JPRS 51984

14 December 1970

TRANSLATIONS ON NORTH VIETNAM

No. 835

Hoc Tap, No. 10, 1970

JOINT PUBLICATIONS RESEARCH SERVICE

NOTE

Unless otherwise indicated items are complete textual translations of the original.

The contents of this publication in no way represent the policies, views, or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22151. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in U.S. Government Research & Development Reports issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 51984

14 December 1970

TRANSLATIONS ON NORTH VIETNAM

No. 835

Complete translation of the monthly theoretical and political journal of the Vietnam Lao Dong Party published in Hanoi.

CONTENTS PAGE

CONTENTS (Continued) Page

TWENTY-FIVE YEARS OF THE LAO PEOPLE'S STRUGGLE AND SUCCESSES

[Editorial; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 1-8]

On 12 October 1945, the Provisional Government of Laos came into being and declared an independent Laos following the victorious general uprising which inaugurated one of the most glorious phases in the history of the Lao people's struggle against imperialism to win independence and freedom. The date of the Lao Declaration of Independence marked an important turning point in the history of the struggle to build and defend the brotherly Lao people's country.

Since the Declaration of Independence, the Lao people have, throughout 25 years of violent military struggle and political struggle, scored very glorious victories in the valiant resistance against past French colonialism and are scoring very glorious victories in the staunch struggle against the invading U.S. aggressors and their lackeys today. Under the clear-sighted leadership of the Lao Issara (now the Lao Patriotic Front), the Lao people have vigorously developed their staunch, indomitable traditions, written immortal epics of a small, weak nation with only several million people, and fought courageous, prolonged, and arduous battles against powerful imperialists to gain liberation.

For more than 16 years now, the U.S. imperialists have carried out the policy of extremely brutal and malicious aggression against Laos in an attempt to turn it into a U.S. neocolony and aggressive military base in Southeast Asia. The U.S. imperialists have poured in billions of dollars and tens of thousands of tons of bombs, and carried out every brazen and insidious maneuver -- sometimes attacking militarily, sometimes deceiving politically or attempting to win favor economically -- in an attempt to enslave the Lao people; however, they have repeatedly been defeated and have been unable to bring Laos down the path of slavery. This is the basic defeat of the U.S. imperialists as well as the most important victory of the Lao people.

*

The brilliant and solid victories of the Lao people militarily, politically, and diplomatically have dealt a mortal blow to the U.S. imperialists' aggressive plan in Laos. The Lao people are in an offensive and victorious position while the U.S. imperialists and their henchmen are in a passive and defeated position. The lackey army of the United States is growing seriously weak, their morale confused and sagging. The Vientiane administration is growing increasingly weaker and revealing more and more that it is the U.S. tool for carrying out neocolonialism in Laos. Through 16 years of combat, the Lao army and people have wiped out or put out of action nearly 150,000 enemy, captured approximately 53,000 weapons of various types and tens of thousands of tons of armaments, ammunition, and other means of war, destroyed thousands of military vehicles, and shot down or destroyed more than 1,530 U.S. aircraft, most of them modern jets. This glorious achievement has illuminated heroic Laos and made a valuable contribution to the struggle for independence and freedom of the peoples in Indochina and the world.

The U.S. imperialists and their henchmen have long been bent on attacking, taking over, and destroying the liberated area of Laos by every means. But the vast liberated area, encompassing two-thirds of the land and half the population, remains firmly in hand and is continuously being consolidated in all aspects. The defense and construction of the liberated area under fierce wartime conditions are the important, historically significant result of the Lao revolution. The increasingly consolidated liberated area is not only the strong, stable base of the Lao revolution, but is also the example inspiring the people's struggle movement to achieve independence and freedom.

The appearance of the liberated area is still changing despite the extremely barbarous and destructive character of the bombing and strafing by the U.S. imperialists' air force. It is completely different from the dismal appearance of the enslaved Laos of olden times and of the area under enemy control presently. The work of building up the economy and expanding culture has attained many far-reaching successes. The people's level of awareness has been improved distinctly. The revolutionary government is being established from the national level down to the villages, and educational and public health work is developing vigorously. Nearly 500 large, medium, and small water conservancy projects which have been built can irrigate tens of thousands of hectares of fields. Hundreds of thousands of farmers have been assembled in production solidarity teams and mutual aid teams. The output of rice and subsidiary food crops has increased a fair amount. The material and spiritual life of the people has improved sharply. Handicraft sectors have been restored, improved, and developed, especially textiles and the forging of farm implements. The beginnings of a national industry has started to appear; i.e., scores of machinery repair shops, textile shops, printing shops, pharmaceutical processing shops, clothing shops, sugar processing shops, ceramic ware shops, etc., have been built and are growing. Thousands of kilometers of roads have been built and repaired. The liberated area of Laos has nearly 70,000 students in general classes and more than 20 middle schools teaching entirely in the Laotian language. This is a giant stride compared

with the more than 10,000 students and one middle school in the Laos of old. A series of supplementary education schools, normal schools, children's schools, and elementary vocational schools have been built. During the period of French colonial rule Laos had only one doctor, one pharmacist, and more than 200 sick beds. Now, excluding the hospitals of the Lao people's liberation army, 12 provinces have hospitals, nearly 60 districts have dispensaries, and virtually all of the townships have a public health network with nearly 2,000 sick beds, scores of doctors and pharmacists, and hundreds of middle level doctors providing disease prevention and treatment to the people.

The bloc of national unity in Laos has been consolidated and strengthened in an effort to combat the U.S. imperialists and their lackeys. The Lao Patriotic Front recognized right from the beginning that the primary factor in the policy of national unity was the matter of unifying the peoples who live in Laos. Therefore, it resolutely approached and dealt with this matter on the basis of the working class viewpoint and in accordance with the principle of willingness and equality among all peoples. The relationship among the peoples has been and is being improved. Unity and cooperation among the peoples on the basis of equality and mutual assistance are growing increasingly tighter. Disputes and hatred fomented among the peoples by the imperialists are being increasingly overcome. The peoples are drawing close together and are loving each other in production as well as in combat. The most distinct evidence of the equality among the peoples is that each nationality has its own rank of revolutionary cadres who are involved in running the government of the liberated area and managing their own locality. Each alo has an armed force to protect the locality and engage in combat so that together they can protect the entire liberated area. Lao people of all ethnic groups have enthusiastically sent their children into the patriotic armed forces. Thanks to this, the Lao revolution has a powerful armed forces composed of three types of troops -- guerrilla militia, local troops, and the people's liberation army. The Lao people are enthusiastically engaged in the people's war against the United States for national salvation and are endeavoring to build the liberated area into the strong, stable base of the Lao revolution -- the concrete, vivid image of a new, peaceful, independent, neutral, democratic, unified, and prosperous Laos. The building and consolidation of unity and unanimity among the peoples constitute the basic, all-encompassing success of the Lao revolution.

*

Throughout 25 years of steadfast, indomitable struggle under the leadership of the Lao Issara (now the Lao Patriotic Front) headed by the great patriot Prince Souphanouvong, the Lao people have achieved extremely brilliant and far-reaching victories, the most important of which has been the complete liberation of two-thirds of the country where the people here live in independence and freedom. The most fundamental reason for this victory is the fact that the Lao Patriotic Front has a correct revolutionary line and, thus, has united the people in the country into a powerful revolutionary force which is struggling selflessly for the Lao fatherland.

Throughout their glorious revolutionary struggle, the Lao people have made a worthy contribution to the victory of the people of the three Indochinese countries as well as to the development of the national liberation movement the world over. The Lao people have accumulated very precious experiences in the long and complicated struggle. The experiences of the Lao revolution do not only benefit the Lao people themselves, but benefit the struggle for independence and freedom of oppressed peoples in Asia, Africa, and Latin America. The Lao revolution shows that a small, weak country with a newly-formed working class which must face powerful imperialists can surely be victorious despite the difficulties and hardships encountered by the revolution if it builds a truly revolutionary political party which has correct political and military lines and wholeheartedly serves the people. The Lao revolution has correctly assessed the balance of forces between us and the enemy, clearly recognizes the main enemy, and appreciates its strategic role. It has thus set forth a correct strategic line. The Lao people not only possess an enemy assault spirit, but are also applying the assault strategy appropriately, winning gradually firmer victories, coordinating national interests with world revolutionary interests, applying strategy flexibly, and concentrating forces on attacking the main enemy in each period. The Lao revolution has firmly grasped the national and democratic banners, the national banner being constantly held aloft yet still tightly connected to the democratic banner. It has profoundly understood that in Laos the primary force carrying out the national and democratic revolution is the farmers. Thus, it has become deeply involved in the countryside in an effort to build a firm worker-farmer alliance and to motivate the farmers to rise up and serve the revolution. The Lao revolution has firmly grasped the revolutionary principle that the undertaking of the masses and the revolution is always illustrated by the force of oppressed classes that combat ruling classes to regain power. The Lao revolution has thoroughly understood the principal forces in the struggle against the common enemy and has thus built the broad national united front against imperialism and its henchmen, thereby isolating the enemy and creating every condition for the revolution to achieve victory. The Lao revolution has developed the patriotic spirit and self-reliant spirit of the people, coordinated education of the patriotic spirit with education of the proletariat international spirit, united and closely combined combat with the Vietnam revolution and Cambodian revolution, and actively sought assistance in all aspects from the socialist camp, the communist and international workers movement, and the national liberation and peace-loving people's movement the world over. The rich experiences of the Lao revolution have contributed to enriching the storehouse of the national liberation theory of revolution against imperialism headed by the U.S. imperialists.

Despite heavy defeats both politically and militarily, the United States remains stubborn, refuses to give up its design to invade Laos, and continues to pursue the basic strategic objective -- wiping out the Lao patriotic forces and annexing the Lao liberated area. The Nixon administration's escalation of the war of aggression in Laos is the root cause of the present tension in Laos, posing an extremely serious threat to peace and security in Indochina and Southeast Asia. Therefore, as the political program of the Lao Patriotic

Front has clearly pointed out, the pressing task of all Lao people is to unite, endeavor to struggle to defeat the U.S. "special war," protect the independence and sovereignty of the country, protect the liberated area, overthrow the country-selling lackeys, and complete the national, democratic revolution throughout the country.

To prove its good will for peace and national harmony, the Lao Patriotic Front issued a statement concerning the five-point political solution to the Laos problem. The long-time stand of the Lao Patriotic Front is that the Laos problem must be settled on the basis of the 1962 Geneva agreement on Laos and the actual situation presently in Laos. The United States has intervened and committed aggression in Laos, so it must put an end to this intervention and aggression. The Laos problem must be settled among the Lao parties concerned without U.S. intervention. To create conditions for a meeting of the Lao parties concerned, the United States must immediately end the escalation of the war and completely end the bombing of the territory of Laos without posing any conditions.

*

Since Nixon took office, the U.S. imperialists have frenziedly carried out the "Vietnamization of the war" -- in essence the prolongation of the war of aggression in Vietnam -- stepped up the "special war" in Laos to the highest extent, and used the Lon Nol-Sirik Matak lackeys to instigate the coup d'etat in Cambodia, thus expanding the war throughout Indochina. In the face of the U.S. insidious scheme to carry out the "Nixon doctrine" of using Asians to fight Asians, using Indochinese to fight Indochinese, and dividing and fomenting national hatred among the peoples of Vietnam, Laos, and Cambodia, at the end of April 1970 the Indochinese Peoples' Summit Conference appealed to the peoples of the three countries to heighten vigilance, strengthen solidarity, and step up the fight against the common enemy, the U.S. imperialists and their lackeys, in the three countries until complete victory. The Lao delegation led by Prince Souphanouvong, Chairman of the Lao Patriotic Front, affirmed: "The people of Laos are determined to stand shoulder to shoulder with brotherly Cambodian and Vietnamese people to defeat the U.S. imperialists' war of aggression in Laos under all circumstances, thereby making all three countries independent and Indochina an area of independence and peace consistent with the aspirations of the peoples of the three countries as well as in the interest of peace in Indochina, Southeast Asia, and the world."

The long struggle against the common enemy, the invading imperialists, and especially the current anti-U.S. cause for national salvation have built and strengthened the fervent friendship and deep militant solidarity -- as engulfing as the water of the Mekong River and unshakably firm as the Truong Son mountain range -- between the peoples of Vietnam and Laos. On the 25th anniversary of the Lao Declaration of Independence, the people of Vietnam extend to the brotherly Lao people warmest congratulations. We sincerely thank the Lao people who, through their staunch and indomitable fight, have given the Vietnamese people direct, great, and valuable support. We express

profound gratitude to the Lao Patriotic Front and Lao people who have constantly inspired and vigorously supported our people's anti-U.S. fight for national salvation.

As a signatory to the Geneva agreements on Laos, the government of the Democratic Republic of Vietnam sternly condemns the intensification and expansion of the war by the United States, Vientiane administration, and Thai reactionaries, and demands that the United States end intervention and aggression in Laos. On behalf of the government and people of Vietnam, Premier Pham Van Dong stated in the speech on the occasion of the 25th national day: "The Vietnamese people resolutely: support the brotherly Lao people's valiant struggle under the leadership of the Lao Patriotic Front headed by Prince Souphanouvang against the U.S. imperialists and lackeys; support the five-point solution of the Lao Patriotic Front announced on 6 March 1970, which is aimed toward settling the Laos problem on the basis of the 1962 Geneva agreements on Laos and the actual situation presently in Laos; demand that the United States end the war of aggression in Laos and unconditionally withdraw all of the U.S. army and military personnel as well as Thai and South Vietnamese mercenaries from Laos, first of all completely ending the bombing of the territory of Laos without posing any conditions in order to facilitate a meeting of the Lao parties concerned."

Throughout the past 25 years, the Lao people have resolutely carried on the hard yet gloriously successful revolution. This year, the Lao people jubilantly celebrate the 25th anniversary of the Declaration of Independence with legitimate pride over their glorious successes and with general happiness over the brilliant successes of the Indochinese peoples in the struggle against the U.S. imperialists and lackeys. We are extremely pleased over these brilliant successes of the brotherly Lao people and are firmly confident that the Lao people will surely win ultimate victory and achieve the noble objective -- building a peaceful, independent, neutral, democratic, unified, and prosperous Laos.

6915
CSO: 3909-W

A QUARTER CENTURY OF PERSISTENT AND VICTORIOUS STRUGGLE

[Article by Kayson Phomvihan; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 9-22]

> On the occasion of the 25th anniversary of Laos' proclamation of independence, we have invited a Lao revolutionary leader, Kayson Phomvihan, to write an article for Hoc Tap on the heroic struggle of the Lao people over the past 25 years. We sincerely wish to present this article to the reader.

Laos is a small country with a backward economy and culture; however, in the favorable international conditions of the past 25 years, led by a genuine revolutionary party the Lao people have stood up to wage a persistent struggle against the French, Japanese, and American imperialists in order to gain independence and freedom and have won ever greater victories. In this arduous and exacting yet extremely heroic fight, we Lao people have fought in cooperation with the fraternal Vietnamese and Cambodian peoples, our faithful and close comrades-in-arms. The resounding victories of the Indochinese peoples in general and the Lao people in particular over the past quarter-century cannot be separated from the introduction of Marxism-Leninism into Indochina and the founding of the Indochinese Communist Party in 1930 by the late President Ho Chi Minh as well as from the correct line and clear-sighted leadership of the genuine revolutionary party of the Lao working class today.

Commemorating the 25th anniversary of Laos' proclamation of independence, the Lao people are extremely proud of the achievements scored and highly confident in the brilliant future of their nation.

The Lao revolution is an integral part of the Indochinese and world revolution. Born and maturing in the present era, the Lao revolution enjoys many fundamental advantages: It lies in the common offensive posture of the world revolution and receives active support from the world revolutionary, democratic, and peace forces. At the same time, it has to cope with many powerful imperialists, especially the U.S. imperialists, their

ringleader. Therefore, the Lao revolution must go through a long and arduous struggle before achieving complete victory.

The Lao revolution has gone through two periods of glorious struggle, first against the French colonialists, then against the U.S. imperialists.

Carrying forward the tradition of resistance against foreign aggression, after World War II, the Lao people rose up to seize power, establish a Provisional Government and proclaim their independence to the world. But, with the help of U.S. and British imperialisms, French colonialism staged a comeback. After fighting for some time in the towns, the revolutionary forces, then still weak, had to temporarily withdraw to preserve their strength and switched to building revolutionary bases in the countryside. Implementing the policy of mobilizing the peasant masses and setting up bases in the countryside, our patriots built revolutionary bases first in the jungle areas then in the plains and around the towns. In the process, they set up political and military forces, stepped up production to become self-sufficient in food, and improved the living conditions of the peasants of all nationalities. Through these activities they succeeded in rallying the various strata of the population into the Lao Issara, built bases in the countryside, set up revolutionary armed and paramilitary forces, formed a resistance government to lead the armed struggle against the French colonialists, and coordinated closely with the main battlefields in Vietnam and Cambodia. During 9 years of resistance, with the devoted assistance and close coordination in combat of the Vietnamese people and revolutionary army, the Lao people advanced from victory to victory. The historic Dien Bien Phu victory compelled the French colonialists and the U.S. interventionists to sign the 1954 Geneva agreements recognizing the independence, sovereignty, unity, and territorial integrity of Vietnam, Laos, and Cambodia. The Lao revolutionary forces had by this time set up a liberated zone comprising the provinces of Sam Neua and Phong Saly and won a legal status. These were victories of great historic significance.

The victorious resistance against the French colonialists vigorously enhanced the national spirit of the various strata of the people. We built up the revolutionary forces politically and militarily, built bases, developed cadres, drew valuable revolutionary experiences, and established the material and spiritual base for a new period of revolutionary struggle.

But immediately after the French colonialists were defeated in Indochina, the U.S. imperialists took their place in the hope of turning Laos into a neocolony and military base, a springboard to attack the Democratic Republic of Vietnam and the Peoples Republic of China, contain the revolutionary tide in Southeast Asia, and control and enslave the peoples in this area. To carry out this scheme, they have waged a "special war" in an attempt to wipe out the revolutionary forces and all patriotic tendencies opposed to U.S. aggression in Laos.

In face of the new requirements of the revolution, the genuine revolutionary party has held aloft the national-democratic banner and led the entire people to resist U.S. aggression and save the country. A Lao Patriotic Front was established which undertakes to mobilize the entire people for defeating the invading U.S. imperialists and their lackeys with a view toward achieving a peaceful, independent, neutral, democratic, unified, and prosperous Laos. In pursuance of this policy we have strengthened, consolidated, and developed the revolutionary forces in all fields, especially by broadening the national united front and building up the armed forces.

We have shattered all the enemy encroachments upon the Sam Neua-Phong Saly base, maintained and promoted the revolutionary movement in the other provinces, and conducted talks with the other side compelling him to sign the Vientiane agreements under which a National Coalition Government with the Lao Patriotic Front's participation was established. This was a major victory. Having sustained heavy defeats, the U.S. imperialists and their lackeys resorted to perfidious political maneuvers in the hope of peacefully liquidating the revolutionary forces. This scheme, however, was again foiled, particularly through the 1958 complementary election. After that, the U.S. imperialists and their lackeys went out of their way to sabotage the Coalition Government, arrested and jailed revolutionary cadres and people, encircled the armed units of the Lao Patriotic Front in an attempt to wipe them out, and even put into prison a number of Lao revolutionary leaders. In the face of this situation, the party promptly switched to armed struggle combined with political struggle, and mobilized the entire people to rise up against the U.S. aggressors and their lackeys. The second battalion broke the enemy encirclement and returned to the base, thus opening a new period of struggle.

The mounting military and political struggle aroused the national spirit of the various strata of the population, especially the middle ones and the enemy officers and soldiers. This created favorable conditions for a number of revolutionary leaders to escape from the enemy prison and led to the coup d'etat staged by several units of the Royal Army and the setting up of the neutralist forces allied with the Lao Patriotic Front to fight against U.S. aggression. The revolutionary forces developed quickly and the national united front broadened. Thanks to the great assistance from Vietnam, the Soviet Union, China, and other socialist countries, we intensified our military and political attacks, liberated two-thirds of the territory and half of the population, and compelled the U.S. imperialists and their stooges to agree to the formation of a Tripartite National Coalition Government and to sign the 1962 Geneva agreements recognizing Laos' independence, sovereignty, and neutrality. This constituted a second heavy setback for the U.S. imperialists in Laos and a great and extremely important victory for the Lao people which enabled the power and strength of the Lao revolution to make leaps forward.

Not reconciling themselves to failure, the U.S. imperialists and their lackeys blatantly sabotaged the 1962 Geneva agreement and the National Coalition Government, and intensified and expanded the "special war," using the U.S. Air Force in coordination with puppet troops including special forces, Vientiane troops, and elements of the Thai and Saigon army to attack and sabotage the liberated area, in conjunction with the U.S. aggressive war in South Vietnam. In the face of this situation, the party decided to strengthen the unity of the entire people for a resolute military and political struggle, intensify the revolutionary forces in all fields, persevere in the fight against the United States for national salvation, defend, build, and consolidate the liberated area and, at the same time, step up the struggle of the people in enemy-held areas with a view to shattering the enemy's scheme and advancing the revolution by firm steps. Implementing this policy, the Lao revolutionary forces quickly matured and won ever greater victories, inflicting an initial setback on Nixon's new aggressive move, gaining the initiative of attack, and driving the U.S. imperialists and their lackeys into a defensive position and heavier setback. Of late, as the U.S. imperialists have extended the war throughout Indochina, the Vietnamese, Cambodian, and Lao peoples fighting side by side against the common enemy have driven the U.S. imperialists and their lackeys deeper into the morass of failure.

Through 25 years of hard and valiant struggle, our people have won victories which constitute leaps forward of tremendous historic significance.

Though small and poor, Laos has together with Vietnam and Cambodia crushed the old colonialism of the French imperialists and Japanese fascists, and is crushing the neocolonialism of the U.S. imperialists -- the most powerful chieftain of imperialism -- winning very fundamental and ever bigger successes. This is a source of great pride to us. This victory is not only paving the way for us to independence, freedom, and genuine peace, but is also making a worthy contribution to the struggle for peace, national independence, democracy, and social progress of the world's people.

Two-thirds of the country and half of the population have been freed. The liberated area has been firmly defended and consolidated in every field. The nationalities in the liberated area are enjoying true equality and living in harmony. They are striving to build a new, national, democratic, and progressive social regime. Their material and spiritual life is improving with every passing day. The firm liberated area constitutes a considerable source of strength for our people in their anti-U.S. resistance for national salvation and future national construction.

The revolutionary forces have been set up and developed in the crucible of a fierce and complex struggle. The genuine revolutionary party has gathered abundant experiences in leading the revolution, forging the bloc of national unity, and building a broad national united front and the various revolutionary mass organizations as well as the revolutionary army

composed of regular and paramilitary forces, and a contingent of cadres loyal to the revolution and the interests of the nationalities. These constitute fundamental factors which determine the victory of our people. The prestige and influence of the revolution is growing and taking deep roots among the entire people. The international status of the Lao Patriotic Front is being heightened.

The Lao revolution enjoys the sympathy, support, and active and great assistance of the socialist countries, the national liberation movement, and the peace- and justice-loving people in the world.

On this occasion, we sincerely thank the peoples and governments of the Democratic Republic of Vietnam, the Soviet Union, China and the other socialist countries, the peoples and governments of the nationalist countries, the people struggling against imperialism for national liberation, and progressive people in the world, for their active support to our just struggle.

The aforementioned achievements have a paramount significance in the history of our nation. The Lao society has undergone deep changes: from former slaves the various nationalities in Laos have become masters of the country and the forces of the Lao people are developing with unprecedented vigor, constituting a sure guarantee for the total victory of the revolution. These are successes of the most revolutionary thought of the era in a small former colony like Laos with an underdeveloped economy and culture. These successes have opened for the Lao people an era of independence and freedom and a bright future that no enemy force can stop.

Those great achievements of the Lao revolution are due to the following factors:

There is a genuine revolutionary party absolutely loyal to the interests of the working class, the laboring people and the entire nation, a correct political and military line and conduct of the revolution, and a tested contingent of cadres and party members that has been forged in arduous and prolonged revolutionary struggle.

The Lao revolution has established and consolidated a broad national united front on the basis of the worker-farmer alliance under the leadership of the party, united and promoted the heroic tradition of resistance against foreign aggression among the nationalities, resolutely and persistently struggled against the imperialists and their lackeys in the spirit of all for the independence and freedom of the fatherland.

The Lao revolution is being waged in favorable international conditions: the socialist system is developing in all fields and has become the factor determining the development of human society; the national liberation movement is mounting powerfully and the working class' and laboring people's movement in the developed capitalist countries is gaining momentum.

Moreover, the Lao revolution is waged in Southeast Asia where an unprecedented revolutionary storm is raging, especially at a time where an extremely heroic and victorious struggle is being waged by the Vietnamese people which has a direct bearing on the Lao revolution. As a result, the Lao revolution enjoys the huge support and assistance of the socialist countries and peace- and justice-loving people in the world.

The three aforementioned causes have a close relationship and are all necessary for the success of the Lao revolution. However, the fundamental and determining factor remains the correct leadership of the genuine revolutionary party.

Throughout 25 years of hard yet extremely heroic struggle, the Lao revolution has gained many precious experiences:

First of all, the Lao revolution shows that in a small country with a backward economy and culture and a nascent working class like Laos which has to cope with imperialism with its powerful economic and military potential and many perfidious and cruel maneuvers, if one can build a revolutionary party with a thorough revolutionary spirit, a correct political and military line and conduct of the revolution, a close-knit organization, an inner unity, firm ties with the masses, and total dedication to the people, and which knows how to mobilize and organize the masses for the struggle, promote the tradition of resistance against foreign invasion, and enlist the assistance of the fraternal countries, in the first place the socialist countries, then the revolution, though beset with difficulties and hardships, will certainly triumph.

In several decades under French rule, there broke out in Laos many valiant uprisings and armed struggles against the French colonialists which caused the enemy many losses; however, all invariably failed in the end. This was mainly because the tribal chief, though nationally conscious, did not truly represent the interests of the masses and could not, therefore, put forth a correct political line fully meeting the people's aspirations. In the 1940's the patriotic movements "Lao Pen Lao" (Lao to the Lao) and "Lao Seri" (Free Laos) of the urban petty bourgeois class were influenced by the patriotic movements against fascism in Indochina led by the Indochinese Communist Party. Although they had a number of forces which were operating in many provinces and had made a definite contribution to the 1945 general insurrection, they could not rally the people around their leaders who, ignorant of the laws of social development, advocated the establishment of an outmoded democratic bourgeois regime if and when independence was regained. With the founding of the Indochinese Communist Party, the Lao revolution got a correct orientation, and the genuine revolutionary party of the Lao people -- faithful to the interests of the working class, the laboring people and the entire Lao nation -- got a correct revolutionary line and method, a thorough revolutionary spirit, and so on. The party has resolutely led the Lao nationalities to stand up against the U.S. imperialist aggressors -- the most cruel and powerful imperialist

ringleader -- and repeatedly won great victories and built up a powerful revolutionary force to insure final victory for the Lao people.

In each period of the revolution, the Lao revolutionary party has correctly assessed the balance of forces between the enemy and us, and singled out the main enemy. At the same time, it has clearly realized all the characteristics of Laos and, on this basis, put forward a correct revolutionary line, set appropriate steps for the revolution, closely combined the task of national revolution with that of democratic revolution, the interests of the nation and the Lao revolution with those of world peace, adopted an appropriate offensive strategy and flexible tactics, fully exploited the enemy's internal contradictions, and concentrated on smashing the main enemy in each period, thus gradually repelling the adversary and winning partial success in a steady manner.

Laos holds a strategic position of utmost importance in Southeast Asia. There are two fundamental contradictions in the Lao society: one between the Lao nation and the imperialist aggressors (at present the Americans) and their lackeys, and the other between the Lao people -- essentially the laboring people -- and the comprador bourgeois and feudal forces, the former contradiction being the most fundamental. Therefore, the Lao revolution has a national and democratic task aimed at liberating the nationalities from the aggression and domination by the imperialists and their lackeys as well as other reactionary forces, and building a peaceful, independent, neutral, democratic, unified, and prosperous Laos.

Over the past 25 years, while leading the struggle to fulfill this task of national and democratic revolution, the party has combined the two tasks but laid stress on the former in order to concentrate upon the fight against the imperialist aggressors and their lackeys. At present, the main contradiction in the Lao society is that between the Lao people and the U.S. imperialist aggressors and their lackeys comprising the bureaucratic and militarist, comprador bourgeoisie and a number of most reactionary feudalists. The line of national and democratic revolution and the program of uniting the entire people to defeat the U.S. imperialist aggressors and their lackeys, and building a peaceful, independent, neutral, democratic, unified, and prosperous Laos is an important creation of the party in leading the implementation of the national and democratic revolution aimed at fulfilling this main task and creating conditions for the Lao revolution to win steady success. Thanks to this creative strategic guidance and this flexible application of tactics, our party has rallied the entire people around it, disorganized and isolated the enemy to the utmost, won greater successes in the great anti-U.S. resistance for national salvation, and created fundamental factors to eventually achieve our national and democratic revolution.

The national and democratic revolution in Laos is, in essence, a revolution to liberate the farmers. To accomplish this revolution, the key task for the party is to build and consolidate the worker-farmer

alliance under its leadership. Over the past 25 years, the party has gone deep into the countryside, mobilized the farmers who make up over 90 percent of the population, developed the unity between the farmers of different nationalities, brought them material interests, organized and led them to rise up against the imperialists and their lackeys to gain independence, freedom, happiness and progress, increased their attachment to the revolution, and consolidated the worker-farmer alliance. The party has also set up bases in the countryside, proceeding from the building first of political bases then military bases in each locality, mobilized the farmers to struggle for self-liberation from a low to higher level. All the achievements of the revolution and the building and consolidation of the great revolutionary forces during the past 25 years are linked to the building and consolidation of the worker-farmer alliance and the mobilization of the farmers of different nationalities to struggle against the imperialist aggressors and their lackeys and build a new life.

A great experience of the Lao revolution is that the revolutionary party must grasp and creatively apply the principle: the revolution is the work of the masses and is always materialized by the revolutionary violence of the oppressed classes against the ruling classes to seize power. To oppose the imperialist aggressors and their lackeys who continually use counterrevolutionary armed violence in an attempt to wipe out the revolutionary forces, the party has mobilized the masses to wage a war of liberation. The party has organized and developed the political forces as bases while building revolutionary forces with three kinds of troops as the core for the people's war. On the other hand, as the U.S. imperialists have launched a special war and carried out a neocolonialist policy in Laos, the party has mobilized the masses to wage a struggle in many forms, closely combined armed struggle with political struggle, and made use of various forms of struggle -- legal, diplomatic, parliamentary, several negotiations, two national coalition governments, etc., but the party has always regarded armed struggle and political struggle as the two fundamental ones, the former being the most important form to win victory.

By grasping the principle that all revolutionary and progressive forces which can be united must be united to defeat the enemy and by grasping the political and social characteristics of Laos, the party has successfully built a national united front on the basis of the worker-farmer alliance under its leadership. The party has promoted mutual affection and cooperation among the nationalities, with a program best suited to each period. The party has resorted to diversified forms of struggle, rallied all patriotic, peace, and democratic forces, and won over tribal chiefs, personalities, and buddhist monks to form a united front of the entire people, thus isolating to the utmost the U.S. imperialists and their lackeys and creating conditions for the revolution to score even greater successes.

Another great experience of the Lao revolution is that to win victory for the revolution in a small country having to oppose powerful imperialist countries along with promoting patriotism and self-reliance as

the main task, it is most important to broadly unite with all revolutionary, democratic, and progressive forces in the world, unite and fight in coordination with the Vietnamese and Cambodian revolutions, and actively enlist the support and assistance in all fields of the socialist countries, the international communist movement, the national liberation movement and the justice-loving people in the world.

The aforementioned experiences demonstrate a great truth of the present era: a small and backward nation, if it is led by a genuine revolutionary party armed with a correct political and military line and revolutionary method, is closely united, struggles resolutely and perseveringly, and enjoys the support and active assistance of the socialist countries and all revolutionary, democratic, and peace forces in the world, can certainly defeat any imperialist aggressors -- including U.S. imperialism -- and wrest and safeguard its independence and freedom.

The staunch and heroic struggle over the past 25 years has taken the Lao people a long way on the road of national and democratic revolution. It has dealt stunning blows at the policy of intervention and aggression of the U.S. imperialists, inflicting upon both invaders and traitors heavy losses in the military as well as political fields. However, bellicose and stubborn by nature, the U.S. imperialists are carrying on their neocolonialist policy of intervention and aggression with a view to turning Laos into their neocolonialist military base. This is a long-term scheme in the framework of their strategy in Indochina and Southeast Asia, and an integral part of their "global strategy" for world mastery. In the time ahead, together with the intensification of the "Vietnamization of the war" in Vietnam and the extension of the war into Cambodia, the U.S. imperialists and their lackeys will step up their special war in Laos and pile up more crimes against the Lao people.

In the political field, they will strive to bolster and galvanize their lackeys, consolidate the Vientiane administration, and undermine the national united front against U.S. aggression in an attempt to weaken the Lao revolutionary forces by sowing discord between the Lao Patriotic Front and the Lao Patriotic Neutralist Forces and destroying the latter and dividing the nationalities to further their counterrevolutionary schemes. At the same time, they will exert utmost efforts to shore up the local administrations in the areas under their control, set up and develop reactionary organizations, and go ahead with the so-called "program of rural development" by erecting more concentration camps camouflaged under the name of "united villages," "prosperity zones," and "refugee zones" in order to put under their sway the material and human resources of the Lao people and to drag out their aggressive war in Laos. Moreover, they will step up spy war and psy-war, disparage the Lao Patriotic Front and the Patriotic Neutralist Forces, and slander the socialist countries, particularly the Democratic Republic of Vietnam, in the hope of divorcing the revolutionary and patriotic forces from the Lao people, and dividing the Lao and Vietnamese peoples. At the same time, they will continue to make fraudulent

peace efforts in an attempt to hide their obvious country-stealing from American and world opinion, which is condemning the Nixon administration for its intensified war of aggression against Laos.

In the military field, the U.S. imperialists are frenziedly building up the puppet army, particularly the "Special Forces" directly fed and commanded by the United States. They will intensify their murderous attacks by U.S. Air Force and puppet troops, with increasing participation of Thai and South Vietnamese troops to carry on encroachments and attacks on the Lao liberated area, in coordination with their activities in South Vietnam and Cambodia, while launching mopping-up operations to destroy revolutionary bases in the Vientiane-controlled area. On the other hand, they will increase, consolidate, and develop military airfields, strategic communication lines, and logistic bases along the Lao-Thai border, together with the consolidation of their network of military bases in Thailand, with a view to further consolidating their "Mekong defense line." With their scheme to set up a politico-military axis going from Vientiane, Saigon, and Phnom Penh to Bangkok and their military bases in Thailand, and relying on the Vientiane-controlled zone, the U.S. imperialists are trying to prolong their aggression in Southeast Asia, implementing the so-called Nixon Doctrine of using Indochinese to fight Indochinese and Asians to fight Asians.

In the economic and cultural fields, the U.S. imperialists and their lackeys will step up the implementation of their neocolonialist policy in the area under their control, dump their surplus goods through "commercialized aid," and then expand capitalist investments in Laos to dislocate its economy. At the same time, they will import more and more products of the U.S. depraved culture to turn the country into a new-style colony.

In the execution of this scheme, the U.S. imperialists are working hand in glove with the Japanese monopoly capitalists who are plotting a big expansion in Southeast Asia. Through economic and espionage measures, they are helping the American imperialists in their aggressive war in Laos while pursuing their own colonialist design through the preparation of economic bases and other projects in this country. The Thai reactionaries, efficient U.S. lackeys in Southeast Asia, are bringing an increasing number of their troops to fight in Laos, sending spies and commandos to the liberated area, and setting up "clandestine forces" in strategic positions in the Vientiane-controlled area. At the same time, they are reinforcing the northeast of Thailand to serve as a logistic base, training center and a supplier of manpower and material resources for the U.S. war of aggression in Laos. In addition, we must be vigilant against the maneuvers of other imperialists.

Though having sustained heavy defeats, the U.S. imperialists remain stubborn. The Nixon administration's escalation of the war of aggression in Laos and the expansion of the war throughout Indochina is the root cause of the present tension in Laos, an extremely serious threat to peace and

security in Indochina and Southeast Asia. Therefore, as the political program of the Lao Patriotic Front has pointed out: "The sacred and pressing task of the Lao people, regardless of their nationalities, age, sex, social appartenance, religious and political belief, is to unite and struggle to foil the U.S. imperialists' 'special war' and neocolonialism, overthrow the traitors in order to build a peaceful, independent, neutral, democratic, unified, and prosperous Laos, and contribute to the restoration and safeguarding of peace in Indochina, Southeast Asia, and the world." The front's program deeply reflects the fundamental aspirations and the vital interests of the various Lao nationalities. So long as the U.S. imperialists and their lackeys have not given up their design to invade and sell out our country and bar the materialization of the aspirations of the Lao people, the latter will unite and persevere in their fight until complete victory.

Although the Lao people are still faced with many difficulties and hardships in the struggle to achieve the program of the Lao Patriotic Front and their fundamental aspirations, the Lao revolution is enjoying new and favorable conditions. The enemy of the Lao people -- the U.S. imperialists -- is like a beast cornered by the Indochinese peoples. Isolated to the utmost and suffering heavy defeats it is doomed to complete failure. As for their lackeys in Laos, they are notorious traitors torn by power struggles between rival individuals as well as rival groups and will not escape the fate of their masters. As for the Lao people, they are strong with their just cause and their growing forces. Moreover, they enjoy the support and active assistance of the fraternal countries, particularly the socialist ones, the coordination in combat and devoted assistance of the Vietnamese and Cambodian peoples, and the sympathy and support of the peace- and justice-loving people throughout the world, including progressive public opinion in the United States.

That is why, following up the successes already scored, holding aloft the spirit of "all for independence and freedom," and promoting the tradition of resistance against foreign aggression and revolutionary heroism, the Lao people are determined to persevere in the fight and will certainly win complete victory in their great resistance against U.S. aggression and in the building of a peaceful, independent, neutral, democratic, unified, and prosperous Laos.

CSO: 3909-W

PREPARE FOR A SUCCESSFUL 1970-71 WINTER-SPRING RICE CROP

[Article; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 23-29]

Since 1967, the annual spring rice area under short-term, high-yield rice strains has increasingly expanded. These new rice strains have had a marked effect on increasing the rice output and productivity of the winter-spring crop.

The 1969-1970 winter-spring rice yield averaged 19.74 quintals per hectare, the highest rice yield during the winter-spring season in the past 10 years. The past winter-spring crop was one of the bumper crops both in fifth-month rice and spring rice. Yet it must be realized that this winter-spring rice had a higher average output and productivity than past years primarily because the spring rice area rice yield was substantially higher than the fifth-month rice yield. The 1970 spring rice area is greater than in 1969 and accounts for 18.5 percent of the total winter-spring rice area -- the greatest spring rice area ever. The average yield of spring rice was 27.71 quintals per hectare, an 8 quintal per hectare increase over last year's spring rice crop and a 5 quintal per hectare increase over the 1968 spring rice crop. Noteworthy is the fact that the average output of the spring rice was nearly 10 quintals per hectare higher than the fifth-month rice even though this year's fifth-month rice crop was also a bumper crop; in many provinces and districts the spring rice yields were between 10 and 12 quintals per hectare higher than the fifth-month rice. Thus, the increased amount of paddy from the 1969-1970 winter-spring crop was primarily brought by the spring rice.

Thai Binh Province achieved an average rice yield for the entire winter-spring crop of more than 30 quintals per hectare thanks to actively cultivating spring rice on more than 50 percent of the winter-spring rice area and attempting the intensive cultivation of spring rice and fifth-month rice. Spring rice itself yielded 36.5 quintals per hectare. Thai Binh Province's increased amount of paddy brought about by the spring rice equaled approximately 20 percent of the entire province's winter-spring paddy output.

Many districts, which actively transplanted considerable spring rice and ensured that work was done on schedule with the correct techniques, also increased the average yield of winter-spring rice in their districts to over 30 quintals per hectare. For example, Dong Hung District reached an average winter-spring rice output of 35.38 quintals per hectare, Dan Phuong District reached 32.99 quintals per hectare, Vu Thu District reached 32.44 quintals per hectare, Kien Xuong District reached 30.8 quintals per hectare, Hung Ha reached 30.74 quintals per hectare, and so on.

The three provinces of Thai Binh, Hai Hung and Ha Tay alone, where hundreds of cooperatives grew spring rice on between 80 and 100 percent of the area, also recorded average winter-spring rice yields of 40 quintals or more per hectare. A number of the cooperatives averaged 5 metric tons per hectare on the entire area in one crop, such as Vu Thang, Tan Phong, Mo Lao, and so on.

These realities point up very clearly that the short-term rice strains transplanted during spring were high-yield strains adapted to the soil, climate, etc., conditions of North Vietnam. If we know how to select and nourish these new rice strains well while, at the same time, endeavoring to create conditions for actively and firmly expanding the area under these new strains, they will surely be an important factor in rapidly increasing North Vietnam's paddy output and productivity.

On the other hand, we will bring about new conditions for restructuring crops by using short-term rice strains in conjunction with other types of short-term crops which are consistent with the soil and climate conditions of a given area such as potatoes and short-term sweet potatoes, winter vegetables, duckweed, and so on. This is aimed toward rationally using soil, adding one production crop, and stepping up intensive cultivation to increase yields. There are many localities and cooperatives which have applied the formula: duckweed + spring rice + tenth-month rice; or the formula: potatoes or short-term sweet potatoes and various types of winter vegetables + spring rice + early tenth-month rice. These are new farming formulas which, in effect, increase the fertility of the soil and rapidly increase grain and food output. Furthermore, the development of spring rice also makes it possible to reduce expenditures and lower the cost of production on one unit of product.

Thus, spring rice is opening a new horizon for North Vietnam in intensive cultivation to increase rice yields, actively contributing to rapidly fulfilling and overfulfilling the objective of "5 metric tons of paddy per hectare," and rapidly increasing grain productivity. Spring rice is also creating favorable conditions for increasing subsidiary food crops, increasing the source of green manure, restoring the soil, carrying out succession cropping, and opening for agriculture new capabilities and prospects for comprehensive, vigorous, and firm development. Obviously, we surely cannot, with the small amount of land reserved for growing rice in North Vietnam, rapidly achieve the objective of "5 metric tons of paddy per hectare" in the next several years and cannot create productive rice areas in order to rapidly increase the volume of marketable paddy, thus making it hard to satisfactorily

meet grain requirements, if we do not actively and aggressively create conditions for expanding the spring rice area and improve the level of intensive cultivation to achieve high yields and substantial productivity. Therefore, continuing to expand the spring rice area and satisfactorily work on the spring rice during the 1970-1971 winter-spring season is a correct direction and an important task which should be prepared well.

*

To ensure the successful fulfillment of this correct direction, it is first of all necessary to clearly realize that having short-term, high-yield rice strains is a big advantage in rapidly increasing paddy yields and productivity on a unit of area. But having good strains alone is not enough. The cooperative members must also have a material and technical base (primarily water conservancy and fertilizer), management proficiency and intensive cultivation proficiency, a voluntary, sonscientious spirit and, especially, experience in working on spring rice. Only then will the new rice strains be effective. The past spring rice crop was an excellent crop from an output and productivity standpoint in virtually all of the areas in North Vietnam. However, the spring rice area which had yields of 6 quintals or more higher per hectare than the fifth-month rice and which was really economically effective only amounted to 68 percent of the entire spring rice area. The spring rice area achieved yields which only approximated that of or was somewhat over the fifth-month rice. Yet this did not match the additional seeds, capital, and effort expended which accounted for 23 percent of the entire spring rice area. Moreover, 9.4 percent of the spring rice area had poorer yields than the fifth-month rice, 4 quintals per hectare poorer in some places. There were even some localities which had spring ricefields where harvests were not worth mentioning. This situation proves that results vary due to the different methods even with the same new, short-term, high-yield rice strains. Therefore, the expansion of the spring rice area cannot be done simply, arbitrarily, or complacently. On the contrary, the work done on spring rice must be done well to ensure higher average yields than with fifth-month rice. Only then will it economically effective.

Spring rice is a short-term, high-yield rice strain, yet it demands close technical guidance, must be planted in relatively good fields, must have enough irrigation water throughout the season and be actively irrigated and drained, and must have considerable fertilizer. Blight must also be prevented and schedules strictly adhered to. Localities and cooperatives should firmly understand the conditions and requirements for developing spring rice. At the same time, they must know the basis for the special characteristics and actual conditions in their locality and cooperative (e.g., the material and technical base, the management and intensive cultivation proficiency, soil conditions, labor, etc.) in order to actively create conditions for developing spring rice and for balancing out all aspects in determining plans for developing spring rice consistently and with high economic effectiveness. It is necessary to prevent and struggle to overcome improper tendencies in the development of spring rice, especially the two following tendencies:

- Shyness, conservatism, fear of difficulties, and the failure to actively create conditions for acquiring short-term, high-yield rice strains. This tendency frequently overestimates difficulties with regard to the conditions demanded by the new rice strains or is satisfied with the present habit of farming the fifth-month and tenth-month crops.

- Complacency and simply appreciating advantages while failing to realize all of the strict conditions demanded by the new rice strains. This consequently leads to the fast and furious expansion of the spring rice area and to overexceeding the actual conditions and capabilities of their locality and cooperative.

Both of these tendencies are detrimental and contrary to our Party's and state's positive and firm approach to expanding the spring rice area.

To actively and promptly prepare the conditions necessary for satisfactory work on the 1970-1971 spring rice crop, localities and cooperatives absolutely must have plans for developing the spring rice right from the beginning. This plan must be discussed and formulated in a truly democratic fashion by the cooperative memebers in each production unit and cooperative. There must be unanimity and determination to carry it out within the Party organization as well as within local government organizations and cooperatives. At the same time, there must be very close guidance from the beginning. It is necessary to resolutely overcome forceful guidance and authoritarian methods in formulating and carrying out the plan to develop spring rice, especially in assigning area norms for farming spring rice from the top down in a complacent, average, and preposterous manner.

The development of spring rice during the coming winter-spring season is an urgent requirement for stepping up intensive cultivation to increase rice yields and grain output which is aimed toward actively contributing to meeting grain requirements. But, on the other hand, it must be understood that the winter-spring season encompasses many types of crops including rice, subsidiary food crops, and industrial crops. Furthermore, spring rice is not the only rice grown. There is also fifth-month rice, and its area is presently double that of spring rice. Consequently, the plan for developing the spring rice should be figured and balanced in all aspects (soil, irrigation water, fertilizer, labor, etc.) so that it is the most rational and beneficial in an effort to ensure the plan for expanding the area and increasing spring rice yields while ensuring the plan to increase fifth-month rice yields and other crops. In other words, the expansion of the spring rice area must be closely connected with the intensive cultivation of spring rice over the entire area and closely connected with the comprehensive, vigorous, and stable development of agriculture.

It is necessary to overcome the situation wherein attention is devoted solely to concentrating guidance, fertilizer, and manpower on spring rice, thus neglecting the intensive cultivation of fifth-month rice, ignoring the cultivation of subsidiary food crops, and even disregarding schedules and the area under other crops. Ultimately, spring rice yields and output may well

increase, but not enough to make up for the shortages resulting from the decline in yields and output from fifth-month rice and other crops.

Based on the land situation, material and technical base, intensive cultivation proficiency, and the spring rice cultivation experience of the cooperative members, the locale in which the coming expansion of the spring rice area should be primarily concentrated is in the delta (including the deltas in the midland area and old region 4). In this area -- where relatively suitable land, relatively good proficiency in intensive rice cultivation and experience in cultivating spring rice exist -- the material and technical base should be actively strengthened with the focus primarily on water conservancy and fertilizer in order to cultivate spring rice even better over a wide area. In these places the principal orientation is to rapidly and vigorously develop spring rice from an area, yield, and productivity standpoint, thereby enabling it to play a decisive role in rapidly increasing the winter-spring paddy output. In key rice areas, the state should make suitable investments, along with developing the energetic spirit of the cooperatives, in an effort to create conditions for the rapid development of spring rice. This is aimed toward developing a concentrated spring rice production area which has high yields and a large amount of marketable paddy.

The delta of old region 4 and the midland area could both develop spring rice, but the extent is based on the conditions which have been actively created because here many areas have infertile land, the material and technical base (especially water conservancy and fertilizer) has many difficulties, and there is not a great deal of experience in cultivating spring rice. Old region 4 has weather conditions and advantages when seedling work is done, but difficulties with the hot, dry Lao winds at the end of the season. Consequently, schedules should be firmly adhered to in order to ensure that the spring rice blooms with the fifth-month rice. The midland area and old region 4 should be sure to do water conservancy work even better, strengthen the source of fertilizer, and balance manpower so that spring rice, fifth-month rice, and other crops are not in conflict with one another in terms of fertilizer and manpower during the planting and harvesting seasons.

In the mountain region it is essential to become deeply involved in intensive spring rice cultivation on the existing area and to plan and adjust the land where spring rice could be transplanted so that it is consistent with the existing material and technical base and the special weather characteristics of each subclimate area. At the same time, it is necessary to do seedling work very well and to keep the spring rice transplanting season from dragging out for this has an adverse effect on the tenth-month rice schedule and output.

The expansion and intensive cultivation of spring rice should be extremely active in all areas. Investment to create conditions for the material and technical base to support spring rice should be concentrated on the most advantageous fields and closely connected to the development of key marketable rice areas. In conjunction with stepping up the cultivation of spring rice, it is necessary to cultivate fifth-month rice well and devote attention to

developing new, high-yield fifth-month rice strains with a view toward making both spring rice and fifth-month rice attain high yields.

*

Continuing to expand the spring rice area and satisfactorily carry out work on the spring rice crop during the 1970-1971 winter-spring season is related to the daily life of the cooperative members, the income of the cooperative, and the requirement for rapidly increasing the grain output of North Vietnam. This is not simply an important economic task, but is something which has a practical effect on strengthening cooperatives and on creating a new posture for promoting the vigorous and stable advancement of agricultural production. Thus, levels and sectors (especially those sectors which are directly related to agricultural production) from the national level to the local and cooperative level must conscientiously improve their sense of responsibility to ensure successful fulfillment of this task.

Levels and sectors should become deeply involved in cooperatives, investigate each cooperative's strengths and weaknesses, closely inspect the spring rice area to be expanded in each field, etc., in order to have specific and practical plans of assistance. It is necessary to devote particular attention to provinces, districts, and cooperatives which intend to replace most of the fifth-month rice with spring rice. The agricultural sector -- from the ministry to provincial services and districts -- should, in conjunction with the reduction of personnel, withdraw college level or middle level scientific and technical cadres and economic management cadres and put them in cooperatives (especially the cooperatives in key rice areas) so they can become directly involved in production and help the cooperatives technically and managerially. It is necessary to urgently develop the understanding needed in cultivating spring rice and the experience in working on spring rice over a wide area among the cadres in the managerial staff of the cooperatives and among production unit leaders and deputies. The best method is to hold training classes on each farming task and to help the cooperatives to gain experience in spring rice cultivation in their cooperative. At the same time, it is necessary to devote attention to studying the experiences of cooperatives and production units which have done spring rice work skillfully.

The development of spring rice over a wide area constitutes a great change in rice cultivation. It has changed the thinking and farming habits of the cooperative members. As a result, in order to vigorously develop spring rice, it is necessary to, in addition to ensuring conditions with regard to the material and technical base, management proficiency, and intensive cultivation proficiency, stress the work of educating and persuading the cooperative members. The best method is to use actual models to persuade and help them to clearly realize the advantages and, at the same time, the difficulties so they will conscientiously work. Only by so doing will they strive to cultivate spring rice well and, upon encountering difficulties, seek ways to overcome them in order to achieve success. To respect the voluntary and conscientious spirit of the cooperative members is to respect their collective ownership spirit in determining their cooperative's business affairs.

In summary, continuing to develop spring rice over a wide area is posing many matters which should be urgently prepared and many difficulties which must be resolved. But with high determination, the experience accumulated, and the enthusiastic fervor of the farmers who are energetically working on the tenth-month rice and actively preparing for the coming winter-spring crop, we are entirely capable of overcoming all difficulties in order to successfully carry out the task of developing spring rice along with the other tasks set forth in the 1970-1971 winter-spring plan.

6915
CSO: 3909-W

GUIDING THE CULTIVATION OF SPRING RICE IN THAI BINH PROVINCE

[Article by Ngo Duy Dong, Secretary of the Thai Binh Party Committee; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 30-40, 56]

The party organization and people of Thai Binh achieved a tremendously successful 1969-1970 winter-spring crop on the agricultural production front, especially in the production of rice. The rice area exceeded the plan by 1.12 percent. The average rice yield was 30.41 quintals per hectare, exceeding the plan by 12.6 percent. The total paddy output exceeded the plan by 13.3 percent. This was a winter-spring season which saw the highest rice yields ever, with a total paddy output greater than virtually all previous winter-spring seasons and more than double the 1939 fifth-month rice crop, the bumper crop year under the French. Meanwhile, the rice area dropped tens of thousands of hectares due to the shift to construction and to the cultivation of other crops.

The great success in the production of rice during the 1969-1970 winter-spring season was primarily due to the success of spring rice transplanted with new, short-term, high-yield rice strains. During this winter-spring season, our province transplanted over 50 percent of the area with spring rice which yielded an average of 36.51 quintals per hectare. Nearly 50 percent was transplanted with fifth-month rice which yielded an average of 24.25 quintals per hectare.

The difference between the spring rice yields and fifth-month rice yields in the districts was generally about 10 quintals per hectare. Fifth-month rice yields in the districts of Kien Xuong, Vu Thu, Hung Ha, Dong Hung, etc., where the soil is good, were between 24.3 and 27 quintals per hectare while spring rice yields were between 25.2 and 38.8 quintals per hectare. Fifth-month rice yields in the districts of Thai Thuy and Tien Hai, which are on the coast where the soil is poorer due to acidity and alkalinity, were between 21.8 and 24.5 quintals per hectare while spring rice yields were between 33.8 and 35.1 quintals per hectare.

Those places that transplanted a large amount of the area with spring rice and worked on schedule with the correct techniques were the places that

had higher average yields overall during the winter-spring season than the places that transplanted only a little spring rice. Dong Hung District transplanted 72 percent of the area with spring rice. Its average rice yield overall for the winter-spring season was 35.62 quintals per hectare. Tien Hai District transplanted 22.7 percent of the area with spring rice. Its average rice yield overall was 20.77 quintals per hectare. The Vu Thang and Tan Phong cooperatives transplanted 100 percent of the area with spring rice and had an average yield of more than 50 quintals per hectare per crop. Some spring rice fields yielded 9 to 10 metric tons per hectare per crop.

Thus, spring rice transplanted with short-term rice strains, especially the new rice strains, is opening many good prospects. It has made it possible for us to quickly solve the grain problem, the central task of a province in the key rice area of North Vietnam. It is making it possible to vigorously expand livestock raising and to set aside area for developing industrial crops and vegetables with a view toward developing agriculture comprehensively, vigorously, and firmly and paving the way for the development of the local economy. The success of this spring rice crop proves that the Party Central Committee's line on agricultural development and the localities' direction for agricultural development are correct. This success has made our people and party organization more enthusiastic and determined to achieve the present direction laid down by the Party Central Committee, i.e., to concentrate efforts on advancing agriculture a new step over the next several years.

This success has initially provided us some pointers on guiding spring rice work in Thai Binh, especially during this year's winter-spring production season.

Perseveringly Carry Out the New Production Direction and Create Conditions for Expanding the Spring Rice Area

With the responsibility of an agricultural province in the key rice area of North Vietnam, a large population, and limited land, we must somehow advance agriculture in order to ensure the livelihood of over 1 million people in the province, better meet the needs essential to the development of the local economy, and supply more and more marketable farm products to the state, grain and food first of all. In answering this, our province's Congress of Party Organization Representatives, which met in July 1963, outlined three directions for Thai Binh, the primary one of which was: intensive cultivation to increase output, multicropping, and increasing the number of subsidiary food crops. This is a correct direction which is consistent with the special characteristics and production conditions of our locality. In carrying out this direction, our province actively studied and experimented with spring rice. Work done initially with spring rice was aimed toward sucession cropping and adding one more production crop. Because spring rice has a short growing period and is transplanted before and after the beginning of spring, and because the interval between the time the tenth-month rice is harvested and the spring rice is transplanted is relatively long, it is possible to add one more production crop. If only fifth-month rice is transplanted, work must begin immediately after the harvesting of the tenth-month rice. Consequently, the assignment of labor and draft animals is too hectic, and it is

hard to ensure good cultivation. Furthermore, because of the long growing period, fifth-month rice occupies the land for nearly 7 months, making it impossible to increase the number of crops.

During the initial years of experimentation with spring rice, many difficult struggles between the new and the old, progressive and conservative thinking, and man and nature occurred in our Party organization and among our people. But we were persistent and determined, and the experimentation with spring rice thus gave our province rational farming formulas such as: tenth-month sweet potatoes + spring rice + early tenth-month rice; potatoes or various types of vegetables + spring rice + early tenth-month rice; duckweed + spring rice + tenth-month rice. With these new farming formulas we met the succession cropping requirement, added one production crop, restored the soil, and increased fertility in order to step up intensive cultivation. Moreover, by conducting experiments in the field we came to realize more clearly that spring rice could also give higher yields than fifth-month rice. But we did not have a great deal of experience in producing spring rice with the new rice strains and we also had not selected the best strains. Thai Binh is a coastal province and 80 percent of the cultivable area is acidic and alkaline soil which has not been restored well. Although water conservancy work has been done, there is no capability for combatting drought and waterlogging. The source of fertilizer is limited, especially nitrogen fertilizer which the state is unable to supply in large quantities. Techniques in spring rice cultivation are not sidely known by the cadres and masses. Some places where poor and even disastrous harvests have occurred are afraid of difficulties and lack the confidence to give the chance for development. All of these difficulties demand that the expansion of the spring rice area be done gradually.

To overcome these difficulties and create conditions for the gradual expansion of the spring rice area, we have: actively guided the spreading of lime and the use of silt to clean up the acidity and alkalinity and restore the soil; stepped up the water conservancy movement through major, medium, and small irrigation projects aimed toward closely coordinating these three types of projects; attempted to supply additional electric pumps and oil pumps to support irrigation and drainage requirements; stepped up the fertilizer production movement, especially duckweed; continued to select good rice strains and, at the same time, trained the cadres and people in spring rice cultivation techniques. Thanks to this, the spring rice area has gradually been expanded. The spring rice area accounted for the following percentages of the winter-spring rice area in the years indicated: 1967- 5.6 percent; 1968- 12 percent; 1969- 27.5 percent.

The benefit of spring rice is growing increasingly evident. Spring rice yields are getting higher, much higher than fifth-month rice. The average spring rice yield for the entire province in 1967 was 27.2 quintals per hectare while fifth-month rice yielded 25.4 quintals per hectare; in 1968, the spring rice yield was 31.1 quintal per hectare while fifth-month rice yielded 23.3 quintals per hectare; in 1969, the spring rice yield was 25.8 quintals per hectare while fifth-month rice yielded 21.4 quintals per hectare.

Many spring ricefields yielded an average of 50 or 60 quintals per hectare per crop. Townships and cooperatives which transplanted considerable spring rice of abandoned fifth-month rice entirely for the cultivation of spring rice with correct techniques all had fairly high yields. And spring rice gave high yields not only in the cooperatives which had good land, but also in cooperatives in the marshy, acidic area and the coastal, alkaline area where restoration of the soil and active fertilizing was begun.

Based on this actual situation and the 1969-1970 winter-spring crop, our province decided to expand the spring rice area to 70 percent of the winter-spring rice area with a view toward rapidly increasing the total grain output, creating a new change in agriculture in accordance with the tenor of the resolution from the Political Bureau on the 1970 state plan and, at the same time, successfully achieving the objective of 5.5 to 6 metric tons of paddy per hectare annually which the resolution of our party organization's Congress of Representatives set forth at the beginning of 1969. We think that if Thai Binh is to have high rice yields and output it must actively expand the area under spring rice instead of fifth-month rice and gradually make spring rice become the main crop. This is because we have been unable to create any high-yield fifth-month rice strain similar to the new rice strain. The primary shortcoming of the fifth-month rice is the tall, weak stalk which cannot be fertilized a great deal. It topples over if it is and the yields are low. Several years ago we practiced the intensive cultivation of fifth-month rice with tep and sai duong strains in agricultural cooperatives to gain experience; however, yields were only approximately 40 quintals per hectare in the best fields. Conversely, spring rice strains have many strong points, especially the strong stalk which does not topple over. As a result, it is not damaged from heavy rains at the end of the season and, at the same time, can withstand considerable fertilizer. Thus, the possibility of intensive cultivation to boost yields exists.

Even though agriculture's material and technical base is limited and industrial support to agriculture is not extensive, Thai Binh Province has the conditions necessary for expanding the spring rice area. These conditions are: cooperatives have been strengthened both ideologically and organizationally; management proficiency and intensive cultivation techniques have been improved; the water conservancy base has been actively developed, and drought and water-logging have been basically resolved; land has been greatly restored and the amount of serious acidic and alkaline area is not great; more fertilizer especially duckweed, can be produced than before; good short-term rice strains have been selected, especially the new, higher yielding rice strains; the basic problems with the schedules for and techniques in producing spring rice have been initially identified through many years of experience; a few of the cadres and people have knowledge and experience in producing spring rice. Along with these subjective factors, our province has also received close leadership and guidance from the national government. It has helped considerably with electric power, draft animals, fertilizer, and so on. Consequently, the production of spring rice over a wide area as we decided has a basis and has taken into account the conditions for ensuring success. It would be wrong not to develop these advantages for expanding the spring rice area

in order to achieve high yields and considerable output. However, the specific amount of spring rice area to be expanded in each area and cooperative must be specifically calculated so that it suits the conditions and capabilities there. Do not arbitrarily set too high a percentage before creating enough conditions to guarantee success.

Understand the Important Factors and Provide Close Guidance Right From the Beginning When Expanding the Spring Rice Area

The capability for expanding the spring rice area in Thai Binh exists. But in order to turn the capability into reality and firmly guarantee success, we have devoted particular attention over the past several years to the following important factors:

1- We expanded democracy and created unanimity and high determination from the provincial level to the grass-roots level in formulating and carrying out the plan to develop spring rice.

The production of spring rice in place of fifth-month rice is something new. Something which has just been conceived frequently encounters difficulties and obstacles. For a long time our people have only been familiar with the production of fifth-month rice. Experience in the production of fifth-month rice has been accumulated over many generations and the habits in producing fifth-month rice are deeply rooted in everyone's subconscious. Therefore, the expansion of the spring rice area is a revolution in production habits, techniques, and thinking.

The process of producing spring rice in our province is a difficult and complicated ideological struggle process, the solution to one thought giving rise to another. Many places expended many workdays in producing spring rice during the initial years, yet yields were low and sometimes complete failures becuase experience was limited and good strains had not been selected. Because of this, many people felt that Thai Binh's fields could not grow spring rice. Some even hated it, felt it was hard to work with, they thought the rice was not tasteful and lacked sufficient nutrients, and so on. When good strains were selected, when schedules and techniques for producing spring rice were determined, when spring rice yields were much higher than fifth-month rice, and when the benefits of spring rice had been proven, there was then the feeling that although the spring rice yields were high, the production of it required high production expenditures, the economic effectiveness was low, and so on. Through actual experiences in many cooperatives and especially through the movement to build "10 metric ton Nguyen Van Be" fields, one thing became evident. Even with a material and technical base which is not extensive and with most of the labor done manually, by knowing how to provide good guidance and working right on schedule with the correct techniques, spring rice yields were considerably higher than fifth-month rice yields even though the workdays expended on working on 1 hectare of spring rice were more than with fifth-month rice and production expenditures were somewhat higher. And when specific calculations were made in a number of cooperatives which had produced high spring rice yields, the number of workdays and the amount of production expenditures for producing a quintal of spring rice paddy were frequently

lower than with fifth-month rice. Since then, the thinking above has gradually been alleviated.

Many other thoughts surfaced at the time of the last winter-spring season when our provincial party committee advocated expanding the spring rice area to 70 percent of the winter-spring rice area. For example, there was the feeling that the production of such a large amount of spring rice would detract from the significance of intensive cultivation and successive crops; there would not be enough straw for roofing homes or for cooking if a large amount of spring rice was produced; there would not be enough fertilizer or enough manpower to keep on schedule if a large amount of spring rice was produced. Some people even felt it was risky. We had taken these matters into account prior to making the policy decision. We felt that cultivating a part of the spring rice area in order to do multicropping and succession cropping and to experiment with techniques in the intensive cultivation of rice was a correct policy during the years when there was not a great deal of experience in producing spring rice and when the material and technical base was weak. The benefits of spring rice have been obvious. Conditions for expanding the spring rice area exist. Is it possible to stop with a small area in order to do multicropping and succession cropping? On the contrary, only by expanding the spring rice area will it be possible to rapidly increase rice yields and output. At the same time, the expansion of the spring rice area not only does not detract from the significance of multicropping and succession cropping, it creates better conditions for it.

In the daily activities of the people the need for straw and stubble is essential. But of the two needs, rice and straw, the need for rice is more important. Thus, does it make sense not to expand the spring rice area, which could provide much more rice, simply because of the need for straw? Furthermore, there is not a great difference in fact between the amount of straw from spring rice and fifth-month rice. If the intensive cultivation of spring rice is good, spring rice will give high yields and a large amount of straw. Moreover, we have many possibilities for overcoming the difficulties with fuel and home roofing materials compared with the rice difficulties.

Spring rice needs a large amount of fertilizer. A large amount of fertilizer must be spread to get high yields. This is obvious. But the source of fertilizer in Thai Binh could be developed further by knowing how to step up the production of it and by knowing how to fully use all of the sources, especially duckweed and sesbania. On the other hand, with additional chemical fertilizer being provided by the state we could, if rice yields were high and grain increased substantially, reserve an amount of paddy for export or reserve grain for raising more pigs. Thus, we would have more fertilizer, more pigs for export and, as a result, could exchange them for chemical fertilizer.

Thai Binh does not have a manpower shortage, generally speaking. However, labor would be very hectic at planting and harvest time in areas where there is a high average land area if a large amount of spring rice is produced without figuring the farm work specifically in an effort to organize manpower rationally. But if manpower is calculated and arranged well and guidance is

close and comprehensive, there will be less manpower difficulties in producing spring rice than in producing fifth-month rice. This is because the planting schedule for spring rice is later than for fifth-month rice. As a result, there is a longer period of time for basically completing soil work, fertilizing, and producing duckweed prior to transplanting; and manpower would be concentrated on doing the transplanting rapidly and systematically.

Thus, if Thai Binh's actual situation is not firmly understood and no stand is taken when examining problems, there will be no basis for solving the above difficulties, creating high unanimity in actively expanding the spring rice area, and pushing aside reflections of conservative thinking, fear of difficulties, and lack of confidence.

The cultivation of spring rice over a wide area is something which is closely related to the income of cooperatives and the life of the cooperative members. Thus, there can be no force or coercion. Instead, everyone must be made, on the basis of education and persuasion and an analysis of the capabilities, advantages, and difficulties, to clearly understand and to voluntarily and conscientiously work. In order to do this well, we publicized the province's policy on the 1969-1970 winter-spring crop and encouraged cadres and party members at all levels and in all sectors as well as numerous cooperative members to hold discussions, get involved in formulating plans for expanding the spring rice area, and determine measures for implementation. We allowed freedom of thought during the course of the discussions. Differences were aired, rights and wrongs were analyzed, and actual circumstances were determined for substantiation.

In an effort to expand democracy and simultaneously avoid lax leadership in formulating plans, we relied on: the zoning of production; land, water conservancy, fertilizer, and manpower conditions; management proficiency; experience in the intensive cultivation of spring rice; and the determination of the cadres and people in each locale. This was aimed toward inspiring a suitable amount of interest in spring rice work.

Based on the provinces interest, the districts held discussions on formulating their plan norms based on the local situation and aroused the interest of each township. At the grass-roots level, the party committees and chapter committees also relied on the district plan norms to lead the party organization, party chapters, and management staffs of cooperatives in analyzing the specific capabilities and conditions of their own township and cooperative. This was aimed toward formulating standards and discussing practical measures. Afterwards, they were brought up before the production units for the cooperative members to discuss. Then a Congress of Cooperative Member Representatives made the decisions.

In formulating the plan, the amount which came down from above was simply to arouse interest. The decision-making depended on the calculations and struggle spirit of the cadres and people at the grass-roots level. Therefore, after consolidating the norms formulated by the cooperatives, the entire province's area devoted to spring rice only accounted for 50 percent of the winter-spring rice area. This was still low compared with the province's expectations and, in the final analysis, was not going to develop all of the capabilities of the localities. However, we did not pressure the districts and townships

with low norms to increase the norms. We realized that the amount of the spring rice area expanded not only depends on the material and technical conditions, but also on the realization of the cadres and the conscientious spirit of the cooperative members. Therefore, the decision of the cooperative members had to be respected, and efforts would have to be concentrated on guiding work well so that this production crop could be successful. If so, there would be many advantages and new conditions for advancing vigorously forward later.

This policy and method of formulating the plan to expand the spring rice area allowed us to create a high degree of unity throughout the party organization and among all of the cooperative members and to create a fairly enthusiastic desire to prepare all aspects to ensure success. The party committee echelons, sectors, and agricultural cooperatives considered this to be the immediate political task, i.e., to develop all the capabilities and create all the conditions for satisfactory completion while, at the same time, endeavoring to mobilize the cooperative members to actively work.

The high degree of support for the policy of cultivating spring rice on a wide area is very important. This is a factor in success. Realities have indicated that there will be no determination and good results will not be attained in the production of spring rice or anything else if thoughts are not clear and unanimous. Furthermore, our agricultural production is also greatly dependent on natural conditions. If thinking is not clear and unanimous, everyone will not seek to overcome the difficulties and obstacles that may be encountered. Since we are aware of this, we have attempted to work on this problem well. However, there are still a number of places which do not do well. The main reason is the lack of true democracy and the failure to satisfactorily educate and persuade the cadres and party members at the grass-roots level. There are still even instances of coercion and authoritarianism. For example, in some places the cadres of the cooperative force the cooperative members to plant spring rice on the 5 percent land reserved for them because the cadres want to ensure that 100 percent of the spring rice area is planted. Or there are places where the township and cooperative leadership cadres do not thoroughly understand how to produce spring rice on a wide area. Thus, it is planted in poor fields, and nitrogen fertilizer originally reserved for the spring rice is put on the fifth-month rice. The result is that the spring rice is bad and yields are low. The fifth-month rice, on the other hand, topples over because of the large amount of fertilizer put on it and its yields are also poor. Although there are not many of these instances, they do represent authoritarian and bureaucratic supervisory methods which should be resolutely corrected. It must be realized that such supervisory methods are not only problems in carrying out the Party's mass line and in guaranteeing the democratic and collective ownership rights of the cooperative members.

2- We prepared the material and technical base to ensure satisfactory implementation of intensive cultivation measures and techniques.

The production of spring rice with the new, short-term rice strains will give high yields. However, one cannot, with an eye toward high yields, simply expand the spring rice area arbitrarily without specific calculations and preparations. On the contrary, in order to ensure that the expansion of the

spring rice area is suitable and that spring rice production is successful, the capabilities of the locality and cooperative must be thoroughly understood in order to specifically calculate all aspects. At the same time, it is necessary to prepare the material and technical base well, do ideological work well, and strive to provide technical training to the cadres and cooperative members. Experience indicates that spring rice yields will be adversely affected if a particular task is not fully prepared or solutions are not prompt such as a mixture or shortage of seeds, late transplanting, late arrival of fertilizer and insecticide, and so on.

Thai Binh Province has actively created conditions for gradually expanding the spring rice area over the past years. However, the high percentage of spring rice to be produced this year demands that the material and technical base be strengthened and necessary materials fully prepared. Only then will a big success be assured.

First of all, we are stressing the solution of the water conservancy problem because when spring rice begins to sprout it will sprout late and the sprouting rate will be reduced if the rice is suffering from drought or the water level is too high. When the rice blooms and ripens, it is frequently very hot, sunny, and sometimes there are hot, dry Lao winds. A shortage of water will choke the rice tassels and keep the rice from fully blooming and ripening. To ensure active drainage and irrigation, we designated spring rice areas with an eye toward concentrating efforts on repairing or building additional area embankments, plot embankments, and ditches in essential areas, finished dredging river basins and sluices before running water into the fields, and so on. The total volume of water conservancy projects built during the 1969-1970 winter-spring season rose to 2.7 million cubic meters of dirt, exceeding the plan by 300,000 cubic meters. We completed the construction of nearly 40,000 hectares of planned fields which accounted for over 50 percent of the winter-spring rice area. Moreover, we urgently completed 20 additional electric pump stations and distributed over 300 more oil pumps to the cooperatives. Lubricants for the pumps were prepared right at the beginning of the winter-spring season unlike previous years. At the same time, we encouraged the cooperative members to prepare scoops and water sheels for bailing water when necessary, especially during power failures or when machinery was damaged. Supervision over closing and opening irrigation and drainage canals was also prompt. Thanks to doing all of these tasks well, we guaranteed enough irrigation water for the winter-spring crop and kept serious drought from occurring.

The production of a large amount of spring rice requires a large amount of fertilizer. The source of stable manure is limited, so we have stepped up efforts to get sludge and deposit duckweed. To have enough duckweed seeds for reproduction over a wide area, we selected a number of relatively good fields for cultivating and reproducing duckweed seeds. Thus, 70 percent of this rice area was covered with duckweed, 20 percent of which was buried in duckweed two to three times. The districts which produced a large amount of spring rice were also the ones which produced a large amount of duckweed.

For example, Dong Hung District transplanted spring rice on 72 percent of the winter-spring rice area and 95.6 percent of the area was covered with duckweed. Chemical fertilizer, especially nitrogen fertilizer, is usually distributed and transported late every year. Many times it does not arrive in time to be spread when the growth of the rice plants require it. Lime to restore acidic fields is a very essential need for ensuring the good growth and development of the spring rice, but our province has none and must rely on distribution from higher levels and assistance from other provinces. To obtain fertilizer and lime in order to spread it on time, we, on the one hand, recommended that higher levels distribute it early and contacted other provinces to obtain rock lime to bake. On the other hand, we concentrated all the means of transportation in the province on hauling it early and distributing it promptly to the cooperatives. Thanks to this, when transplanting was begun we had over two-thirds of the chemical fertilizer and enough of the lime necessary for fertilizing the fields and restoring the soil.

Soil work must also be done carefully and promptly to ensure that transplanting is right on schedule. However, there is an extreme shortage of draft animals in our province. To solve this problem, we urgently moved in the tractors and draft animals supplied to the localities by higher levels. At the same time, we inspected and repaired the tools for soil work in an effort to promptly distribute them to the cooperatives. Gaining experience from previous years when a number of places were frequently undecided between aeration and soaking, thus causing soil work to run late, we this year had them make a clear determination from the beginning of the season. As a result, the aerated area was aerated well and the soaked area was soaked well, which speeded up soil work.

Clearly realizing the important position of seeds, we have actively selected spring rice seeds over the past years. We have selected two types, TH2 and tran chau lun. Both give high yields and are adapted to the localities. During the 1968-1969 winter-spring season we were supplied a few new strains by higher echelons. We provided direct supervision in order to reproduce them and gain experience on schedules and techniques on many types of land and in many varied areas within the province. Results indicated that the new rice strains gave high yields, so we actively reproduced them in an effort to prepare for this winter-spring season. By distributing the seeds promptly, the cooperatives recieved a sufficient amount ahead of schedule for soaking.

The production of spring rice is frequently fought with the worst difficulties during the seedling stage because they often die from cold which leads to a shortage and to abandoment of land. To limit these difficulties and ensure good seedlings, we built over 100 hotbeds. Places that had no heaters dug holes or found warm places sheltered from the wind for the soaking. Seedling beds were built on good fields with active water. They were not built in fields which were too high in order to keep the seedlings from dying due to the cold. At the same time, we inspected the treating of seeds, soaking, seedling beds, insect prevention, and so on. Because of the close supervision over seedling work, the spring rice seedlings were good this year and many cooperatives had a surplus.

Have good seedlings, but transplant right on shedule. Only then will the rice bloom during the appropriate period, i. e., avoiding late cold spells and the Lao winds. With the expansion of the spring rice area the transplanting season becomes very hectic. To guarantee both aspects, shcedules and techniques, we held training classes on the new-style transplanting for over 70,000 women in all the cooperatives in the province. By practicing transplanting, many places doubled or tripled their transplanting output. Many places also mobilized more men and children to pull up the seedlings in order to let the women concentrate on transplanting. Thanks to this, 95 percent of the spring rice area was transplanted on schedule and techniques were ensured, this despite the widespread flu epidemic after Tet.

3- We kept close guidance and concentrated on each task; we stressed technical training for cadres, party members, and cooperative members.

The production of spring rice over a wide area is something new. The winter-spring crop is the comprehensive production crop encompassing rice, subsidiary food crops, indusyrial crops, and livestock raising. As a result, without overall guidance plans, it is easy to fall into a situation in which one job is successful but another not, such as rice; spring rice may be good but fifth-month rice poor, or vice versa. Based on our experience, there must be specific guidance plans for each crop if guidance is to be comprehensive and is to coordinate all of the aspects in production the most actively and beneficially. Here we would like to cite several experiences concerning the spring rice guidance plan.

In order for the spring rice guidance plan of each level and cooperative to be specific and practical, right from the beginning of the season we advocated that the levels and sectors review the previous years experience in producing spring rice with a view toward clarifying the strengths and weaknesses and pointing out directions and measures for overcoming them effectively. At the same time, we insisted that there be undivided support for the program and measures set forth by the province , especially with regard to the schedules and techniques concluded by the province; here the province's guidance had to be complied with. If any changes were needed, they would have to be brought up before the collective for discussion and a report made to the higher echelon for its decision.

In carrying out this policy, the party committee echelons (from the district to the township), sectors, and circles reviewed experiences and discussed plans and measures. At each echelon, in addition to strengthening the leadership of the party committee echelon, each member was put in charge of a given area and task. Party chapters and party cells put their members in charge of each facet of production and each field. Sectors and circles were also assigned specific tasks in order to satisfactorily develop their functions in support of agricultural production.

To help the cooperative satisfactorily carry out intensive cultivation techniques, we mobilized over 400 cadres and students from the province's agricultural management and techniques middle school to send to the cooperatives. These cadres and students carefully discussed the direction of the winter-spring production and the measures and techniques for the intensive cultivation of spring rice. Thanks to this, they were able to help the cooperatives and report essential matters to higher authorities for prompt solution.

As a result of the specific assignments, stipulating responsibilities clearly, and providing additional cadres to help the grass-roots level, guidance was concentrated and the execution of schedules and technical measures was strict and unified from the top down. Many secretaries and chairmen carried overall leadership well and personally supervised key areas to gain experience. The comrades in the district party committees who were put in charge of townships stayed very close to the production installations and fields in order to keep abreast of the situation and promptly correct deficiencies for the lower levels. Many party committee members and chapter committee members at the grass-roots level satisfactorily led production units, provided guidance on the fields, and eliminated deficiencies on the spot. Many party members set the example in productive labor and in carrying out intensive cultivation measures and techniques. This guided and persuaded the cooperative members to work accordingly.

The growing period for spring rice is short. Thus, only by concentrating guidance on assiduously carrying out each technique can it be ensured that spring rice will develop well. We devoted particular attention to guiding the cooperatives in doing each technique properly and on time, and promptly helped them to take care of the difficulties while carrying them out. For example, during the soil work period we supervised the lower levels in calculating the land, draft animals, manpower, and specific tasks that would have to be done during prescribed periods. For those places that had a large amount of land, a small amount of manpower, and problems with water and draft animals, we distributed more pumps and delivered more tractors to help out. In the transplanting period, it is necessary to inspect, encourage, and ensure that the transplanting is right on the schedule prescribed for each type of rice. But during this period the flu epidemic was developing widely and transplanting was going slowly in a number of places. Many fields had not been transplanted and schedules were about to expire. We promptly mobilized over 10,000 vocational students and teachers, cadres, and state employees to uproot the seedlings and help the cooperatives do the transplanting for between 5 and 7 days. At the same time, we encouraged the cooperatives to help each other. The same was true in caring for the crop. When difficulties were encountered -- such as the lack of sunshine and the prolonged cold rains during February and March, or the poor development of spring rice in a number of fields due to the high degree of alkalinity or considerable acidity, or due to the sudden rise in acidity and alkalinity caused by recent machine plowing -- we sent cadres down to inspect and help, and concentrated lime and fertilizer to promptly save the spring rice. As a result, it was quickly restored and developed vigorously.

These realities indicate that in order to supervise spring rice work well we must stay close to the rice plants from the beginning to the end of the season and must closely guide and concentrate on each technical task. On the other hand, this method of supervision is also for forging in the cadres and cooperative members a disciplined spirit during production and strict implementation of production regulations and technical standards during production.

Agricultural leadership and supervisory cadres should not only thoroughly understand the Party's direction for agricultural development and have a profound and specific work style, but must also understand and guide the successful implementation of techniques involved in the intensive cultivation of spring rice. If they do not thoroughly understand techniques they cannot supervise well. One could say that one of the reasons why spring rice work is poor in a number of areas is because the cadres do not thoroughly understand the techniques involved in producing spring rice.

In recent years we have emphasized training the province's agricultural leadership and supervisory cadres in the technical knowledge needed to produce spring rice. To ensure that the production of spring rice over a wide area attains good results, we also continued to hold meetings or brief courses for the leadership cadres from the province level down to the grass-roots level in an effort to publicize the specific growing characteristics of spring rice and the schedules and techniques involved in working on spring rice, especially the new rice strains. At the grass-roots level alone, we held training classes for over 20,000 management cadres, production unit leaders and deputies, and secretaries of youth subgroups. Many places also organized trips and drills to study and gain experience on each technique such as seedling work, techniques involved in transplanting, care, and so on. For cooperative members, we publicized spring rice cultivation techniques in many ways, such as using the province's radio, books, or newspapers or organizing training or providing guidance in the fields. Thanks to the emphasis on technical training for cadres and cooperative members, the implementation of spring rice measures and techniques made remarkable progress.

*

The successof the recent spring rice crop is a great success. It created for Thai Binh Province for strong advancement. This new posture is that spring rice has not only contributed to solving the grain and food problem, but has also created conditions for the comprehensive, vigorous, and firm development of agriculture and formed the basis for the expansion of agriculture and the development of the local economy. At the same time, we also recognize the fact that Thai Binh Province's agricultural production movement is not uniform. A number of places did unsatisfactory work and rice yields were low. Conservative thinking, fear of difficulties, arbitrariness, and authoritarianism also surfaced from many varied angles. As a result, this limited the success of the recent winter-spring crop. Therefore, in order to bring the new posture into full play, we should satisfactorily apply the experiences gained and do our utmost to overcome the shortcomings and deficiencies encountered. We affirm that in order for Thai Binh's rice production to have high yields and

substantial output and in order for agriculture itself to make new progress, it is necessary to actively expand the spring rice area and make spring rice the main production crop. By producing spring rice over a wide area during the recent winter-spring season, we came to realize our conditions and capabilities more clearly. At the same time, we also realized the problems which require some thinking in order to solve. For example, there is the water problem. Thai Binh has basically solved drought and water-logging under normal conditions. But when there are heavy floods or a large drought, many difficulties still exist. Furthermore, spring rice demands sufficient water and active irrigation and drainage. However, there are many fields in Thai Binh where this condition is not ensured well. Thus, if reliance is placed only on manual labor without strengthening machinery for water conservancy, considerable manpower will be consumed on this which will adversely affect other production aspects in agriculture. And if the water conservancy problem is not solved soon, spring rice cannot be stabilized soon. The problem of fertilizer and lime for restoring the soil is also a very big problem. There must be a large amount of fertilizer for cultivating a large amount of spring rice. There must also be enough fertilizer for other crops. Under present conditions, naturally we must actively expand livestock raising in order to have a large amount of stable manure. We must also attempt to develop green manure, especially duckweed and sesbania. But in order to boost the spring rice yields even higher -- say, for example, 5 to 7 metric tons per hectare per crop -- there must be even more fertilizer, especially nitrogen fertilizer. As for the seed problem, we also must devote attention to selecting the new rice strains well because experience has shown that no matter how good the rice strains are, it will deteriorate if the above work is not done well.

These problems must naturally be solved by the party organization and people of Thai Binh. We must heighten the spirit of self-reliance and fully use all the capabilities of the localities to meet requirements to the highest extent possible. But on the other hand, these are also problems which the development of agricultural production poses to other economic sectors, especially the industrial sector. We are confident that under the leadership of the Party Central Committee, with the efforts of the entire party organization and people in the province, and with the active assistance and effectiveness of the sectors at the national level, we will surely achieve even greater success during the coming winter-spring season.

6915
CSO: 3909-W

VU THANG COOPERATIVE, STANDARD BEARER OF SPRING RICE PRODUCTION

[Article by Song Le; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 41-46]

Vu Thang Cooperative Replaced Fifth-Month Rice with Spring Rice During the 1969-1970 Winter-Spring Season to Ensure a High Yield

They actively accelerated water conservancy and fertilizer efforts, improved the fields, and strengthened leadership in the Vu Thang cooperative in Kien Xuong district of Thai Binh province. As a result, they increased the yield of the fifth-month rice. The fifth-month rice yield reached 3.6 tons per hectare in some years. However, thru the process of stepping up intensive cultivation measures in Vu Thang, they clearly recognized that the fundamental weakness of fifth-month rice was that the rice seed grew to be tall but weak, was easily toppled, and could not stand up under a great deal of fertilizer. It therefore was unable to keep pace with the forceful rate of expansion allowed with intensive cultivation measures. It would be necessary to institute a revolutionary change with regard to seed if the effectiveness of ever-improving technical and intensive cultivation measures was to be fully manifested; and only in this way would it be possible to rapidly increase the yield and output of rice during the winter-spring season. That was a problem which totally concerned the Vu Thang cooperative.

The cooperative experimented with spring rice in 1965. It used a short term rice seed, which grew low and solid, would not topple, could stand up under a great deal of fertilizer, and could show a high yield. Because of a lack of experience, a great deal more effort and assets were used on the spring rice during the first year than would have been used on fifth-month rice and the harvest was not commensurate. Most people were not "infatuated" with the spring rice. However, under the leadership of the party committee, the cooperative management section persisted in the cultivation of spring rice and expanded the area devoted to experimental transplanting. They both worked and studied in Vu Thang, used practical experiences to elevate the awareness of cooperative members, and allowed

those members to clearly recognize the important position of seed measures within the overall system of intensive cultivation. The cultivation area devoted to spring rice was gradually expanded until it was stabilized. By 1969, the cultivation area devoted to spring rice in Vu Thang occupied 56 percent of the total winter-spring season cultivation area. In the early years, although all of the spring rice fields were not good and all production units working on spring rice did not increase the harvest, the output of spring rice in Vu Thang was generally higher than the yield of the fifth-month rice. In particular fields, the spring rice output doubled the yield of the fifth-month rice. Moreover, the spring rice yield increased faster and with greater stability than did the yield of the fifth-month rice. That fact can be specifically proven by the chart below:

Unit = tons/hectares and the percentages shown are the increases or decreases compared with 1965:

YEAR	1965	1966	1967	1968	1969
Fifth-Month Yield	2.8	2 - 29%	3.6 + 28%	3 + 7%	3.5 +28%
Spring Rice Yield	3	3.3 + 10%	4.3 + 43%	4.3 +43%	4.5 +50%

The spring rice yields are much better than the fifth-month rice yields and that is a fact to which all of the cooperative members can attest. On the other hand, through practical experience in Vu Thang, they recognized that it was necessary to change from fifth-month rice to spring rice to acquire the conditions necessary to increase crops and rotate crops, as well as to create additional conditions under which to more rapidly increase the spring rice yield. The growth period for fifth-month rice is very long, nearly 7 months. When working fifth-month rice, the cooperative does not have the opportunity to increase crops. December and January are the best months for processing duckweed but that is also the time at which the cooperative must concentrate upon transplanting the fifth-month rice. In order to ensure that the fifth-month rice is transplanted in accordance with the proper agricultural schedules, the cooperative must begin work on the soil immediately following the harvest of the tenth-month rice. Therefore, it is often not done carefully and the cooperative falls into a worsening situation with regard to labor and draft power. On the contrary, the growth period for spring rice is short and the transplanting schedule is later. This allows the cooperative enough time to work on the soil carefully and to acquire conditions under which it can increase the duckweed crop (a vitally important source of green manure to the cooperative) before the transplanting. Careful work on the soil and increased fertilizer are very good conditions in support of the intensive cultivation of spring rice and ensure an even better yield.

In recent years, when the cultivation area devoted to spring rice and fifth-month rice was approximately equal, it was difficult for the cooperative to provide good leadership over agricultural schedules. It often faced the problem of concentrating upon the fifth-month rice transplanting while ignoring the spring rice seedlings; or was requried to concentrate upon transplanting the spring rice to the disadvantage of care for the fifth-month rice. This problem could only be overcome if the cooperative shifted over completely to the cultivation of spring rice. The shift from fifth-month rice to spring rice was an urgent requirement facing the cooperative leadership.

After five years of working spring rice, all of the cadres and members of the Vu Thang cooperative recognized that a high winter-spring yield could only be obtained with the cultivation of spring rice and that the fifth-month rice could only be replaced by spring rice. They knew that this was the only way to quickly resolve the grains problem, a "basic" problem which had to be resolved if living conditions in the cooperative were to be improved. On the other hand, Vu Thang also had a corps of cadres relatively experienced in the techniques of spring rice and they would be able to lead the cooperative members in promptly resolving problems which occured during the shift from fifth-month rice to spring rice.

Sufficient water, plenty of water, and ever-improving soil were also advantageous conditions allowing Vu Thang to make this change.

With such relatively ripe objective and subjective conditions, they decided in Vu Thang to stop the cultivation of fifth-month rice and to cultivate spring rice in its place on their total cultivation area, 226.6 hectares, during the 1969-1970 winter-spring season. At the same time, they also boldly replaced the old spring rice seed with a new spring rice seed. This new spring rice seed, which had been experimentally cultivated during the 1968-1969 winter-spring season, was a vastly superior seed to the one which they had cultivated during previous years in Vu Thang. This new spring rice seed devoured fertilizer, grew strongly and quickly, had solid plants, had large blossoms and many grains, was low on chaff, had heavy grains, and so forth.

Having prepared well ideologically, as well as in regard to technical and material bases, the cadres and members of the Vu Thang cooperative began the 1969-1970 winter-spring season with an aggressive revolutionary spirit and a determination to succeed. The sacred will of President Ho ensured a successful spring season.

The new spring rice seed was cultivated in improved acid and shallow fields and it was perfectly cared for from the beginning to the end of the season, thus eliminating confusion. The great efforts of the collectivized peasants in Vu Thang were appropriately rewarded . The output of this winter-spring season increased by 78 percent over the 1968-1969 winter-spring season

(that is, from 618.5 tons up to 1161.7 tons). One cultivation worker produced 1129 kilograms of paddy during this season, or enough to feed 10 men if one man eats from 20 to 25 kilograms of paddy per month. On one hectare of spring rice area cultivated with the new seed, the cooperative harvested an average of 5,165 kilograms paddy, increase of 70 percent over the 1968-1969 winter-spring yield. Such remarkable spring rice yield increases required greatly increased expenditures per hectares (C. went from 453 dong up to 589 dong while V. went from 517 c up to 749 c) but the cost per 100 kilograms of paddy was significantly reduced. It decreased from 27.37 dong in 1969 down to 23.11 dong (based upon the stipulated value of 1dong per working day). Costs could have been reduced even more if the cooperative had devoted attention to the greater use of improved tools, especially in the areas of rice transportation and fertilizer.

There was a surplus of spring rice in Vu Thang and they quickly employed it to meet their paddy obligations to the state for all of 1970. Nevertheless, the per capita grains consumption was still 38 kilograms per month, considerably higher than it had been in previous years, 16-25 kilograms per month. The capital accumulation treasury and the public welfare treasury in the cooperative was greatly increased. There was a 21 percent increase in capital accumulation and an 11 percent increase in public welfare during the 1969-1970 winter-spring season, as compared with all of 1969.

This great progress in total output and rice yields, as well as the output of each cultivation worker, during the recent winter-spring season created a totally enthusiastic atmosphere within the cooperative and stimulated it to accelerate tenth-month production and actively make plans for the 1970-1971 winter-spring season. Word of the success spread from person to person. In only a few months, more than 100,000 people, mostly cadres who had led production units and cooperatives, came from near and far to learn the specifics of the great success in Vu Thang.

The Necessity to Go Through a Period of Preparation in Vu Thang in Order to be Able to Shift From Fifth-Month Rice to Spring Rice

During the 1969-1970 winter-spring season, there was enough water in the fields of Vu Thang. There were no earthquakes and no floods. The soil was carefully worked and 85 percent of the cultivation area was treated with dry compost while the remainder was treated with wet compost. The rice was transplanted in accordance with the proper agricultural schedules and techniques. A great deal of fertilizer was used: On the average each hectare received 250 kilograms of nitrogen fertilizer, 270 kilograms of phosphorous fertilizer, 554 kilograms of lime, and 24 tons of various types of manure. The rice was weeded three times and the fields were "cleaned out" of blight. Those are the conditions which directly allowed the spring rice cultivated with new seed recently in the Vu Thang cooperative to develop well and to show a remarkable yield.

However, the above-mentioned conditions did not just appear out of the blue. It was rather the entire process of struggling against difficulties continuously on the part of the cadres and members of the Vu Thang cooperative which created those conditions.

Imagine, if after the small cooperatives in Vu Thang combined into a large scale cooperative, the party organization had not known how to promptly take advantage of the power of the new relationships of production in such a way as to accelerate the technical revolution in every respect and to rapidly improve the acid and shallow fields, would the conditions necessary for the development and high yield of the spring rice existed.

The vital importance of water conservancy is readily apparent in Vu Thang. The configuration of the land in this area resembles a frying pan with Vu Thang in the middle. It takes only a 200 milimeter rain to flood the entire village. When the rain is heavy, the water from other areas rushes in and floods the rice weekly. During the fifth-month season, two dry weeks constitute a drought and the acid raises up to wither the rice. The combined yield of the fifth-month and tenth-month rice had not reached 3 tons. If the water conservancy problem was not quickly resolved, there would be not way to alter that basic situation. The people of Vu Thang under the determined leadership of the party organization worked for five long and continuous years in digging 1,250,575 cubic meters of earth, building 23 bridges and culverts, installing 151 water lines, and progressively perfecting the system of irrigation canals. The water conservancy projects of the cooperative were closely combined with the perfection of water conservancy projects in the district and with the provincial level expansion of the Kien River. With the above-mentioned efforts, the cooperative satisfied its requirements and guaranteed that high heat would not crack the earth in the fields and that heavy rains would not flood the rice for long. The cooperative also adopted water conservancy measures which would eliminate the acid and expended a great deal of energy in moving 700 tons of lime into the fields from far away. This "withdrew" the acid and made the acid fields "sweet".

In conjunction with water conservancy efforts in Vu Thang, they totally accelerated fertilization efforts. The cooperative endeavored to increase both the quantity and quality of manure. There were 2.7 hogs per hectare of cultivated ground. The cooperative also fully employed human waste and urine while devoting attention to developing various types of green manure, such as: duck weed and sesbania. Vu Thang has grown from a place in which there was very little duck weed into a place in which duck weed is skillfully grown. As of 1969, the cooperative was spreading 48 tons of various types of manure per hectare with 2 crops. All of the above taken together produce an integrated result: the soil in Vu Thang became more and more fertile while the acid content decreased (The pH content went from 3.5 - 4 up to 5 - 6).

In their five years of working on water conservancy, improving the fields, and increasing the fertilizer in Vu Thang they also gradually became familiar with spring rice, a rice seed that is more highly productive than fifth-month rice but one which also demands better water and fertilizer conditions, agricultural schedules, and so forth. Having experienced both success and a lack of success in working spring rice in Vu Thang, they have accumulated a wealth of experience. That was also one of the important factors leading to the great success of the 1969 - 1970 winter-spring season. Without experience in working spring rice it would not have been possible to unite the cooperative in its determination to completely shift from fifth-month rice over to spring rice in 100 percent of the cultivation area.

In the process of working out the technical measures for intensive cultivation of the rice, the corps of cadres in Vu Thang grew rapidly and acquired excellent standards in the management of the economy, as well as technical knowledge. Because of the presence of such a competent corps of cadres, when it came time to stop cultivating both fifth-month and spring rice and to shift completely over to spring rice, the cooperative was able to promptly assign agricultural jobs to them which were appropriate to the revolutionary change that had taken place in the structure of agriculture. The cooperative did well in every job right from the beginning of the winter-spring season because it knew how to schedule jobs scientifically, provide close leadership, and tightly manage labor. The cooperative knew that it must concentrate upon working on the soil, working on duck weed, transporting fertilizer out to the fields, and sowing seedlings during the period immediately following the tenth-month harvest and January 1970. As a result, the earth was worked carefully, duckweed was spread and buried at an equivalent rate of 65 percent of the rice cultivation area, enough fertilizer was transported out to be spread on the fields, and the compost was harrowed. During this period, the cooperative devoted a great deal of attention to seedlings because this was the "most basic aspect". Because of the concentrated, united, and direct leadership provided by the management section and because they knew how to learn from their experience with seedlings in previous seasons to improve techniques in all respects, from working on the soil, soaking, composting, sowing, and cultivation, the seedlings during this season grew thickly and well. One seedling reproduced almost ten fold, thereby reducing by one-half the seedling area needed for transplanting fields. The volume of paddy seed used during this season was less than half that needed last year and there were still excess seedlings because the paddy was soaked exactly as required and the growth ratio reached 95 percent. The seedlings grew thickly and without weeds. They were constantly moistened and were therefore easy to pull. Only one puller was required to support from 3 to 5 transplanters.

Before it began the period of concentrating its efforts upon transplanting, the cooperative started four short term training class on new transplanting techniques for 810 cooperative members and 200 adult women students. During the transplanting, the cooperative promptly divided the

groups up into older people, younger people, fast transplanters, and slow transplanters, thereby overcoming the problem of inter-dependence. At the same time, it created an atmosphere of emulation among the transplanting groups which resulted in an increase in transplanting productivity from 3 to 4 units up to an average of 9 to 10 units per worker. Individual transplanters covered as much as 1.5 sao per day. The transplanting plans called for 20 days but the cooperative had virtually completed it in only 15 days. Therefore, in a short period of time, the cooperative guaranteed that all of the cultivation area was transplanted in accordance with proper agricultural schedules and techniques. This contributed to the great success of the recent spring rice season.

The clear cut distribution of labor among management cadres, as well as among production unit cadres, and the implementation of a system of scheduled visits to the fields and inspections of the units ensured that the spring rice in Vu Thang would be perfectly cared for from the beginning to the end of the season.

It was the same with regard of the management of expenditures. Because of the availability of a corps of experienced cadres the cooperative boldly and rapidly increased expenditures when shifting over to the total cultivation of spring rice in order to ensure its advantageous development. There were two inappropriate expenditures but generally they were all necessary. For example, as compared with 1969, the working days for spreading fertilizer increased by 100 percent because in addition to the quantity of nitrogen fertilizer provided to the cooperative by the state, the cooperative had to process a great deal of mud fertilizer and duck weed. The cooperative had enough time to plow and harrow so that the soil would be soft. At the same time, it treated all of the field dikes in order to kill insects and this caused an increase of 92 percent in working days for the soil and treating the dikes. Working days for transplanting increased by 55 percent because the cooperative added work points to the contract in order to encourage the cooperative members to transplant quickly, in accordance with new techniques, and so forth. The technical and material bases of the cooperative were still poor and underdeveloped, the per capita field area was very low, and labor power was abundant. Therefore, in order to rapidly increase the gross output of rice, the cooperative could, and must, expend many working days. This was a fact which could be accepted. However, if the cooperative could have actively prepared and used many improved tools, such as boats and vehicles to transport rice and fertilizer and rice pickers in place of manual labor, a number of working days expended for the winter-spring season could have been reduced.

On one hand, they boldly increased expenditures necessary to support intensive cultivation designed to increase the yield of the new spring rice, that is, they increased fertilizer, lime, and so forth. On the other hand, in Vu Thang they strived to strengthen management and improve techniques in order to save that which could be saved. They worked well on seeds and saved 25,000 dong in the cooperative. They improved the method of spraying

pesticides by spraying uniformly on all of the fields during each period. As a result, they "cleaned out" the insects but used only one-third as much pesticide as they had used during the last season and saved 4,000 dong, and so forth. The management of expenditures in the cooperative was done relatively well because they knew how to rapidly increase necessary expenditures and also knew how to save where it was possible. As a result, they actively contributed to the increased rice yield per unit of cultivated area and reduced the cost per unit of production.

All of the above shows that in order to shift from fifth-month rice to spring rice on all winter-spring cultivation area, and to acquire a foundation for the acceptance of the new spring rice seed, and to obtain a high yield the cooperative must have a definite period of time in which to create the necessary material and technical conditions: sufficient water, a great deal of fertilizer, good seed, improved fields, and so forth. At the same time, it is also necessary to accumulate experience in working spring rice so as to be able to educate the masses and make them see through actual production experience the practical side of expanding spring rice cultivation area.

The skill of Vu Thang did not come from something totally unique which is not available in other places. The true skill of Vu Thang was there and with the help of the state the cooperative overcame every difficulty to create stable conditions in a relatively short period of time so that they could shift to the cultivation of spring rice in place of fifth-month rice. At the same time, they accepted the new spring rice seed, made great progress, and obtained the yield of the recent spring season.

The conditions necessary to win such a success as that of Vu Thang are not something special. If other cadres and cooperative members are highly determined, they also can create the conditions necessary to obtain a high yield as they did in Vu Thang.

The success of the 1969-1970 winter-spring season in Vu Thang presented the cooperative with many new problems requiring thought. First of all, there is the problem of developing hog raising. In order to obtain a yield of 5 tons of paddy per hectare of cultivated ground in two seasons, it is necessary to have at least two hogs. If during one season there is to be a yield of five tons of paddy or much more, each hectare of cultivated ground must have many hogs. This is the only way in which to obtain an adequate balance to ensure that there is sufficient fertilizer to gradually increase the rice yield, or at least to stabilize production in the event that the state has not yet provided a great deal of nitrogen fertilizer to the cooperative. Can the cooperative reduce the volume of grains produced in order to develop hog raising more forcefully when the paddy output rapidly increases? Under the new conditions and given the stock raising problem of Vu Thang, should they rapidly introduce a commercial sector as important as cultivation in order to quickly transform

the cooperative from one which cultivates rice into one which specializes in both the cultivation of rice and hig raising? That is probably the direction which the Vu Thang cooperative and other townships in the key rice growing areas should go in order to acquire a great deal of grains and food for the industrialization of socialism and the improvement of living conditions for the people.

The success of the 1969-1970 winter-spring season in Vu Thang also presents another problem to the cooperative. They must more boldly use improved tools and machinery in support of intensive rice cultivation. This would at the same time reduce the number of working days devoted to cultivation and forcefully stimulate a new distribution of labor in the cooperative. What would the surplus workers do and where would they go? That is a major and complicated problem and it relates to the progress of the cooperative. Vu Thang should quickly forecast plans to resolve this problem with the help of the district and the province so as to avoid stagnation in the future.

Unsatisfied with accomplishments that have been recorded, cadres and members of the Vu Thang cooperative are immediately concerned about doing better in water conservancy and strengthening the still weak aspect of improved tools. They are especially concerned with trying to rapidly increase the number of hogs and with forcefully expanding duck weed in order to acquire much more organic fertilizer, which will respond to the requirements of the new spring rice seed. At the same time, they are striving to do well in other efforts, preparing additional conditions necessary to attain higher rice yields during the 1970-1971 winter-spring season, and maintaining their position as the standard bearer in spring rice production for North Vietnam.

6915
CSO: 3909-W

EFFECTIVENESS OF SPRING RICE IN THE FIELDS OF HANH LAC COOPERATIVE

[Article by Huu Hanh; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 47-50]

The Han Lac Cooperative in Hai Hung Province has only been cultivating spring rice for 3 years. In 1970, it planted spring rice in 51 percent of its winter-spring cultivation area and clearly demonstrated that the spring has many advantages over the fifth-month rice. It also created a new atmosphere in intensive cultivation and stimulated the rapid progress of agricultural production in the Hanh Lac Cooperative.

Quickly Surpassing the "5 Tons" Goal and Rapidly Increasing Paddy Output

All of the winter-spring rice area in the Han Lac Cooperative was cultivated with fifth-month rice in 1966. The fifth-month rice yield was only 1300 kilograms per hectare. The tenth-month rice was good, showing a yield of 2700 kilograms per hectare. However, the annual rice yield of the cooperative (in 2 seasons) was only 4000 kilograms per hectare. Even in 1967, the year in which the overall tenth-month harvest was the largest in this area, the rice yield (for 2 seasons) in the cooperative only reached something over 5000 kilograms per hectare. In order to obtain the above-mentioned rice yield, the cooperative had to make a great material effort. Further increases in the rice yield were difficult because of the limitations of the low-productivity rice seed, especially fifth-month seed.

On this same winter-spring rice cultivation area this year (1970), the Hanh Lac Cooperative planted 51 percent spring rice and 49 percent fifth-month rice. The yield of the spring rice was 4000 kilograms per hectare, or equal to the total rice output (for 2 seasons) in 1966. Additionally, 1 hectare of spring rice produced 1500 more paddy than 1 hectare of fifth-month rice planted during this season. Because of the high yield of the spring rice, the cooperative showed an average yield of more than 3300 kilograms per hectare during this season. The tenth-month rice for this year has not been harvested but it is better than it was in 1969 and the yield could reach 2900 kilograms per hectare. If the tenth-

month rice production in Hanh Lac this year is equal only to that of last year (nearly 2700 kilograms per hectare), the cooperative will show a yield of 6 tons of paddy per hectare in those fields taking two crops annually.

It is clear that the reason Hanh Lac was able to surpass the "5 tons of paddy" goal so quickly was because of the important role played by the spring rice planted in more than half of the cultivation area during the recent winter-spring season. If spring rice had been planted on most of the winter-spring cultivation area, the degree by which the Hanh Lac cooperative surpassed the "5 tons" goal would have been considerably more. That is a reality which will surely generate results in a short period of time in the cooperative.

There is still a great potential for the annual expansion of the cultivation area devoted to spring rice in the Hanh Lac Cooperative. In 1966, the cooperative planted 180 hectares; and in 1970, only 182 hectares. Therefore, the rapid increase of rice output per unit of cultivated ground is the primary road toward an increase in the total paddy output in this cooperative.

In order to rapidly increase rice yields, they must of course accelerate intensive cultivation in the fields. In this regard, the Hanh Lac Cooperative is greatly restricted and therefore, its intensive cultivation standards have not changed greatly, as compared with other good cooperatives in Van Lam District. The annual tenth-month rice output (from 1966 to 1970) in Hanh Lac has been stable at approximately 2700 kilograms per hectare. As a result, the annual rice output has not varied significantly. But many changes have taken place in the output of winter-spring rice over the past several seasons. During the 1966 winter-spring season in Hanh Lac, the entire crop was fifth-month rice and the yield was only 94.7 tons. On this cultivation area, they planted 51 percent of the 1970 winter-spring crop with spring rice and obtained an output of169.6 tons; the remaining 49 percent was planted with fifth-month rice and only 84.6 tons were harvested. Therefore, although the cultivation area was almost identical, the spring rice output was double that of the fifth-month rice. This demonstrated the significant advantage of spring rice over fifth-month rice in the fields of the Hanh Lac cooperative and as a result, the 1970 winter-spring rice output approached 254 tons. The tenth-month rice in Hanh Lac this year will be the best ever and it is anticipated that the harvest will go above 300 tons. The total output of the cooperative for all of 1970 may go above 550 tons. Therefore, as compared with the total paddy output for 1966 (not counting the rice harvested and retained rather than used to meet obligations to the state), the cooperative will have an additional 157 tons of paddy or an increase of more than 38 percent in 1970.

That proves that the rapid increase in the paddy output in the Hanh Lac Cooperative was mainly due to the results of spring rice cultivation. This fact has made the cadres and members of the Hanh Lac Cooperative believe more firmly in spring rice and they are determined to prepare every condition necessary to cultivate spring rice on most of their winter-spring rice cultivation area with a view toward more rapdily increasing the total paddy output of the cooperative. On that basis, they will create the conditions necessary to quickly improve living conditions for the cooperative members, increase the cooperative's capital accumulation, and make a much greater contribution to the state.

The New Atmosphere in Intensive Cultivation and Economic Effectiveness

Working spring rice not only has the effect of rapidly increasing the total paddy output but also creates conditions under which the cooperative can implement intensive cultivation measures in all of its fields. By moving spring rice into fields where two rice crops have always been cultivated, the Hanh Lac cooperative has restructured its agriculture. The tenth-month rice is transplanted at the beginning of July and harvested at the end of November while the spring rice is not transplanted until the beginning of the following February. Therefore, from the time the tenth-month rice is harvested until the spring rice is transplanted there is a "free soil" period of nearly two and one-half months. During the first 10 to 15 days of this period, the cooperative carries out the initial plowing and prepares the soil on all of the spring rice cultivation area. Then, as soon as it has enough duckweed seed, the cooperative drains off the water and removes the duckweed. By the end of December, all of the fields reserved for spring rice transplanting have been covered with duckweed. In previous years, when the cooperative did not work spring rice, it had to begin plowing and harrowing the fields immediately after the tenth-month harvest so that it would meet the fifth-month rice agricultural schedule. As a result, there was no soil for growing duckweed advantageously as is now the case. Because they planted spring rice this year (1970) and gained those two months for growing duckweed in Hanh Lac, they had enough duckweed to spread on 100 percent of the winter-spring rice cultivation area. Duckweed was also buried in large quantities in 85 percent of this cultivation area where it served as fertilizer for the fields and scores of tons of duckweed were used as fertilizer on subsidiary crops. On the other hand, the fields reserved for spring rice cultivation were allowed to mould, which is like adding another fertilizer treatment, additional duckweed was buried, and the fields were carefully soaked. As a result, the rice rooted quickly, grew well, and was highly productive.

It is clear that working spring rice in fields where two rice crops are planted has created conditions under which it is possible to add a duckweed crop for use as fertilizer on the fields and opened up a new and effective course in intensive cultivation, that is, "using the fields to nourish the fields." Therefore, as more and more cultivation area is devoted to spring rice rather than fifth-month rice in 2-rice-crop fields, there will be more and more cultivation area for duckweed. This will

create a large volume of green manure and respond to the intensive cultivation requirements of the new and highly productive rice seed which is being introduced into widespread production in the fields of the cooperative.

Working spring rice also has the effect of increasing the cultivation area of the cooperative. The area devoted to subsidiary crops in the Hanh Lac Cooperative occupies approximately 30 percent of the winter-spring cultivation area. During the spring season here, they cultivate only long term potatoes, beans, peanuts, and so forth, while only rice is cultivated during the tenth-month season. For the past few seasons in the Hanh Lac Cooperative they have been planting spring rice in some of the vegetable fields. During the winter-spring season, they planted spring rice in fields shared with vegetables (11 hectares) according to the following formula: short term tenth-month rice plus potatoes plus spring rice. The short term tenth-month rice was planted at the beginning of July and harvested at the beginning of October in 1969 (approximately 85 days). Immediately following that, they planted potatoes. Because of heavy rain, it was the end of October before the cooperative could work on the soil to get the potatoes in and they were harvested at the beginning of February 1970 (the potato season is about 3 months long). The potato harvest completed, the cooperative brought water into the fields and plowed immediately in order to get in 1 duckweed crop. By mid February, they had completed the transplanting of the spring rice, which was harvested at the end of June, concluding one cycle in the above-mentioned formula. The results were as follows: short term tenth-month rice output averaged 3200 kilograms per hectare; spring rice showed a yield of 5300 kilograms per hectare; and potatoes showed a yield of more than 11 tons per hectare. Therefore, by implementing the cultivation formula "short term tenth-month rice plus potatoes plus spring rice" on each hectare of cultivated ground, the annual harvest was: 8.5 tons of paddy (valued at 2550 dong) and more than 11 tons of potatoes (valued at 3960 dong). The gross value of both rice and potatoes was 6510 dong, or equivalent to nearly 2200 tons of paddy. On these same fields in previous years, they planted only 1 tenth-month rice crop and 1 long term sweet potato crop, the value of which was only 18,522 dong in 1967. In 1970, by implementing the new cultivation formula (primarily potatoes and spring rice), the cooperative collected 57,513 dong, a more than threefold increase over 1967.

That experience shows that by introducing spring rice into multiple crop fields and by restructuring agriculture according to the "short term tenth-month rice plus potatoes plus spring rice" formula, the yield of a rice season was increased and a vegetable season of low economic value was made into a short term, highly productive, and economically valuable season. If the problems of water and soil improvement are resolved well in 2-rice-crop fields, it is also possible to apply the above-mentioned formula, thereby increasing the economic value of a short term vegetable season and transforming a low-productivity fifth-month season into a high-productivity spring rice season.

That is a grains crop rotation system with a high degree of economic effectiveness. It exploits the potential of the climate and the fields and allows for the production of the highest volume of grains per unit of cultivation area. It also expands out capability to rapidly increase the total grains output under conditions where land is scarce.

Future Plans of the Hanh Lac Cooperative

The cultivation of spring rice in the fields of the Hanh Lac Cooperative brought about great results. Through several seasons of working spring rice, the cadres and cooperative members fully understand the material conditions and primary techniques necessary for the cultivation of spring rice in their fields. As a result, everyone is agreed that they will plant spring rice on 100 percent of their cultivation area during the 1971 spring season. This means that they will completely do away with the "traditional" fifth-month season with its low yields in exchange for a spring rice season with a high yield. That is a revolutionary change in rice cultivation. It will create a new production for the Hanh Lac Cooperative: reassignment of cultivation, new agricultural schedules, and new operational methods so that the fields and labor power can be appropriately employed in the most effective manner. At the same time, it also demands that the cooperative adopt an aggressive revolutionary spirit, strive to overcome new problems, and ensure a large and certain success.

The Hanh Lac Cooperative has sufficient conditions to plant spring rice in all of its rice cultivation area during the coming spring season. First, they have actively resolved water problems. Area and lot dikes are more or less perfect for scientific irrigation. Second, they have enough labor and draft power so that agricultural efforts can be undertaken carefully and according to agricultural schedules. Third, they have enough spring rice seed and have prepared enough seed for the tenth-month season, which is primarily new and highly productive seed. They are self-sufficient in potato seed, as well as in seed for other subsidiary crops, and can ensure that there is enough to meet the requirements for the production of the cooperative and cooperative member families. Fourth, the party chapter and the Hanh Lac Cooperative has placed the fertilizer processing problem at the top of the list for each member at this time because a great deal of fertilizer is necessary when all cultivation is to be done with the new, highly productive rice seed. The cooperative is presently raising an average of 3 hogs per hectare of cultivated land. It will continue to step up its stockraising efforts in order to acquire more manure. Area devoted to duckweed will be greatly increased. In addition, the cooperative will assign and motivate everyone to produce a great deal of green manure and mud fertilizer, which is to be provided to the cooperative. From now until the tenth-month harvest, the cooperative will concentrate its efforts upon making mud fertilizer. From the completion of the tenth-month rice harvest until it is time to transplant the spring rice, the cooperative will take advantage of all cultivation area reserved for spring rice to plant duckweed. During the period, that is, during approximately December and January, when

the duckweed is forcefully developing, the cooperative can produce a great deal of duckweed for use as fertilizer in the cultivation of vegetables. It can also strive to produce 1 thick duckweed crop which is to be buried once before the spring rice is transplanted; and later, it can bury more duckweed once again. During the 1971 spring season, the cooperative will fully use sweet potato vines and peanuts, cultivate additional sesbania and beans, and so forth. It will also produce green manure so as to be prepared for the following tenth-month season. The Hanh Lac Cooperative can by those methods guarantee that there will be enough fertilizer to meet the needs of intensive cultivation on all of the fields in the cooperative.

Fully preparing such necessary conditions as those listed above, the Hanh Lac Cooperative will in the future carry out cultivation in various fields in accordance with the following new cultivation formulae:

On 100 percent of the 2-rice-crop fields, they will work "tenth-month rice plus duckweed plus spring rice." On the cultivation area devoted to rice and vegetables, they will do as follows: on 34 percent of the cultivation area, work "short term tenth-month rice plus potatoes plus spring rice"; on 22 percent of the cultivation area, work "short term-tenth-month rice plus 3-month sweet potatoes plus spring rice"; on 22 percent of the cultivation area, continue with "1 long term sweet potato crop plus 1 spring rice crop using the new, high-productivity seed"; on 16 percent of the cultivation area, work "vegetables plus beans or peanuts plus tenth-month rice"; and on 6 percent of the cultivation area, work year-round vegetables (according to the requirement to provide green vegetables to the district).

Such a structuring of agriculture in the fields will create great progress in the production and living conditions of the Hanh Lac Cooperative.

6915
CSO: 3909-W

EXPANDING HOG RAISING IN AREAS SPECIALIZING IN RICE CULTIVATION

[Article by Xuan Kieu; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 51-56]

The Dong Phong cooperative in Thai Binh province has traditionally been poor in stock raising. From 1967 to 1969, the Dong Phong cooperative strived to increase hog raising from 1.5 up to 3.2 hogs per hectare of cultivated ground. What could the cooperative do to forcefully expand hog raising in an area specially devoted to the cultivation of rice, where the fields were few, and where there was no land for the cultivation of subsidiary crops?

1- Resolving the Problem of a Stable Feed Base for Hogs

Although the Dong Phong cooperative encompasses an entire township and has 187 hectares devoted to agriculture, the per capita volume of fields is only 743 square meters. Rice production has previously been very low, the yield for the highest year showing only 3.6 tons per hectare in two seasons. In 1966, the cooperative worked to obtain a yield higher than 5 tons of paddy per hectare. But hog raising has developed slowly and they only raised ony hog per hectare of cultivated ground.

In looking over their attempts to develop stock raising prior to 1967, the Dong Phong cooperative recognized that the primary reason for poor expansion in collectivized hog raising, as well as in family hog raising, was a lack of feed. In 1967, the collectivized hog herd of the cooperative numbered 140 hogs. They should have had 25.9 tons of primary feed and 368 tons of vegetables but the cooperative had only 12.6 tons of primary feed and 127 tons of vegetables. This was less than half of the feed needed for the hogs. The situation was even more serious when feed was in such short supply that the hogs had to go without eating for two or three days and the cooperative was forced to use duckweed blossoms and bananas as feed in place of vegetables and bran. As a result, the hogs grew slowly and some of them actually lost weight. The collectivized stock raising sector lost all of its capital and profit. Some cadres and cooperative members wanted to cease the collectivized raising of

hogs. Hog raising in the private sector also developed slowly and some families had to sell their hogs because they did not have feed.

Since the end of 1967, the party organization and the Dong Phong cooperative management section have done everything possible to create a stable feed base which would serve as a foundation for the expansion of hog raising. Of the 5 percent of the land reserved for collectivized stock raising, 2 percent was reserved for cattle raising while 3 percent was reserved for hog raising. The cultivated area involved is 6.8 hectares. In order to acquire 45.8 tons of primary feed and 655 tons of raw feed with a view toward meeting the requirements of increasing collectivized stock raising up to 260 hogs in 1968, the cooperative has assigned the 6.8 hectares of cultivated ground reserved for collectivized hog raising as follows: 3.5 hectares to rice cultivation and the remainder to the cultivation of water cress, arums, and Calla Palustris. On the 3.5 hectares devoted to the cultivation of rice, the cooperative has applied the formula "spring rice plus duckweed plus tenth-month rice" and increased intensive cultivation measures. On the average, each hectare of rice receives from 20 to 22 tons of manure and scores of tons of duck weed. Plowing, harrowing, and cultivation measures have been strengthened and as a result, the rice yield increased from 5 tons per hectare in 1967 up to 8.1 tons per hectare in 1968 and 9 tons per hectare in 1969. Therefore, from the 3.5 hectares of rice in 1968, the cooperative harvested 28.35 tons of paddy and in 1969, 31.5 tons of paddy and more than 20 tons of duckweed, which was used both for fertilizer and as feed for the hogs. In addition to the paddy produced, the cooperative gathered up all of the paddy on the ground and that which had not fully grown, which amounts to approximately 10 tons annually. This is a major source of collection which the cooperative had not fully used in previous years.

In addition to the intensive cultivation of rice, special attention was devoted to the intensive cultivation of water cress and arums. The cooperative had reserved 3 hectares of land which was specifically devoted to the cultivation of water cress and arums in previous years but because of poor cultivation and fertilization techniques, the vegetable yield was only 40 to 45 tons per hectare. Learning from its experiences in vegetable cultivation, in 1968 and 1969 the cooperative strengthened such intensive cultivation measures as softening the soil, rotated between water cress and arums, and fertilized the vegetables. As a result, vegetable output was 320 tons per hectare in 1968 and 360 tons per hectare in 1969, which means that vegetable production increased from 127 tons in 1967 to 800 tons in 1968 and 900 tons in 1969. Along with the production of primary and raw feed on the land reserved for collectivized hog raising, the cooperative also fully employed the land next to the rivers, ponds, dikes, and mounds in the cultivation of potatoes. This land is usually scattered all over the place and the cooperative had previously paid it little attention, thinking that it was a waste of time. However, the cooperative has now mobilized this land into production and harvested scores of tons of starches.

The intensive cultivation of the 6.8 hectares and the collection of feed from other sources has resulted in a large quantity of hog feed for the cooperative: 42.7 tons of paddy (including 10.7 tons of immature paddy and that left on the ground), 15.8 tons of subsidiary crops, 900 tons of vegetables, and 20 tons of duck weed. In addition, the cooperative also collected 13.8 tons of soy bean leavings (gained through the processing of soy beans for the state) and 6 tons of bran (gained from milling paddy for the state).

By implementing intensive cultivation to increase the yield of crops on the soil reserved for collectivized hog raising and by fully exploiting soil and feed sources, this cooperative with little land created a feed base strong enough to rapidly increase collectivized hog raising. In 1967, collectivized stock raising accounted for only 140 hogs; in 1968, this had increased to 260 hogs, then to 360 hogs in 1969.

In addition to building a feed base for collectivized stock raising, the cooperative also devoted special attention to providing guidance to cooperative member families in the production of feed for hogs. Previously, the source of primary feed for hogs raised by cooperative member families was mainly bran. If they were required to rely upon bran, the cooperative member families could not increase their hog produciton. For example, 452 tons of paddy belonging to the cooperative member families in 1969 contained 54 tons of bran, or only enough to raise 320 hogs. In order for the cooperative members to raise more than 1,000 hogs, it was necessary to create additional feed sources so that available feed would increase by triple. Since the 5 percent of the soil reserved for cooperative member families was mainly devoted to the cultivation of rice, the cooperative guided these families in reducing the area devoted to rice and shifting over to the cultivation of Calla Palustris. The families were also encouraged to fully utilize gardens and mounds to cultivate various starchy plants. In order to provide the cooperative member families with better conditions for hog raising the cooperative also reserved 4.3 hectares of ponds (of the 6.4 hectares of ponds under cooperative management) so that it could be used to grow duckweed. Some of the land on the banks of ponds and rivers was divided up among cooperative members for the cultivation of water cress and potatoes. The quantity of this land given to each family depended upon that family's stock raising capability. In addition, the cooperative arranged with state grains warehouses for some cooperatives who milled the paddy in exchange for the bran. The cooperative devoted special attention to families raising sows and reserved a great deal more land and ponds for these families. For each kilogram in weight of breeders sold to the cooperative, the members were authorized to purchase an additional kilogram of paddy.

Through crop rotation, increased crops, the implementation of intensive cultivation measures to increase output, and the full employment of ponds, rivers and streams, and every available feed source in the cooperative, Dong Phong was able to create a stable feed source which could serve as the foundation for the forceful expansion of hog raisin. The following statistical chart illustrates that fact:

	1967	1968	1969
Total number of hogs in the cooperative	960	1250	1380
- Collectively raised hogs	140	260	360
- Hogs raised by families	820	990	1020

The above-mentioned results in the Dong Phong cooperative prove that: In an area specializing in the cultivation of rice where there are few fields, there is no soil devoted to the cultivation of subsidiary crops, and the 5 percent of the land reserved for stock raising is limited, the cooperative can surely establish a solid feed base upon which to expand hog raising if it knows how to use the land reserved for stock raising, employs a rationally structured cultivation, implements crop rotation and increases the number of crops, implements intensive cultivation measures on the land reserved for hog raising, searches for and exploits all potential, and fully employs all sources of feed available within the cooperative. The cooperative is not only completely capable of attaining the goal of 2 hogs per hectare of cultivated land but can attain a goal of more than 3 hogs per hectare of cultivated land.

2- Improving Hog Raising Techniques to Rapidly Increase the Weight of Hogs

Having established a solid feed base and expanded the scope of stock raising, a new requirement presented to the cooperative is the necessity to increase the average weight of each hog every month and to reduce the time necessary to prepare the hog for shipment. Only in this way is it possible to attain a high degree of economic effectiveness in hog raising.

The cooperative first of all became involved in calculating the feed ration for each breed of hog. Based on that, it harvested and processed feed on a daily basis for each breed of hogs.

The cooperative, which had been in the habit of giving ripe feed to the hogs, shifted over to the practice of giving the hogs raw feed and using yeasts to ensure that the hogs ate all of the stipulated ration. By giving the hogs raw feed, the cooperative saved 4,000 dong worth of fuel and 360 working days spent in feed preparation annually. The simplest measure is fermentation. This makes digestion easier and encourages the hogs to eat a great deal and thereby, to grow quickly. Later, the cooperative studied the experiences of the Thanh To state farm in Hai Phong and applied the technique of fermenting with micro-organisms. This type of fermentation has the effect of increasing the sugar and nitrogen content and making the feed easier to digest, which in turn enables the hog to eat

a great deal, grow quickly, develop sweet meat, and increase its weight quickly. In the beginning, the cooperative purchased yeast from the state but it now produces its own and provides more than 50 percent of the micro-organisms needed in stockraising to the cooperative members. Dong Phong has become a cooperative famous for the production of yeast and many other cooperatives in the province buy it from them. In addition, the cooperative has allowed the hogs to eat more bean cakes and fish to increase their nitrogen intake.

In order that the hogs would rapidly increase in weight, the cooperative established experimental "high production" stock raising farms. From this "high production" stock raising experiment, they learned about ways to feed the hogs, that is, about how much to feed them and how to feed them so as to rapidly increase their weight while saving on expenditures. Actual experience has shown that the "high production" pork of the cooperative increased in weight by 8 to 10 kilograms per month while the pork raised in the ordinary manner increased by only 5 to 7 kilograms per month at the highest. In calculating the feed ration during the first several months, it was found that the "high production" hogs ate from 1.5 to 2 times more than hogs raised in the ordinary manner. However, if all of the time taken to raise the hogs, right up to the shipment point, is considered the economic effectiveness of the "high production" hogs is much greater than that of the hogs raised in the ordinary manner. A comparison between the "high production" hogs and those raised in the ordinary manner during an 8 month period indicated that the average weight of the "high production" hog was 98 kilograms while the average weight of the hog raised in the ordinary manner was only 45 to 50 kilograms. Measured in cost per kilogram of pork, this means that the "high production" pork was 1.14 dong while that of the hog raised in the ordinary manner was 1.26 dong. It is clear that the "high production" hog results in a greater economic effectiveness. The experiences gained in raising "high production" hogs was progressively applied to regular stock raising. As a result, the average weight of hogs rapidly increased. In addition to improving feed techniques, disease prevention and pen sanitation measures were strengthened. The cooperative had three immunization schedules annually: in March, August, and December. Veterinary cadres were assigned to a monthly inspection of the disease situation. The cooperative previously built concave pens but now builds convex pens. During the summer, the pens are swept twice daily, once in the morning and once in the afternoon and the hogs are washed once a day. During the winter, the cooperative seals off the pens and spreads thatch in order to protect the hogs from the cold. As a result of these disease prevention and sanitation measures, there has not been a single hog killed by disease since 1967, including the hogs belonging to the cooperative and those belonging to individual families.

Because of the proper application of the above-mentioned stock raising techniques, the collectively raised and those raised by cooperative member families constantly developed, the hogs increased in average weight, and the period of time involved in raising them was reduced:

	1967	1968	1969
Average monthly weight increase (kilograms)	2-3	5-6	7-8
Shipping weight (kilograms)	30-45	40-45	45-50
Time lapse between purchase & sale (months)	12-4	8-10	7-8

The above-illustrated experiences of the cooperative allow us to recognize the capability for the expansion of hog raising in two directions: increasing the number of hogs annually and increasing the average weight of the hogs monthly. That is an illustration of the relationship between quality and quantity in stock raising. It is the basis upon which to resolve problems of both quality and quantity in stock raising, to create an abundant source of feed by intensive cultivation, and to employ feed sources in hog raising through the application of progressive stock raising methods. If the number of hogs increases annually but quality (meaning the average monthly weight increase) does not increase, stock raising will only be minimally effective and in some cases, even result in the loss of capital. Neither will stock raising be able to respond to the ever-growing needs for food and fertilizer.

3- Strengthening Organization and Leadership in Stock Raising

The party organization and the Dong Phong cooperative management section have been involved in strengthening collectivized stock raising units since 1967 in order to guarantee the expansion of stock raising. The cooperative has selected vigorous cadres and cooperative members experienced in stock raising. So far, there are 30 workers in the cooperative's stock raising unit (including 8 women and 22 men). All of them are cadres and cooperative members who have experienced many years of challenge, are comfortable in their work, and are closely tied to the collectivized stock raising sector. In addition to the stock raising unit, there is also a corps of veterinary cadres including 16 people, who are assigned to a veterinary network designed to protect the hogs of the cooperative, as well as those belonging to cooperative member families.

The members of the stock raising unit were assigned by specialty. They were placed in various production groups depending upon their individual standards and capabilities. The feed processing group has 6 people and each individual cares for 60 hogs on the average. The group specializing in the processing of fertilizer and the building of pens has four people who are responsible for processing all of the fertilizer produced through stock raising. This group also takes care of repairs to the pens. The feed production team has 18 people who are responsible for the production on 6.8

hectares of rice and vegetables. The feed production team is subdivided into many small groups and assigns contracts by group. Work effectiveness has been improved because of this subdivision and contracting out to groups.

The party organization established a party team within the stock raising unit and put capable party committee and party members with a sense of responsibility in charge. With regard to stock raising by cooperative member families, the party committee assigned responsible cadres, including one leading cadres and two technical cadres. These men are responsible for keeping close track of and helping the families engaged in stock raising with capital, breeders, stock raising techniques, and disease prevention. They also promptly encouraged families to do well in stock raising and help these families when they encounter difficulties. The cooperative has adopted appropriate measures to encourage stock raising by cooperative member families. Based upon the grains income and feed production capability of the 5 percent of the land used by cooperative member families, the cooperative proposed that each member sell 25 kilograms of smoked pork to the state each year and that each family raise an average of 2.2 hogs annually. If the stipulated goal (25 kilograms per worker) if attained, he is authorized to purchase 15 kilograms of grain. If the goal is surpassed, the cooperative member may purchase 0.7 kilograms of grain for each kilogram of smoked pork above his quota. If he does not meet the quota, he may only purchase grains in accordance with the current ration. As a result of this measure, family stock raising forcefully expanded during 1968 and 1969.

The cooperative and the cooperative member families sell pork to the state on the basis of a contract signed by the cooperative, its members, and the food store. The cooperative makes its calculations beforehand and ensures the number and weight of hogs shipped during each period. If the hogs are shipped at the proper time and are of sufficient weight, stock raising is highly effective.

Because of the application of the above-mentioned measure, hog raising in the Dong Phong cooperative has brought about clear economic results. The quantity of pork provided to the state rapidly increased from 21 tons in 1967 up to 32 tons in 1969. The volume of fertilizer provided for rice cultivation increased continuously from an average of 5.9 tons of manure per hectare of cultivated ground in 1967 up to 9.7 tons per hectare in 1969. With this quantity of fertilizer, in addition to other types of fertilizer, the Dong Phong cooperative is striving to attain a yield of 7 tons of paddy per hectare in 1970. Specifically with regard to the 1970 winter-spring season in Dong Phong, the average yield was 3.8 tons of paddy per hectare.

The cooperative began profit and loss accounting in collectivized stock raising in 1968. The income produced from 1 working day in stock raising in 1968 was 1.064 dong and 1.21 dong in 1969. The production of 1 kilogram of smoked pork costs 0.6 working days in 1969. The cost of 1 kilogram of smoked pork was 1.24 dong. When compared with the purchase

price paid by the state, each kilogram of smoked pork produced a profit of 0.41 dong.

Therefore, the Dong Phong cooperative attained an integrated effectiveness in hog raising by increasing the number and weight of hogs while reducing costs and making a profit. On that basis, it created a new balance between cultivation and stock raising and between increased grains output and the output of food. It increased the income of cooperative members and contributed much more to the state. The results of hog raising in the Dong Phong cooperative is that it brought about a shift in the single crop production of the cooperative specializing in the cultivation of rice and gradually made stock raising, which had always been subordinated to cultivation, into an independent production sector. Because of that result, the cooperative has properly recognized the position of hog raising in a rice growing area, boldly implemented a new distribution of labor between cultivation and stock raising, and truly become involved in the organization, management, and improvement of techniques in the hog raising sector.

There were also some shortcomings and weaknesses in the hog raising effort undertaken by the Dong Phong cooperative, such as: they were slow in expanding sow herds; and they have not yet boldly shifted to more highly productive breeds of hogs. However, the above-mentioned results mark a clear forward step in hog raising by the Dong Phong cooperative. The experiences in the Dong Phong cooperative can make us think about the possibilities of expanding hog raising in areas specializing in the cultivation of rice. Is it reasonable to think that hog raising cannot be forcefully expanded in an area specializing in the cultivation of rice, where the land is not fertile, and there are few fields? Should collectivized stock raising be a financial loss? Is it reasonable to believe that in a rice area the capability of attaining the "two hog" goal should only be given attention after the "5 tons" goal? If so, what can be done to destroy the single crop idea, to create a balance between rice and hogs, and to guarantee that the rice cultivation sector expands continuously. Now, while we are expanding the area devoted to the cultivation of spring rice and making remarkable progress in spring rice yields, what can be done to create a source of fertilizer large enough to support the new spring rice seed in the primary cultivation area? Does not the goal of 7 to 8 tons of paddy per hectare (in two seasons) demand a better hog raising balance, possibly 3 to 4 hogs per hectare of cultivated ground? As we see it, all of these problems can be resolved from the lessons learned in hog raising in the Dong Phong cooperative.

6915
CSO: 3909-W

CLIMATE, SOIL AND PROSPECTS FOR RAPID AGRICULTURAL DEVELOPMENT

[Article by Doan Do; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 57-71, 89]

Agricultural production is closely related with the climate and soil. The search for understanding the climate and soils of North Vietnam in an effort to plan an appropriate agricultural and animal husbandry organization is a very important matter. The following are the opinions of Doan Do on that subject and are presented for your consideration.

Climate and soil are two natural conditions that are very basic to agriculture.

Climate is a natural factor that has decisive significance with regard to agricultural production. In the old days, we had a saying, "The first is second to ripen." This saying emphasized the importance of climate. Today, modern agricultural science and technology is daily better understanding the important role of the weather in agriculture.

In agriculture, in addition to the long-term changes in the nature of the soil, the climate also influences the growth of vegetation. It is clear that a given soil (including the microscopic elements) located in a tropical climate can be used only to grow tropical plants; in a temperate zone, it can be used to grow only temperate zone plants; and finally, if the soil is in an area which has two distinct seasons and warm temperatures, it is possible to grow both types of plants -- tropical and short-term temperate zone plants -- and, it is possible to grow long-term subtropic plants.

Since the restoration of peace, we have been studying the climatic areas of North Vietnam, the fundamentals, those things that influence the overall task of agricultural science and technology research, and the deployment of the planting organization in North Vietnam, which is to say, we studied the climate of North Vietnam in general in an effort to best use the soils of North Vietnam with the least amount of work.

With regard to the climate of North Vietnam, we usually say that North Vietnam is a tropical area with seasonal winds. But, what is that? And, how can we best deploy the farming organization to be appropriate to the climate and meet the needs which have never been discussed in concrete terms?

This shortcoming has caused us to encounter many hardships and stumbling blocks in guiding agricultural production.

With regard to soil, the second important factor in determining agricultural production, we have spent many work hours in studying soils and with decisive results. But, we have not yet fully determined the structure of the soil, its slopes, surface, subsoils, limestone, the marshes, and so on. As a result, we are still uncertain in the work of utilizing and protecting the soil to be appropriate with the climatic conditions and the use of the soil for the highest economic gain.

Speaking briefly, in the guiding of basic scientific and technological research to respond to agricultural needs, and in the guidance of agricultural production, along with the great achievements we have had in many aspects, we have yet to make a clear-cut and lasting decision on the basic subject of the special points of economic geography in North Vietnam. Primarily because of this, we have not taken advantage of the natural advantages available to us.

We wish to present some of our opinions on the basic characteristics of the climate and soil in North Vietnam. And, based on those opinions and on a summary of actual production and research projects, we wish to offer some suggestions on the direction of the farming and animal husbandry organization in North Vietnam.

I. The Substance of the Climate and Soil

The climate of North Vietnam carries the special marks of many foreign scientists who used their own terminology to describe it or who, bringing in their own opinions, used terminology that is contradictory. Because of the varying viewpoints concerning the climate and soils in North Vietnam there are many different opinions on how to use the soil in keeping with the climate.

As a result, these varying opinions only confuse the issue. There are very few people who started by actually working with the existing vegetation and studying the deployment of a farming organization to prove their viewpoint and, from there, arrive at conclusions concerning agricultural production in North Vietnam.

A. The Substance of the Climate in North Vietnam

North Vietnam lies within the tropical zone. Geographers in general have decided that North Vietnam is a tropical area. For many years,

we followed these conclusions in deploying our agricultural organization, our animal husbandry organization, our agricultural export organization, and so on. However, actual practice showed that working in that manner we always encountered natural disasters and that what we called the superior "tropics" became an obstacle.

This reality forced us to think about and take action on avoiding or reducing the effects of natural disasters and on how to use natural conditions in our favor. This was the correct and most effective method.

To solve the problem, we had to abandon the books that spoke in generalities and go deep into the specific subject of North Vietnam by integrating and summarizing our production, documents, and take advantage of the newest and best inventions of the world.

The definition that the area which lies between 23-27 degrees north latitude and 23-27 degrees south latitude is the tropical zone is correct. However, going into specifics, although North Vietnam lies within these latitudes it has a very different climate than the other areas within the zone.

North Vietnam stretches from 17 to 23-24 degrees north latitude near the Tropic of Cancer and bordering the temperate zone. The sun is directly over our country twice each year in approximately June or July, depending on the area. (On 22 June, the sun is directly over 23-27 degrees north latitude.) The rotation of the earch around the sun and the location of North Vietnam causes the climate of North Vietnam to change from a temperate to a tropical climate.

This is the first special characteristic of the climate of North Vietnam.

The second and very important special characteristic of the climate of North Vietnam is that as the sun gradually moves toward the tropic of capricorn, winter gradually approaches, the northeast seasonal winds appear and grow stronger, greatly influencing the climate of North Vietnam. This takes place from November of one year to April of the next year. The countries affected by the northern and southern seasonal winds are the countries influenced by the Indian Ocean. The seasonal winds in North Vietnam are the northeast seasonal winds. These seasonal winds bring the moist and cold air from the polar regions and passes through China. It causes the climate of North Vietnam to be colder, as if North Vietnam had been pushed several degrees of latitude northward. It is nearly 10 degrees colder than Saigon during the coldest month. It has nearly seven times more rain than Saigon during the dry months (Hanoi 242 mm and Saigon 36 mm) and it is colder than Cuba, a country within 5 degrees latitude of our country.

In addition to the two special characteristics mentioned above, there are other, special characteristics, for example, the high mountain range to the south and west which reduces the influence of the equatorial heat during the winter months, and the lower, broken mountain ranges to the north which are conveniently arranged for the penetration of the northeast season winds.

These are important special points. They cause our climate to be completely different from the climate of other countries of the same latitude, a climate that is not completely tropical, but which, each year, is divided into two distinct climates. One climate -- from May to October -- is completely tropical with temperatures upwards of 25 degrees, usually more than 100 mm of rain each month, and usually many weather changes including storms, cyclones, and so forth. The other climate -- from November until April -- is semitropical (or semitemperate) with temperatures seldom exceeding 20 degrees during a 4-month period and usually less than 100 mm of rain per month. The period of change from one season to the other is short and indistinct, and takes place around April and November of each year.

This two-season climate is most clearly revealed in the Nghe An Province or Ha Tinh Province area. As one procedes southward, the distinction fades. From the Ngang Pass on into South Vietnam, the heat gradually increases. Hue only has 1 month where temperatures fall below 20 degrees.

The climate of North Vietnam (from the Ngang Pass northward) is clearly not temperate, because there are not four defined seasons. There is no ice that causes plant life to stop growing and there is no mild autumn.

However, it is not completely tropical, because it is not hot all year, the temperature is not uniform, and moreover, there is a distinct and wet winter.

There are many characteristics of a semitropical climate, such as two distinct seasons with a change from tropical weather to temperate weather, and a change from hot weather to cold. But, there is no relatively mild autumn and there is no decrease of rainfall.

We can conclude that this is a very special climate. It might be called extraordinary, but we must base our solutions for food, clothing, and shelter on it. In other words, we must base our solutions for agricultural and industrial production on it with a view toward making use of the natural conditions. This is a very pressing and essential matter.[1]

B. The Topography and Land Usage in North Vietnam

The topography and land of North Vietnam is divided into fairly discernable areas: the upper and middle reaches composed of steep slopes, vast fields, and few marshes, the land is mainly of sand and limestone -- lime-

stone soil fields comprise one fourth of the area of North Vietnam -- and they are all at high altitudes in Moc Chau, Sa Pa, Bat Sat, Tam Duong, Son La, Nuoc Hai, and so forth; the delta and the areas bordering on the delta are comprised of wide, flat, and marshy fields and there are many fields of alluvial soil.

Because of our climate, from the middle reaches to the higher slopes, the soil is eroded away each year during the rainy season. This laterization of the land only takes place in the middle reaches and on the lower hills.

During the rainy season in the middle and upper reaches, naturally the water washes over the surface of the slopes eroding away the land not only in small areas but over vast expanses.

There are two ways to end this serious erosion: plant ground cover throughout the year or at least during the rainy season and build terraces.

The most rational method for use in the limestone areas in the mountains and middle reaches is to plant cover and, in part, build terraces.

In the delta and the fields of the middle reaches and mountanous areas, although water must be stored in order to cultivate the plants that require water, however, to keep the fields inundated year round is harmful to the soil. The best method is to rotate between wet-cultivation and dry-cultivation crops.

This is a subject that has been clearly proved. However, in actual practice, we have done the opposite. We have burned the forests to make vast yields and encouraged the planting of wet-cultivation rice in the limestone fields in many areas. There have been periods where little attention has been paid to the planting of secondary crops in the delta and middle reaches and much of the land has been inundated for the growing of wet-cultivation rice, something we should avoid and use other methods that have higher economic results.

One result of the aforementioned method of farming is that the forests are being further destroyed and the land is being eroded and leached. The output of the fields in many areas has declined.

On the other hand, many areas that have gained experience in using the fields in a scientific farming manner by planting crops appropriate to the climate and soil have overcome many difficulties that we normally accredit to nature.

Also because we have not correctly understood the task of protecting and using the land in the middle reaches and higher reaches of North Vietnam (including the middle reaches and higher reaches of old Interregion 4), land reclaimation -- a main policy of the party, has not been good.

If we correctly recognize the capabilities of the middle reaches and the mountain areas and correctly know the climate, we cannot allow the people to carry out land reclamation to plant rice by burning and destroying the forest. In the middle reaches and the mountain areas, the ability to reclaim land to plant rice cannot go much further. If we encourage the preparation of rice fields, and do not raise the yield and expense but we raise the development of planting grains, foodstuffs, and industrial crops that can be dry cultivated, we can mechanize the reclaimation of land to plant dry-cultivation crops. The results of our land reclaimation and increaseing the farming area in the middle reaches and in the mountains proves this.

The reason that land has been misused for a long period is mainly because we did not recognize the laws of North Vietnam climate and planted tropical plants even in the winter and in the rainy season and the tropical crops were seriously threatened.

II. The Direction of the Deployment of the Agricultural Production Organization

Research into the climate and soil is primarily to discover their patterns and application to agriculture and gain experience in order to better deploy and utilize the farming and animal husbandry organizations and make the best use of the soil.

Mainly because of this, it is a very basic point, a paramont point in determining the success or failure of the entire agricultural process.

From the opinions outlined above, based on the objective realities of the natural growth of vegetation, based on the production practices of the people for many generations, and based on experiences in growing new plants for several years, we wish to summarize the basic features in the direction of agricultural production in our country -- dealing primarily with the area from the Nghe An Province and Ha Tinh Province area northward.

A. A Multi-Faceted and Multi-Crop Agriculture

A one-crop agriculture displays a low farming level. A multi-crop agriculture reflects a high farming level.

Simple farming (tropical or temperate) is an agriculture form that is widespread throughout the world depending on the area. Multi-crop farming is the best method and is the rarest form to be found throughout the world.

If we know how to throughly use the climate and soil -- especially the climate of our country -- in only a very short time period of approxi-

mately 10 years, we can surely change our poor, one-crop agriculture into a multi-crop and multi-faceted agriculture to serve as a stable base for agricultural development.

If we wish to have such an agriculture, we must know how to deploy the farming and animal husbandry organization and utilize the soil in the most rational manner, which is to say, to completely use the climate and soil that is natural in our country.

1. A Superior Agricultural Organization, Multi-Cropping and Multi-faceted.

As described above, the climate of North Vietnam is not completely tropical and each year there are two distinct seasons -- a completely tropical season from April to October and a subtropical (or subtemperate) climate from November to April.

In a comparison, we can easily see that this is a very special climate. The hot season is like the hot seasons of the tropical countries and the winters are similiar to end of spring and the summers of the temperate countries.

Recognizing this fact is basic to developing a superior agriculture.

Previously, because we considered our climate tropical, we were set up for farming that was essentially tropical in nature. This farming mode, with the exception of the short-term crops planted at the beginning of the tropical season (rice, sweet potatoes ... planted from April to October), always failed to return a high yield and were threatened by the elements such as:

--Fifth-month rice and eastern sweet potatoes were frequently frost bitten and damaged by drought. They occupied land for long periods, but their yield was not high, even though they received ample fertilizer.

--Sugarcane takes up land all year round and frequently suffers from draught, floods and cold weather which causes unstable production, and the yield was not equal to the yield in true tropical areas.

--Long-term tropical plants such as coffee, rubber, and banana have a very low yield compared to completely tropical areas, because these plants only fare well in North Vietnam during the warm months, and they are frequently damaged by the cold and threatened by frost. There are years when large areas of these plants are completely killed or when they have no fruits or few fruits, such as coconuts planted from the northern region of Thanh Hoa northward.

This is an objective reality, but side by side with the tropical plants and in the area where they are plentiful, we have attained a very high

yield with short-term temperate plants that are suited to our winter season, and which have subtropical plants of the world, or for example:

--In production that can be called crops, we have relied on the production of many short-term temperate plants, and have attained good results. We have had better results than expected. This success was experienced with nearly all short-term vegetables, such as kohlrabi, cabbage, cauliflower, tomatoes, allum cepa, red turnips, and sugar beets. There are plants in the temperate zone which required 2 years to flower, but planted in North Vietnam they require only 6 or 7 months, such as kohlrabi, sugar beets and so forth.

--In production in a number of small areas or following traditional methods many short-term plants such as sunflower, hops, and so forth have been planted in large areas. Specifically potatoes, a plant used for food, in industry, and as animal feed, has developed strongly in all areas and returned a high yield, from 15 to 30 tons per hectare. Some areas have yielded as much as 40 tons per hectare and the growing season is shorter than in the temperate zone.

--In empirical experiments, we have relied on producing many kinds of short-term temperate plants or crops never before planted by us, such as legumes that can be planted when the soil is idle in order to improve the soil and later harvested to be used as animal feed. And, we have planted long-term plants, but now we plant short-term plants that have a high yield, such as sunflower and sugar beets. Generally speaking, this type plant is good and has a high yield. For example, in less than 90 days, sunflowers can be harvested and the yield can be as high as from 1,500 to 2,000 kilograms of seeds per hectare. Sugar beets can be planted close together and increase land usage by 16 percent. They can be harvested in 4 months and yield more than 80 tons per hectare, and so on.

--Concerning the plants that require many years to mature, produced in the traditional way as well as in modern state farms, we have many types of desirable tropical plants of the world that grow very well and are among the highest yielding plants in the world (for example, oranges, mandarin oranges, logan, tea, and so forth). As far as oranges are concerned, we have wide areas that yield 30 tons from just over one hectare and the capability exists to produce approximately 20 tons in less than one hectare. As for tea, there are areas in lots of scores of hectares that produce 20 tons of fresh buds per hectare and there is a capability to product just under two tons of dry tea per hectare. And, as for lichee, logan, persimmons, and so on it is clear that these plants are suited to our climate. Without being fertilized they produce more than 10 tons of fruit per hectare.

The natural vegetation of an area and practical experience in agricultural production in that area will reveal the climate of that area.

Therefore, the subject of the climate in North Vietnam as described above is no longer an academic subject but it is an objective and practical feature. It has been put into practice and is the subject of research projects.

From these patterns and these realities of production, our superior and rational farming organization as follows: From the Nghe An Province and Ha Tinh Province area north, during the winter seasons we raise short-term temperate plants that have a high yield and during the hot season we plant the short-term tropical plants that produce a high yield. As for the long-term plants including fruit trees, fiber producing trees, trees grown for lumber, medical plants, and so on, we plant tropical plants and rare plants that have a high yield. A number of long-term tropical plants can be planted in Nghe An and Ha Tinh Provinces and areas south or in the wide valleys that are subject to the northeast winds and are frost-free. But, the plants must be carefully selected and not planted carelessly, and without considering the economic aspects.

In the high plateau in altitudes above 1,000 meters, in addition to the temperate plants, the short-term tropical plants, and the long-term subtropical plants, it is possible to raise a number of long-term temperate plants such as pears, apples, peaches, and so forth. However it is necessary to be very careful about planting and use pure strains because there is no long frosts and the humidity is high in this area.

Going into specifics, immediately we can readjust the farming organization in the following ways.

--With regard to grains, we will only plant fifth-month rice in the lower fields that cannot be drained in order to be used as dry fields. These fields will consist only of the several thousand hectares of marshy summer rice fields. To replace the fifth-month rice we will plant dry-cultivated varieties such as potatoes, or foodproducts such as sunflower, olives, and so forth before we plant the spring rice and short-term, high yield rice.

Later we will plant short-term, high-yield tenth-month rice. We have these seeds available. We will replace eastern potatoes with western potatoes, because western potatoes planted in this climate only need 80 to 90 days to grow and the yield is many times higher than the sweet potatoes. Moreover, it can go longer without processing. After substituting the western potato for the eastern potato, we can follow up by planting spring rice. In this way we can have an additional crop and increase production many times over.

In the middle reaches and in the mountains, with regard to the limestone soil, in the unirrigated fields we can plant two short term temperate zone crops and raise one main rice crop or one main corn crop.

Food Products

We must make the best use of the climate and soil during the winter by strongly developing temperate zone vegetables that are nutritious and have a high yield. At the same time, we must step up the planting of short-term and long-term crops -- especially the short-term crops -- such as sunflower and olives.

Short Term Industrial Crops

We must select and plant tropical plants that have a growing season of approximately 7 or 8 months so they can be planted during the hot season and after they are harvested a short-term temperate crop can be planted. For example, we can plant jute first and after it is harvested we can plant western potatoes, sunflower, or sugar beets.

As far as fruit and long-term industrial plants are concerned, we can plant subtropical or subtemperate zone plants that are suited to the two season climate and year-round humidity such as oranges, lichee, logan, persimmons, and so forth -- varieties that are always in demand throughout the world.

From Thanh Hoa Province northward, we must step up the planting of sugar beets and gradually decrease sugarcane acreage in an effort to increase the production of sugar. And, at the same time, we can increase the acreage of grain and food product plants, because after the sugar beets are harvested we can plant a rice crop or a crop of peanuts or summer potatoes.

Trees for Lumber

We must also consider our climate. We must summarize the varieties of wood producing trees that are suited to our climate and soil and avoid considering only if the plant will live and planting it without considering its economic worth.

Grasslands for Grazing

In the highlands above 600 meters where the humidity is great, it is possible to grow grass all year round, especially the temperate zone grasses that can withstand drought such as medi grass, white and red ba cha grass, and so on. In these places, we can rotate planting legume family grasses that have a high nutriant value and we can mix varieties to provide grazing lands.

In the delta and middle reaches, areas where the tropical zone grasses grow only during the hot season and creates food shortages for animals during the winter season, it is necessary to plant additional

temperate zone legume family grasses during the cold season because they improve the soil and this is practicing crop rotation.

Here, on the subject of deploying the farming organization and with regard to grains and food products, we see that we must stress that we live mostly by short-term plants and that planting short-term plants requires a smaller investment than long-term plants; mainly, because we know how to use the climate of each season to plant short-term plants with a view toward achieving the highest economic results as many temperate countries (the Soviet Union, Japan, China, the United States, and so forth) are energetically developing wet-rice cultivation and acquiring high yields.

In summary, with the direction of deploying the farming organization as described above, accompanied by investments to build up the agricultural technical and, material base such as water conservancy, machinery, fertilizer, and so forth (the speed of this undertaking depends on the amound we invest in it), with only 1 million hectares of farm land we can harvest approximately 7 million tons of paddy, 3 to 4 million tons of fresh western potatoes, approximately 20,000 tons of sunflower and vegetable oil, and several thousand hectares of grass lands and so on. This is enough grain and food products to satisfy the needs of North Vietnam and provide a great deal of animal feed. But in fact our acreage is not only more than 1 million hectares but later on we will have even more area.

This is no longer a unique undertaking, we must wait a longer period of time because the material and technical base of agriculture has been built up at this time. During the 1969-1970 winter-spring season, it permitted us to plant more than 20,000 hectares of spring rice by flooding the fields and later, after draining the area, we harvested a short-term temperate crop. And, at the same time, we increased the rice yield.

Because of these experiences, we believe that if we make the appropriate investment and know what areas to use, in approximately 5 years on 1 million hectares of land, through intensive cultivation and crop rotation as outlined above, we can solve the basic problem of expanding agriculture in our country. This would bring about a superior farming organization of multi-cropping.

This method of farming and mechanization would permit us to raise three crops a year; permit us to use a crop rotation system; and allow us to develop a soil improvement and conservation system.

2. A Flourishing and Rational Animal Husbandry Organization

Planting and animal husbandry are two very important aspects of any agricultural effort. They greatly influence each other. If the planting effort is poor, animal husbandry will suffer. On the other hand, if there is no animal husbandry to supply organic fertilizer, the planting effort

will not develop even though it may have reached a high level of economic development and the ground is fertile.

At the present time, our animal husbandry is stagnant like our cultivation. Buffaloes and pigs are increasing slowly, cattle are declining, and so on.

The causes are many and are in many important areas. The policies of distribution, prices, and feed shortages must be considered as important causes.

As we pointed out above, the food shortage with regard to humans -- as well as the animal feed shortage -- exists because we have not thoroughly understood the climate and the soil and used the knowledge to develop a superior agriculture. If we redeploy the farming organization as outlined above and apply fertilizers and so on, we will increase the overall total as we reclaim land and give ourselves a very large food source, adequate to propel our animal husbandry effort forward a great step. For example, the leaves from one hectare of sugar beets will provide a minimum of 500 kilograms of meat or 3300 kilograms of milk. The leaves and stalks of sunflower are good animal feed and are a good source to supplement the grain ration. If we added around 30 percent of green food (cha ba or medi grass) to the pig feed we could increase the weight of the pig by approximately 100 percent. We could increase the production of the breed animals from one to three and then to four offspring by planting legume family grasses that can withstand the cold and drought.

Therefore, after we redeploy the planting organization, we will have the capability to gradually increase the animal herds to a large scale in approximately two 5-year plans.

Larger Animals

We must immediately develop the buffalo herds to provide draft animals. However, along with mechanization the buffalo herds will be expanded to a determined number then decreased or converted to milking or meat herds.

This is a long-term plan and will not be carried out for from 5 to 7 years hence. However, immediately the allocation of animal husbandry areas must be regulated. Presently, the buffalo growing areas are in the mountain provinces. The buffalo is a species that has little resistance to cold and every year in these provinces many buffaloes are lost, especially in the highlands. The buffalo has little resistance to cold, gives little milk and the meat is tough. Therefore it adds little to the food production in the mountain provinces. The buffaloes in the mountain provinces cannot serve as draft animals in the delta because they are far away and the roads are not convenient enough to make it economical. How-

ever the main disadvantage is that by the time the buffalo has traveled from the mountains to the delta its draft strength is diminished. On the other hand, if we consider only the provinces that are near the delta or if there were railway connections between the delta and the buffalo raising areas the features would change. Buffaloes could be transported to the delta in from 7 to 15 days and they would have sufficient draft power to plow. And, the cost of the operation would be reduced. With regard to the mountain provinces that are not convenient to the delta, the buffalo herds could be converted to buffalo and cattle milk herds with enough draft strength to serve local needs.

We must immediately carry out research on the subject of buffalo milk because we have many buffaloes and, although the buffalo does not provide much milk, it is many times more nutritious than cow milk. And, there is a possibility that we can make the buffalo give more milk.

Cattle

We are more fortunate than the countries that have a purely tropical or temperate climate, because we have many favorable areas for growing cattle and can develop a rich food supply if we know to plant the grasses that are suited to our climate.

The favorable conditions in the mountain areas, especially the highlands, will permit us to greatly develop temperate zone milk cattle. Here there is good feed for the cattle, the grass is easy to plant, and it grows all year round. The temperatures are suitable for the milk cows. Therefore, it is easy to raise two or more milk cows on a hectare of grassland and produce 20 liters of milk per day from cow.

If we know how to exploit the capabilities for raising milk cattle in the highlands, we surely can establish milking herds of approximately 30,000 with from 1.5 to 2 cows per hectare of improved grassland.

In the middle reaches and the lower areas, there is great grassland potential. If we improve and plant additional temperate zone grasses and short-term temperate zone plants to serve as feed during the winter months such as sunflower, sugar beets, animal feed, cha ba grass, and so on we can increase the herds to 2 million cattle. However, the cattle in the middle reaches must be a cross between the temperate zone cattle and the tropical zone cattle so they will be suited to our two season climate and be heavier than our present cattle. If it is heavier we can produce approximately 10 liters of milk per day from each cow.

In summary, we have the capability to greatly develop animal husbandry with regard to our larger animals and satisfy our meat and milk needs.

Swine

For a long time our swine herds have developed slowly mainly because there has been a shortage of feed. At the present time, pig raising is in the hands of cooperative members. Pig raising on a collective basis is not worth mentioning. If we change the farming organization as described above, collective pig raising will enjoy a great development because the material base (mainly feed) will be increased and stabilized. The output of the 5 percent of the land of the cooperative set aside for animal husbandry and the new food products grown on the cooperative land under the new farming organization, in the span of 4 or 5 years, could feed pig herds equal to the numbers now raised by cooperative members. At that time, there would be 9 to 10 million pigs and if grown in pens they would be fatter than ever before.

Along with the subject of feed, the other subjects such as breed, disease prevention, and so on should also be considered.

As far as breeds are concerned, we must rapidly advance the production of economic crossbreed pigs so throughout North Vietnam the pig herds will be of good quality. We must be selective so that the majority of the economic crossbreed pigs are a crossbreed of superior breeds and suited to our climate.

Along with changing the farming organization to produce more food products, we must further develop the results of our research and experimentation in producing feed for the animals and domestic fowl, especially for pigs and domestic fowl because our climate is very well suited to this work.

Poultry

Our capability to develop this aspect of animal husbandry is very great. However, for many years this field has not advanced because after every winter there has been a feed shortage and the cold and humidity have caused the domestic fowl to suffer from diseases which decimated the flocks. One of the most important causes for this has been the feed shortages, because during a feed shortage diseases break out and the fowl are not strong enough to resist. Medicines have very little effect under these circumstances.

When our farming organization has been improved and the food wholesome with nutriants and amino acids, the domestic fowl flocks will rapidly grow. And, with the disease prevention methods of the new technology which we have developed, it is certain that after every winter the domestic fowl flocks will not decline but will grow even more, escaping from the vicious circle that existed previously.

The solution of the feed problem solves one of the main problems hindering the raising of domestic fowl for industrial purposes.

Naturally in raising domestic fowl -- primarily chickens, the choice of breed is very important. One one hand, we need to import the superior breeds of other countries that are suited to our climate and, on the other hand, we must selectively breed our own breeds. We have very good chicken breeds such as the Dong Cao, Mong Cai, Meo and so on.

In summary, relying on the rational change of the farming organization to solve the feed problem, in only a few years we can increase the domestic fowl population many times over.

Fishing

Our country has many lakes, ponds, rivers, and canals. This is very favorable to the development of fresh water fish. However, our fish area is small and production in these areas is low. While fish production in industrially developed countries is from 12 to 20 tons per hectare, we average 1.6 tons with a maximum yield of 8 tons. The reason for this is that we merely release fish but do not raise fish. To raise fish we must feed the fish, but there is a shortage of fish food.

The principal fish food is manure and grass. If we redeploy the farming organization and increase buffalo, cattle, and pig raising and have good organic manure and grasses for the fish we could increase fish production up to 8 or 10 tons per hectare per year. With such a capability or even if we only harvest approximately 5 tons of fish per hectare per year, with approximately 16,000 to 17,000 hectares of water area, we can harvest nearly 1 million tons of fresh water fish per year. Our fathers had a saying, "First guard the courtyard; second, guard the garden; and third, guard the fields." The economic results of fish are very important. We must use the vast experience of our people .

Bees

Our climate permits us to grow all the tropical plants and high-yield short-term temperate zone plants, depending on the season. And, many long-term, rare subtropic plants can be raised. This is one of the best bases for rapidly increasing honey bee growing with a view toward exploiting this great source for honey, beeswax, bee secretion, and so forth. And, at the same time, it will contribute to the intensive cultivation of friut trees and seeding plants.

At the present time, we have only a few thousand beehives, raised by individuals. However, our experiences with bee raising in the delta, middle reaches, and mountains during the past 10 years have shown us that if we redeploy the farming organization along the lines described above, we will have the capability to raise the number of bee hives to 1 million with an output capability of 20 kilograms of honey per year per hive. And, the price of honey would be lower greatly.

This honey production would represent several hundred million dongs of income and the bees would indirectly serve in the production of fruit through pollination, resulting in more fruit.

B. A Source of Abundant and Valuable Agricultural Export Products.

When forming policies for exporting agricultural products and goods manufactured from agricultrual products, each country must take into consideration its climate and soil in order to set up a superior agricultural organization, then invest in the organization to carry it out. Or, in other words, each country must decide on what to plant in order to take advantage of its "regional differences" and "monopolies."

The export of agricultural products and good manufactured from agricultural products is only economically effective and commands a market when the farming organization and production is easy and can be done at reduced cost or when the product is suited to the production conditions and is a product produced by few countries but is in great demand throughout the world.

Previously, we have expended much work and money, but we have not yet created an abundant and valuable source of agricultural products for export becuase we have not discovered the patterns of our climate and soil in an effort to deploy our farming organization in a superior manner as described above. This is very clear.

If we redeploy the farming organization as described above, in addition to the great benefits of making our agriculture a multi-faceted one and raising its productivity to supply the necessities and providing new and strong divisions of labor, we will also be able to supply products that are in great demand all over the world and export them, earning foreign capital with which we can equip our developing agriculture.

If we deploy our farming organization in this manner we will have:

--Tropical products to export to the temperate and colder zones.

--Temperate zone products to sell to nearby tropical countries or to sell to the temperate zone countries, because at the time we are producing, the agriculture of the temperature zone countries are idle.

--Rare and short-supply subtropic products to sell to both tropical and temperate zone countries.

In addition to enjoying a superior situation as far as climate and soil are concerned for the production of the aforementioned products, we should emphasize our favorable geographic location with regard to transportation. We have many advantages for foreign trade with the countries that need to buy our products. North Vietnam is a coastal country located between the tropics and the temperate zone and, as a result, we can sell our products with a minimum of transportation and undersell products that have to be transported great distances.

The production of rare and short-supply products which our special climate and soil allows us to grow gives us a "monopoly."

For example, if we produce oranges for export, although orange production in other orange producing areas is very high (a minimum of 10 tons of fruit per hectare per year and a high of 30 tons), the price of oranges on the world market at the present time is approximately 130 rubles per ton because the orange growing area of the world is small and cannot fill the demand. Our orange production is among the highest in the world.

If we produced tea, we could earn much foreign exchange because tea is very suited to our climate and soil. Because there are very few areas in the world that have climates favorable to tea growing, unrefined tea is 750 rubles per ton. And the demand is great.

If we produced lichee and logan, we would profit even more because very few countries can product them. As a result, theprice is higher than for other products and there is no danger of slow business.

Our favorable position near a market for all our products gives us a "number 1 priority."

If we sell tropical products (bananas, coconut, and so on) to China, Japan, the Soviet Union, and so on, few countries can compete with us.

If we sell temperate zone products (potatoes, sunflower, and so on) to the countries of Southeast Asia, no temperate zone country has our advantages.

If we sell subtropical products, our transportation lines are shorter and more advantageous than the transportation lines of other countries that sell those products.

If we make the proper investment in the intensive cultivation of the aforementioned products, we will have a "number 2 priority" because we do not lack the necessary manpower.

In summary, to carry out the redeployment of the agricultural organization as described above would give us very great economic advantages on the world market. It would be a great source of foreign exchange to buy equipment and necessities for our economy. Its economic results would be greatly increased compared to the present system. For example, if we planted coffee for export, with the product of one agricultural worker on a state farm for 1 year we could earn foreign exchange equal to approximately one-thirtieth that for oranges, one-tenth that for tea, and so on.[2]

C. A Practical and Proper Direction of Scientific Research

The objective situation and the realities of production and day-to-day experiments have enabled us to understand clearly and fairly deeply our climate and soil and from that we have outlined general directions for the farming organization, animal husbandry organization, the organization for agricultural exports, and so on.

In an effort to assure the carrying through of these directions, we must step up and make new changes in the research and in the application of agricultural science and technology. For example, water conservancy, mechanization, chemistry, selection and development of breeds, research into the climate, and fertilizationof the agricultural area. It is also of prime importance that we build up the agricultural meterial and technical base or use industry and science to serve and further advance agriculture.

With these new directions, there will be favorable changes in the above tasks. For example:

Mechanization

If we redeploy the farming organization to be suited to the climate and soil as has been outlined above, there will be many advantages reaped in the mechanization of our agriculture because the mechanization of dry cultivation is easier and less expensive than the mechanization of wet cultivation. And, the machinery for dry cultivation has been developed already, so we would not have to waste time and money in research. In order to coordinate the planting of one dry-cultivated crop and two wet-cultivated crops in one year, the water conservancy taks must be solved beforehand. This is a basic condition that we must work out so that when water is needed it can be drained into the fields for the wet cultivation.

Mainly because of this factor, in the mechanization of agriculture we must first concern ourselves with the mechanization of the water conservancy link.

Water Conservancy

In order to serve the realization of the superior farming organization mentioned above, the water conservancy task must undergo great changes.

In the mountains and hilly areas of the middle reaches (excluding the large level plains) water conservancy primarily serves dry cultivation. In dry cultivation large quantities of water are not needed so there is no need to build large-scale projects which take up lots of land and require large investments.

In the delta and the large fields of the middle reaches and mountains, water conservancy must meet the needs. It must drain the water to allow a dry-cultivated crop(during the dry season this task will not be difficult) and afterwards it must drain warer into the fields for the wet-cultivated crop. To do this, there must be a good plan, large investments, machinery, and appropriate power concentrated at key points and not scattered thinly.

Chemicals

Carrying out dry cultivation in the mountains in the sloping limestone areas and planting two dry-cultivated and one wet-cultivated crops in the terraced fields and using dry cultivation in the winter and wet cultivation in the hot season in the delta, middle reaches, and mountain fields that are level, we will have sufficient advantages to carry out crop rotation on a large scale -- a project mentioned since the times of Le Quy Don. And, we can carry out land improvement by "the nitrogen cycle." With these methods, leeching of the soil, erosion, and poor soils can be eliminated quickly.

Selection and Developing New Breeds

This new direction in deploying the farming organization has opened new and rich areas for the development of new plant and animal strains that are suited to our climate and soil. At the present we have some valuable strains that we are not aware of and that could be further improved. For example, we have a 3-month dau plant while other countries require 7 months to harvest their strain.

Weather

This is a subject that is very important to any agriculture. This subject did not receive adequate attention in the past. Now, on one hand, we must broaden the organization for meteorological research and expand the weather prediction network; on the other hand, we must quickly learn the weather characteristics of each area in an effort to determine a stable base for agricultural economic decisions.

Finally, when we use climate and soil, agriculture will develop strongly and admissions into the cooperatives will increase. This is a contribution to the cooperativization of agriculture.

We have presented the basic points of a scientific and realistic base for agriculture to show us that although North Vietnam, from the Nghe An Province and Ha Tinh Province area northward, is called a tropical country, the special and unique characteristics of the climate creates two distinct

seasons each year -- 6 months of completely tropical weather (the hot season) and 6 months of cool and wet weather (the winter).

The climate allows us to grow short-term temperate zone plants, short-term tropical plants, and many long-term subtropical plants. This is a very rich variety which is highly productive, valuable, and can create a superior agriculture which can produce enough to satisfy the needs of our people and support a large and varied animal husbandry.

We believe this is a well-based conclusion. It can contribute to basic scientific research in agriculture, and aid agriculture, under the leadership of our party, to develop into a multi-faceted, stable, rapidly advancing sector accompanying the political and military achievements of our party and people.

FOOTNOTES

1. Presently there is much discussion about "subtropical Asia" and "atypical tropical climate." We believe it is a topic that must be carefully considered. The pressing subject is that we must unite the knowledge and substance of the weather in order to use it effectively.

2. Statistics provided by authorized agencies such as the Weather Service, Ministry of Foreign Trade, and Ministry of State Farms.

7839
CSO: 3909-W

DEVELOPMENT OF CHINESE SCIENCE, TECHNOLOGY DURING THE PAST 20 YEARS

[Article by Le Khac; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 72-75, 81]

Under the leadership of the Chinese Communist Party headed by the beloved Mao Tse-tung, after more than 20 years of struggle and hardship with a spirit of self-reliance and self-determination, the Chinese people have won clear victories in the socialist revolution and the building of socialism. Notably in the building of a progressive and modern scientific and technical base, China has made great and rapid progress.

Six years ago, on 16 October 1964, China succesfully tested its first atomic bomb using Uranium 235, a nuclear material that is very difficult to make and which demands a high scientific and technical process and a country with a large economic potential.[1] Nearly a year later, on 14 May 1965, China tested a second atomic bomb. This test was an air burst. The bomb was improved. The burst was small but the destructive force of the bomb was very great. On 9 May 1966, China tested an atomic bomb that contained a fissionable core. On 27 October 1966, for the first time, China successfully tested a rocket with a nuclear warhead. On 28 December 1966, China again tested an improved atomic bomb. The destructive force of this bomb was greater than 200,000 tons of TNT.

The atomic tests led to an extremely great achievement -- on 17 June 1967, China successfully exploded its first hydrogen bomb with the destructive force of millions of tons of explosives. The United States took 7 years to go from an atomic bomb to a hydrogen bomb; England took 5 years; France took 8 years; however, China took only 2 years and 8 months and needed only five tests. This was an unprecedent record. On 27 December 1968, China tested its second hydrogen bomb. In September 1969, prior to its 20th national day, China successfully carried out two nuclear weapons tests: on 23 September 1969, the first underground atomic explosion test and on 29 September 1969, an above-ground hydrogen bomb test in western China. According to foreign news sources, this bomb was greatly improved and had great destructive force (approximately 3 million tons of TNT) but small enough to be used as a warhead on the from of a rocket.

World opinion was greatly surprised and filled with admiration for the rapid development of China's atomic scientific and technological base and with the unique and creative spirit of the Chinese worker class and atomic scientists.

In addition to the achievements in developing atomic science and technology to serve national defense, Chinese scientists have made great achievements in the basic research in atomic science as well as in the use of atomic power to serve production and life. Since the day of liberation, the Chinese government and party were extremely mindful of the important task of developing modern scientific sectors, especially the atomic science and technology research and teaching installations were opened in many areas in the country. The ranks of atomic science and technological cadres matured rapidly, in quantity as well as quality. Today, China has the capability to produce and equip a large portion of necessary testing equipment, from nuclear electron machinery, equipment for measuring radioactivity, and geiger tubes to complex equipment that demands a high degree of technical scale such as Van De Graaff electrostatic generators and nuclear reaction piles. The application of radioactive isotopes has been a matter of attention since immediately following liberation. After successfully constructing the first nuclear reaction pile (June 1968, China had the capability of producing radioactive isotopes. Since then, radioactive isotopes have been used in medicine in diagnosis and cures with very great effectiveness. Radioactive isotopes have been used in agriculture to increase production of seeds and to produce new strains. And, they have been used in many industrial sectors in China from the manufacture of equipment, in metallurgy, chemicals, and petroleum exploitation to the light industrial sectors such as weaving and foodstuffs. This shows the determination of the Chinese scientists to bring the newest achievements of modern technology and science to serve production and the lives of the people, and to serve the building of socialism in China.

The rapid development of the Chinese atomic science and technology sector demands the development of synchronization of many key science and technology sectors. The modern science and technology sectors such as the electronics sector, semi-conductors manufacturing sector, the plastics sector, heavy machinery sector, and the precision instrument sector have been developed rapidly. If 10 years ago China had not yet produced a semiconductor radio tube and a large quantity of electronic equipments, today China can produce electronic tubes and semi-conductor radio tubes of all kinds and can manufacture many modern and refined electronic equipment. Primarily, the rapid development of electronic technology is an important factor in promoting the development of atomic science and technology and rocketry. At the Shanghai industrial exposition, right along side the famous textiles and embroidery pieces of Hangchow and To Chau, and the beautiful "Red Flag" and "East Wind" automobiles manufactured by China, were very delicate medical instruments and equipments, semi-conductor

receivers, plastic goods, steel and alloy goods, processing machinery with tolerances of .001 millimeter, all-purpose electronic computers, electronic microscopes which will magnify from 200,000 to 300,000 times, electronic refining ovens that can melt metals with extremely high melting points such as tungsten (3400 degrees) and molybdenum (2620 degrees) and so on. Also at this exposition there was on display a 12,000 ton, water-pressure machine -- only a very few countries in the world have the capability to manufacture such a machine. The progressive technology in the welding used in the larger parts of this machine was contained in a scientific report given at a scientific congress in Peking in 1964 which was participated in by scientists from Asia, Africa, and Latin America. In the 1964 Peking scientific conference, as in the 1966 Peking physics conference, Chinese scientists introduced a brilliant achievement -- the successful manufacture of a highly efficient Xenon lamp, which is currently in wide use in large cities such as Peking and Shanghai. This lamp has a very beautiful and bright light, and is a thousand fold brighter than ordinary lights.

Concurrent with using the newest scientific achievements to serve the technical sectors, production, and life, Chinese scientists also have enjoyed many achievements in basic scientific research. The scientific reports given at the aforementioned conferences, just as in the research projects concerned with mathematics, mechanics, nuclear physics, theoretical physics, solid physics, and so forth, and published in scientific journals inside and outside the country, have received high acclaim. In 1966, Chinese scientists recorded an extremely brilliant achievement: for the first time anywhere in the world, they were successful in synthesizing crystallized insulin.[2] Research in synthesizing insulin was being carried out in a number of countries, but without desired results. Chinese scientists, after 5 years of research, in 1966 produced a completely synthesized product with from 1.2 to 2.5 percent of the properties of natural insulin. After refining and crystallization, this product was from 10 to 30 times stronger and was in the form of crystals. Its chemical composition, chemical qualities, immunity properties, and medical properties are the same as those of natural insulin. This achievement by Chinese scientists is a great contribution to the probing of the secrets of life.

At the end of 1968, China again recorded new achievements. On 22 September, China carried out observations on the partial solar eclipses that took place in Sinkiang in western China. The observations had various objectives, such as the observation of the influence of the eclipse on the ionization of the atmosphere, and so on.

The result of this project was the collecting of much rich data on the ionization of the atmosphere, pictures of the eclipse that are very clear, much data on the influence of an eclipse on atmospheric layers and the geography of the earth, and so forth. The observation of the partial eclipse demanded a scientifically organized mission and very delicate equipment such as equipment to measure the surface of the sun, equipment to

observe the eclipse, and so forth. These equipments are available in only a few countries of the world.

Moving into 1970, a great and happy piece of news from China greeted us. On 24 April 1970, for the first time China launched an artificial satellite from the earth. This satellite weighed 173 kilograms and orbited in eliptical orbit with a perigee of 439 kilometers and an apogee of 2384 kilometers. The time required for each orbit was 114 minutes. The plane of the orbit was at a 68.5 degrees angle to the equator. The equipment on the satellite operated well. The signals transmitted from the satellite could be heard clearly all over the world.

In a comparison of China's first attempt to launch an artificial satellite with the first attempts of other countries we can see the outstanding progress and stability of China's science and technology with regard to space. Let us look back at the United States first attempt to launch a satellite on 6 December 1957. The U.S. satellite "Vanguard" only weighed 1.45 kilograms with a diameter of 16 centimeters. It was launched by rocket, but the rocket rose only a few score meters then fell to the ground. The satellite, rocket , and launch pad was transformed into a massive fire. Nearly 4 months later, on 1 February 1958, the United States finally successfully launched its first artificial satellite which weighed 13.5 kilograms. England's first satellite was named "Ariel 1" and it weighed only 16 kilograms. The satellite was built by England, but in order to launch it, England had to rely on a U.S. rocket. And, as of now, England does not yet have its own rocket to launch a satellite.

During 1964, France tested a rocket three times and failed. Only on 26 November 1965 was France able to use the rocket "diamont" to successfully launch a man-made satellite named A-4 weighing 42 kilograms -- one fourth the weight of the Chinese satellite. According to General Robert Auginier, Director-General du Centra National d'etudes Spatiales (Director-General of the French Space Research Center), the Chinese rocket was more powerful than the French rocket. Japan's first attempt to launch a satellite was on 26 September 1966. The satellite was a sphere, 50 centimeters in diameter. It was launched by the "Lambda 4S-1" rocket, a four-stage solid-fuel rocket. Japan's first attempt was a failure. The fourth stage of the rocket failed and, as a result, first stage speed was not attained. The satellite and the final stage of the rocket fell into the sea. Only after four successive failures, on 11 February 1970, Japan successfully launched an artificial satellite, one meter long and weighing 23 kilograms, by using a four-stage rocket, 16.5 meters long and weighing 9.4 tons. Japan's first satellite was in orbit only a short time before it fell to earch. Its signals were heard no more.

China's clear achievement -- the successful first launch of an artificial satellite -- marked a beautiful step in the development of China's science and technology.

From a semicolonial, semifeudal country, in the span of only 20 years, China became a socialist country with a modern industry, advanced agriculture, powerful national defense, and developing culture, science and technology. Along with the achievements in other areas, the successful experimentation in atomic and hydrogen bombs and in artificial satellites points out the stubborn revolutionary will and creativity of 700 million Chinese people. The people of Vietnam and the people engaged in scientific and technical work in Vietnam are very pleased by the great victories which the Chinese people have won. They see the victories as a strong encouragement to their own resistance against America for national salvation and building socialism. We hope that the Chinese people under the leadership of the Chinese Communist Party headed by the beloved Chairman Mao Tse-tung, win even greater victories in the development of science and technology as in the building of socialism in general.

FOOTNOTES

1. The most efficient way to manufacture Uranium 235 is by gas-operated diffusion. The first U.S. gas-operated diffusion plant is at Oak Ridge and uses thousands of kilometers of rods and uses 1.8 million kilowatts of electricity. The cost of the first kilogram of Uranium 235 was nearly 30 million dollars. The French gas-operated diffusion plant at Pierrelatte was started in 1961. In 1967 it was completed at an expense of 5.3 billion francs.

   Plutonium 239 or Uranium 235 can be used to make an atomic bomb. Plutonium is a product of an atomic reaction pile. If the plutonium method of manufacturing an atomic bomb is used, the capability for manufacturing atomic weapons will be limited. Moreover, to manufacture a hydrogen bomb, an atomic bomb must be used as a detonator. And, the atomic bomb used as a detonator must be made of Uranium 235. From the beginning, China was determined to build a gas-operated diffusion plant to manufacture Uranium 235 to make atomic bombs and would not be limited in the manufacture of bombs and rapidly moving from an atomic bomb to a hydrogen bomb.

2. Insulin is an endocrine substance which regulates the blood and it is one of the first proteins which was accurately understood in terms of chemical structure and the amino acid structure and order.

7839
CSO: 3909-W

UNIVERSITY AND VOCATIONAL EDUCATION IN EAST GERMANY

[Article by Vu Van Tao; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 76-81]

Since the present German Democratic Republic was liberated from Hitler's fascist yoke, the creative and scientifically-oriented people of the German Democratic Republic, under the leadership of the German United Socialist Party, have gained control of their civilization, and built the eastern section of the former German nation into a prosperous socialist country with a strong industrial base and a modern science and technology. The university and vocational education system has made important contributions to these achievements.

After the conclusion of World War II, the German Democratic Republic set about with the first improvement of education with a view toward wiping out the vestiges of the fascism in the schools; organizing supplementary education for the workers and setting up university preparatory classes; and opening classes for the children of the workers in the universities and vocational schools. The ratio of workers' children in classes raised from 4 percent in 1946 to 28 percent in 1949. There was a dismissal of the professors that had fascist ideas and refused to reform and who held important positions during the first education reform. In Leipzig University alone, 170 of 220 teachers were let go.

The second educational reform was carried out during 1951 and 1952 with a view toward guiding the universities and vocational schools in the path of socialism; continuing the struggle to affirm the leadership of the party in the education sector; and opposing the influence of capitalist education. During this period, 38 new universities were established, and the number of students rose from 30,000 in 1950 to 102,000 in 1960. Of that number, 25 percent were women, and students from worker backgrounds accounted for 45 percent of the total.

The third reform began in 1968 and was aimed at responding to the new and large demands of the task of building socialism. Confronted with the requirements of economic development according to a long-term plan;

relying on a deep understanding of national objective development; relying on expected growth of science and technology in the future; and with a view toward overcoming the difficulties inherent to a country with few natural resources and a manpower shortage, the industry of the German Democratic Republic concentrated on developing the most important industrial sectors such as the petroleum chemical sector, the machinery manufacturing sector, and the precision machinery and electrical equipment sectors. In each sector, a new slogan has been outlined, "surge forward, but do not stop with a catch-up objective" in world progressive levels. Therefore, the science and technological revolution holds a very important role and demands that the university and vocational school sector have new training and research methods and contents to expand the ranks of the science and technological cadres and stabilize them in politics, versatility, and specialization.

Confronted with that task the schools must become an effective research organization in the state's large-scale research system and respond to the rapid development of modern science. Previously, the schools were organized along the following lines: at the top there was a board of supervisors, below the board were the fields of study, and below those was the institution. The institution was the research and teaching unit. Actual practice showed that many institutions could not handle the large research tasks because isolated research and the direction of the research was not adequate. Teaching was not coordinated with the various specialties; as a result, the quality of teaching was restricted.

In order to overcome this situation of dispersed forces and concentrate forces on scientific research, this educational reform was aimed at better organizing the universities, resolving every relationship between the universities and the production universities, and better organize the continued training of cadres after they finish school. It aimed at a united ideology between theory and practice, study and research, study and production in teaching methods.

In the current university organization, the schools are not organized as institutions but as sections. Each section is organized along its own lines of training and research. The section not only has teaching cadres, but it also has cadres, workers, employees, and students. The section chief is elected by the members of the section for a 3-year term. The teaching cadres are divided into specialist teams. Each team has a number of small groups that teach specialties. The scientific research teams are set up according to research subjects, and are participated in by teaching cadres from other specialist teams and by scientists and students. In that way, the establishment of sections to create conditions which make it easy to rationally organize research, make full use of material organizations, and to widen cooperative research with the outside.

Throughout the entire country, each university or every section, based on its strong points, signs research contracts with a number of main

cooperate objectives. For example, the Dresden Polytechnic University cooperates with the large research center of the Federation of Robororong Electronic Enterprises in order to study the theory of transmissions and prepare a theoretical and technical base for the manufacture and perfection of electronic computers. In every field of science and technology they have appointed a section to head up and coordinate the efforts of other sections in order that they may fulfill the contracts that have been signed with the enterprises. The universities normally research basic subjects that will serve the long-range development directions of the enterprises. The vocational schools only research those subjects that are not complex or those subjects that will serve an immediate requirement.

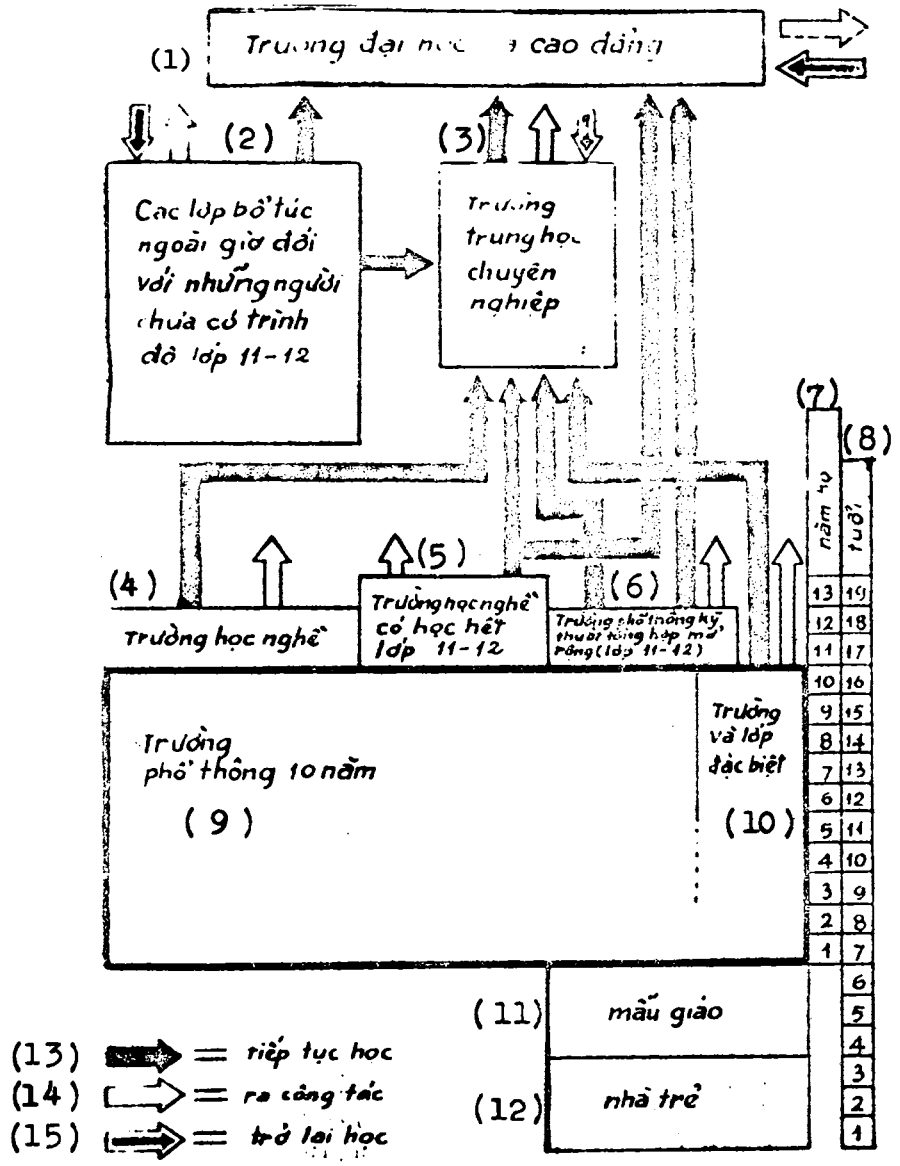
In order to assure a high standard in cadre training, they have emphasized full training in knowledge for the students. After finishing the 10th grade, a student must then graduate from the 2-year combined technical school or they must graduate from a 3-year trade school before they take an examination to enter a university. While studying, the school must actively help the student and concentrate on solving realistic subjects. In all the teaching processes, not only must there be a thorough understanding of the union between political education and specialties, between theory and practice, and between study and research, but there must also be an understanding of how to use the results of education in the public schools and trade schools. And, at the same time, there must be consideration for specialization after graduation. In the training process, the schools have emphasized steering the students into the sectors and trades that they will go into after graduation. The state informs the student of the mission they will undertake one year before they leave school. As a result, specialization is carried out while the student is preparing his graduation thesis. In addition to studying the basic theories of the sector, students in all the sectors must study Marxism-Leninism, military subjects, and two foreign languages, of which Russian is the outstanding language. In addition, the student must study a number of new subjects, such as the science of organization, with a view toward understanding organization theory and methods. Management courses include the theory of organization and leadership. The students also study basic concepts in the coordination and use of electronic computers in production and the general concepts of communication studies, statistics, planning, and so forth. Beginning with their first day in class, the university student is engaged in research. He begins with gathering data and moves on to the study of more refined subject matter under the guidance of the teaching cadres. Through this the student acquires the most modern education and becomes familiar with research methods and learns independent research and study techniques. For short time periods the student enters production installations to propagandize the policies of the party to the masses and regards this as practical practice in political studies. In later years, the student takes part in collective studies with the teaching cadres, and works in the production installations for from 4 to 6 months, researching and preparing his graduation thesis. They studied while doing research, and train in actual circumstances. This method of training demands new

teaching plans and curricula, and demands that every link in the training process must reject the unnecessary, outdated, and repetitive teaching practices with a view toward building up a modern teaching system. Many schools have used modern methods in teaching.

In an effort to unite the concepts in the trade sectors and in an effort to coordinate the learning that is gained while in school and the learning that will be gained after graduation, in 1969, the state promulgated a list of trade objectives for the basic sectors and the specialist sectors. The new list is based on the teaching principles of the system (research, statistics, trade). In this way, a graduate can actively serve a sector or specific trade and, at the same time, continue his learning in an effort to go deeply into specialization in one aspect of the work. According to the list, the universities have 90 basic sectors and approximately 24 specialist sectors; and the vocational schools have 65 basic sectors and approximately 180 specialist sectors. As a result, in the new list the number of sectors and training trades are more streamlined than they were previously. For example, with regard to electricity, in the old list there were 14 electrical sectors set up in groups. There were six high voltage sectors, seven low voltage sectors, and one theoretical electricity sector. In the new listing there is only one basic sector called the electrical engineering sector composed of seven specialist sectors -- theoretical electricity technology, operational techniques, electronic communications, manufacture of electronic equipment and scientific equipment for the electronic industry, electricity technology, and manufacture of electronic components. This improvement has permitted a reduction in the training period from 5 years to 4 years (with the exception of a few sectors such as medicine, which were reduced from 6 years to 5 years).

Continued training after graduation holds a very important role in the university and vocational school system as well as in the whole school system. In the current science and technology revolution, on-the-job training must be looked on as formal school training. Formal training can only provide a basic theoretical foundation so the student can gain experience after graduation in the specific work he has chosen. For example, in chemistry, only three main sectors are taught -- chemistry theory, synthetic chemistry, and industrial chemistry -- with approximately 500 to 1,000 hours of continuous training (of which nearly three-fourths is self-study). Continued learning also helps in transferring from one sector to another. Because transfers are easier and take place in modern scientific and technological conditions it sometimes leads to new production methods and new industrial products. Continued education is also one way to raise the educational level of the cadres and to assure that the cadres are not left behind by the rapid scientific and technological advances. Continued education is carried out through basic classes in many sectors such as mathematics, use of electronic computers, and so on, and through technical reports on new achievements in science. A chart of the united educational system of the German Democratic Republic is presented below and illustrates the relationship between on-the-job training and formal education from the lower schools up to the university.

Unified Education System of the German Democratic Republic



Key:
1. Universities and higher education
2. After-hours supplemental education for persons who have not completed levels 11 and 12
3. Vocational schools
4. Trade schools
5. Trade schools with classes through levels 11 and 12
6. Public technical schools with classes through levels 11 and 12
7. Year of study
8. Age
9. Ten-year public schools
10. Special classes and schools
11. Kindergarten
12. Nursery
13. Continued studies
14. To work
15. Back to school

In order to carry out this heavy responsibility, the universities are very concerned with improving the quality of teaching and improving the political and specialty training of the cadres. The Ministry of Universities and Professions has supplementary education classes for the boards of directors and cadres responsible for the cadres teaching policies of the party and the state. The classes are under the auspices of university and economic institutions. The classes last for 14 days each year. The cadres teach in the schools for 4 or 5 years at a time, and every few months they take supplementary classes in Marxism-Leninism and in other studies necessary in the work such as electronic computers, organization studies, production methods, and so on.

In order to rapidly build up the teaching cadres ranks, many universities have begun to carry out a "research and study" system with a view toward training students from the fourth year to advance straight to being a "member of a scholastic sector" without having to write a thesis. Through this method, in future years the ratio of students in research will rise 20 percent.

In order to meet the requirements for training cadres and in order that the training contents, scientific research contents, and the continued training contents of the schools will be in touch with the realities of the development of socialism, research in the universities will have to be advanced. The university and professional sector are stepping up scientific estimation activities and coordinate with the national estimation agencies, the sectors, industries, and research centers with a view toward outlining the essential directions of development of science and the direction of cadre training for long-range planning. Many schools have planned as far ahead as 1980, and scientific sectors are planning for the year 2000. Completing the scientific estimation activities, the schools are concentrating the intellect of the cadres and students and directing it toward future tasks and dealing with immediate tasks. Regular scientific estimation tasks is considered to raise the teaching level and make it equal to the most modern scientific levels. In summary, the university and vocational school sector of the German Democratic Republic has determined its role in every relationship with all the economic systems in the science and technological revolution. The schools must serve as a special force in developing the economy and they must help in directing scientific potential into areas that best benefit the national economy. Training the socialist man so he will have a high scientific and technological level is not the task of the school alone, it is the task of the entire society.

Formal education is only one important link in the educational process. Therefore, the public schools, trade schools, vocational schools, and continued education schools must form a unified education system that can produce a highly qualified graduate. Transfers after entering work and continued education after graduation is an important link that must not be neglected. The person being trained must be politically stable, have a basic knowledge, and generally understand the sector. From that training

requirement, the schools have built new training methods causing the students to be active in studying, in research, and in training with a view toward achieving three unities -- unity between politics and specialties; unity between theory and practice; and unity between study and research.

The teaching profession in the universities and vocational schools of the German Democratic Republic has developed very strongly. From a total of seven universities that reopened after the liberation from the fascist yoke, today there are 54 universities with 122,000 students of which 31.7 percent are women, and 188 vocational schools with 151,000 students. Today in the German Democratic Republic, for every 10,000 persons there are 71.4 university students and 88.5 vocational school students. In 1968, the number of cadres with university or vocational school educations that continued to study was 64,000 in industry and 65,000 in construction. This was a 10 percent increase over 1961. Compared to 1968, currently the number of students in on-the-job training positions has increased 40 percent in the universities and 138 percent in the vocational schools. Presently the ratio between on-the-job students and centralized students in the universities is 34 to 100; in the vocational schools the ratio is 112 to 100. The quality of teaching in the German Democratic Republic has greatly improved. The schools are struggling to develop the effect of modern science in production, and the effect of education on the younger generation with a view toward serving the building of socialism.

7839
CSO: 3909-W

NIXON HAS INCREASED U.S. TROUBLES BY EXPANDING WAR OF AGGRESSION IN INDOCHINA

[Article by Huong Nam; Hanoi, Hoc Tap, Vietnamese, No 10, October 1970, pp 82-89]

In the presidential inaugural address on 20 January 1969, Nixon had to admit: "We are caught up in war at a time when we want peace. We are torn by division when we want unity."

The war involved is the war of aggression in Vietnam, and this war with its deep and total effect on American society, has made the United States unprecedentedly "torn by division."

Serious Economic and Financial Recession

At the end of 1968, at the time of the presidential race, Nixon could not but realize this. Feeling the trend in U.S. public opinion and with the familiar maneuvers of a demagogue, Nixon promised to deal with the two main problems of the United States, the Vietnam war and inflation. But with his stubborn and warmongering character, Nixon has betrayed this promise, is prolonging and expanding the war in Indochina, and is making the basic difficulties of the United States, economic and financial ones first of all, even more serious.

Inflation is increasing rapidly and has become the largest and longest in the United States since World War II. In 1968, the rate of inflation was 4.8 percent. Nixon estimated a decline to approximately 3.5 percent at the end of 1969, but now the annual rate of inflation has risen in excess of 6 percent. On the reason for inflation, the U.S. magazine Time for 1 June 1970 stated: "At the end of the 1960's the government borrowed considerably on the market to compensate for the nearly 25 billion dollar annual deficit, and most of this money was used for nonproductive purposes such as the Vietnam war." With the present U.S. troop strength in Vietnam being nearly 400,000, the expenditures for the war of aggression in Vietnam do not include the indirect or disguised spending which has officially risen to approximately 24 billion dollars annually, or approximately the same as the deficit cited by Time. With the maneuver of

piecemeal withdrawal, Nixon is finding it very hard to significantly reduce the inflationary pressures caused by the Vietnam war expenditures, especially when the overall spending on defense remains very large. The director of the White House's Office of Management and Budget G. Shultz stated on 28 July: "Defense expenditures during the 1969-70 fiscal year rose to 77.8 billion dollars, exceeding the expenditures Congress authorized by 8.5 billion dollars." In fact, U.S. defense expenditures are not limited to that figure. According to the analysis of antiwar organizations in the United States, in the 1970-71 budget of 197 billion dollars, Nixon only reserved 2.3 percent for public welfare, 14.5 percent for health and education, and nearly 70 percent for defense.

To curb inflation, the Nixon administration has proposed measures for increasing revenues and reducing expenditures and has attempted to keep the 1969-70 budget surplus at between 5.8 and 6.3 billion dollars. The result has been no surplus but instead a deficit of 2.9 billion dollars (Treasury Secretary D. Kennedy admitted it could drop to 10 billion dollars) even though Nixon readjusted the budget more than six times. In the 1970-71 budget, Nixon estimated a surplus of 1.3 billion dollars, but now the deficit is approximately 5 billion dollars (Shultz estimated a deficit of 15 billion dollars) even though Nixon twice recommended tax increases of approximately 3.1 billion dollars. Recently, R. Mayo, director of the U.S. Bureau of the Budget, estimated that the 1971-72 budget would also have a deficit (approximately 23 billion dollars, according to Time magazine).

Tax increases and deficit spending cannot be the way to eliminate inflation. Taxes for 1969-70 were 36.9 percent of the national income compared with 29.4 percent during the Korean war and 26.8 percent during World War II. This means the highest amount in the history of the United States. The highest level of public debts at the beginning of 1969 was 377 billion dollars. Nixon promised to attempt to reduce this by 1 billion dollars at the end of 1970 (Nixon's economic report on 2 February 1970). However, an additional 18 billion dollars had to be borrowed, increasing the public debt to 395 billion dollars or double the entire U.S. budget presently. Meanwhile, the Nixon administration is coming under increased pressure for tax reductions, increased wages, and increased spending on social welfare. The anti-inflation path, as many U.S. newspapers point out, can only be to reduce military expenditures, expenditures for the Vietnam war, first of all. However, this is the path the Nixon administration stubbornly rejects.

Even more serious is the fact that the current inflation in the United States is coupled with recession. Even though the Nixon administration is trying to avoid the use of the word, economic researchers and politicians in the opposing faction have indicated that the United States is in a real and total recession. The current recession is regarded as dangerous because it is occurring when there is a war and, heretofore, war and war production were regarded as effective measures for solving economic crises in the United States. In the 2 February 1970 economic report, Nixon

admitted the slowdown in the economy since October 1969, and U.S. Treasury Secretary Kennedy had to declare on 8 May 1970 that the "U.S. economy is painting a very gloomy picture." Concerning the gross national product, Nixon forecasted for 1970 a 5.5 percent increase over 1969, but in fact it fell for two straight quarters (fourth quarter of 1969 -- 0.4 percent decline per annum; first quarter of 1970 -- 3 percent decline per annum, the highest since 1960). Industrial production declined steadily during the 10 months from August 1969 to May 1970 (except for March 1970, when it slightly increased) and the downward trend continued during the third quarter of 1970. In agriculture, the wheat acreage for 1970 declined 20 percent as compared with 1969. The stock market dropped for 18 straight months beginning in December 1968. The biggest drop was after May 1970 when the United States sent troops into Cambodia and expanded the war of aggression throughout Indochina. Stock prices fell 30 percent and the total stock value fell over 250 billion dollars damaging the interests of approximately 100 million Americans, primarily the middle class which Nixon calls the "silent majority," frequently the voter for Nixon's Republican Party. Economic and stock analysts within and outside the United States feel that the New York Stock Exchange is "all confused" and "entirely panic-stricken." The U.S. stock market crisis has turned into a crisis of confidence in Nixon and the Nixon administration.

In such a general economic situation, the international balance of trade has worsened considerably. The U.S. unfavorable balance of trade annually averages between 4 and 5 billion dollars; in 1969, it was only 1.2 billion dollars. At that time, the expenditures of U.S. dollars abroad were very large (imports needed for the war of aggression in Vietnam and expenditures of foreign currency for U.S. military bases and U.S. soldiers abroad, especially in Vietnam). This caused the worst U.S. international balance of payments since World War II (1969, a deficit of 6.9 billion; first quarter of 1970, a deficit of 2.8 billion; second quarter of 1970, a deficit of 1.61 billion). The value of the dollar has fallen, affecting the value of the currency of the capitalist countries that are allies of the United States. In reality, this means that these countries are forced to bear a portion of the U.S. war expenditures. There is now a trend in Western Europe demanding the freedom to exchange the dollar for gold (in March 1968, Western Europe and the United States agreed that the United States would gradually end the war and the Western European countries would not exchange dollars for gold). The relatively stable situation of the dollar presently on the international market is only temporary and deceiving. The gold reserves during August 1970 were 11.8 billion, the lowest since November 1969 and only equal to one-fourth of the dollars in foreign countries. Even though Nixon has made optimistic statements, U.S. political figures such as Senator Mansfield have warned: "The tragic war in Indochina proves that our resources are not inexhaustible and our wealth not infinite. Inflation and recession are a part of the price we must pay for realizing this mistake." (Reuters, 24 June 1970).

Deepening Political Crisis

The recession has increased unemployment. From 3.3 percent at the end of 1968, the unemployment rate rose to 5 percent in May, June, and July, and to 8.7 percent for the Negro. In an announcement on 10 June 1970, Senator Mansfield and Representative Carl Albert stated: "Rising unemployment accompanied by inflationary prices has compounded the tragedy for those out of work and on reduced hours during the week." Previously, during World War II, when war expenditures caused difficulties in the life of the American people, the U.S. authorities took advantage of the people's patriotic and anti-fascist spirit to limit consumption, mobilize manpower, control prices, and so on. Today, the war of aggression in Vietnam is an unjust war, yet the U.S. authorities, initially thinking they would swallow it, declared the "butter and guns" policy. However, the war continues to drag on and expand and the war expenditures are increasingly pressing heavily down on the heads of the people. Thus, numerous Americans are increasingly condemning this dirty war, and opposition within the United States is mounting rapidly. The problem of crime, the housing shortage, air pollution in U.S. cities, and opposition of American Negroes are becoming more and more serious. Demonstrations for higher wages, solutions to urban problems, democratic rights, and against taxes and poverty erupt continuously. Unprecedented labor strikes have taken place (450,000 diesel engineers stopped work at the end of March 1970; 140,000 power company employees stopped work for more than 3 months, from 27 October 1969 to 30 January 1970). And it even spread to the government sector (250,000 postal employees in March 1970). In mid-September 1970, nearly 400,000 automotive workers stopped work, causing a 30 percent reduction in U.S. automobile output and widespread economic, financial, and social repercussions. Also at that time, 500,000 railroad workers declared their intention to strike and threatened to paralyze transportation in the United States. This caused Nixon to quickly sign an arbitration order and on 18 September the workers were ordered to postpone the strike for 60 days. Of special significance is the fact that demands for better living conditions and democracy were closely combined with demands for an end to the Vietnam war, thereby allowing the antiwar movement to vigorously expand.

The American people's antiwar movement has expanded continuously since Nixon took office and reached a turning point in the fall of 1969. During October and November 1969, various forms of the movement were demonstrated on an unprecedented scale. It included millions of Americans, mainly young people, students, the middle classes, and even some people in U.S. political circles and those from the local governments in some states. Some U.S. soldiers in South Vietnam, as well as Americans abroad, participated. The movement was guided and coordinated on a broad scale throughout the world. While Nixon was making piecemeal troop withdrawals as a means of prolonging the war, the people's antiwar movement issued slogans demanding that he immediately withdraw all U.S. troops and end the war in Vietnam. The Son My incident surfaced then and charged barbarous war crimes on the part of U.S. troops in Vietnam. The average American was

stunned to discover that the unjust war in Vietnam was not only a waste of manpower and expenditures but had also turned their children into murderers of the Son My ilk. With concern, they asked themselves this question: How extensive was this familiarity with murder and how would the return of these men from Vietnam affect American society? By 1970, when Nixon recklessly sent troops into Cambodia and continuously bombed in some densely populated civilian areas of North Vietnam, the movement again expanded and took on a large scale as it had done in the fall of 1969. It attracted many university students, intellectuals, Negroes, workers, and military people. Slogans were strongly worded. They opposed aggression against Cambodia and the bombing of North Vietnam; demanded an immediate end to the war and total withdrawal of U.S. troops from Cambodia, Vietnam, and Southeast Asia; and demanded the impeachment and trial of Nixon. The form of the struggle had developed to a point of violence and, in many cases, the masses took such actions against the war machinery of the United States as bombing some military recruiting agencies and reserve officer training installations on university campuses. American soldiers at 43 U.S. military bases demonstrated against the war, and so forth.

Within the U.S. power structure, in spite of the fact that it has not yet abandoned its aggressive ambition, there is a tendency to criticize Nixon for prolonging and expanding the ever-expanding war. According to the Harris poll, among 537 leaders of the 500 largest companies in the United States, the great majority of whom previously supported Nixon, only 49 percent now approve of the Nixon line and three-fifths of this number consider the aggression against Cambodia as the reason behind the stock market crisis. Nelson Rockefeller, the largest financier of the capitalists in the northeastern United States, and a leader of the Republican Party, and T. Watson, the president of International Business Machines, criticized Nixon for introducing troops into Cambodia. It is significant that even the president of the Bank of America, the largest bank in the United States and Nixon's primary strength among the capitalists in the western United States, expressed the opinion before a Senate committee that the war in Vietnam has caused severe losses to American business and that expenditures for the Vietnam war have created serious inflationary pressures and caused rapid increases in prices.

The conflict within the U.S. power structure is clearly revealed in the relationship between the Congress and the Nixon administration and that between the Republican Party in power and the opposing Democratic Party. According to a public opinion polling agency in the United States, more than 50 percent of the senators and 30 percent of the congressmen opposed Nixon's introduction of troops into Cambodia. The Senate Foreign Relations Committee issued a strong attack, demanded to meet the President, and issued a statement accusing Nixon of violating the constitution, usurping the authority of the Senate, and carrying out a war not authorized by the constitution. The Commonwealth of Massachusetts, one of the most heavily populated states in America, has passed a law granting its citizens the right not to participate in an undeclared war. Specifically, the young

men in the state have the right to resist a forced assignment to Vietnam and can refuse to participate in the undeclared war in Vietnam. There was also a referendum in this state during November 1970 relative to armed aggression by the United States against Cambodia. Hawaii has also passed a resolution demanding that Nixon and the U.S. Congress immediately halt armed aggression in Cambodia. Two U.S. senators, Cooper and Church, have issued an amendment requiring that funds for military operations in Cambodia be cut off. Although it was "amended" many times, and no longer has any real effect, it clearly demonstrates that one element of the ruling circles in the United States does not want to follow the war escalation policy of the Nixon administration. While Nixon has refused to publish a timetable or troop withdrawal schedule, more than 41 percent of the senators have supported the McGovern-Hatfield amendment, which requires that the President establish a timetable for the total withdrawal of U.S. forces from Vietnam (prior to 31 December 1971). This amendment was signed and supported by 2,178,000 people in all 50 states. In the face of the shocking and crude words of Vice President Agnew concerning those who criticize the policies of the Nixon administration, Harriman, the former head of the U.S. Delegation to the Paris Conference on Vietnam, called Agnew "a man attempting to divide the American people."

Even among the members of Nixon's cabinet, one-half did not approve of the introduction of U.S. troops into Cambodia or the attitude of the President and Vice President toward young people who oppose the prolongation or expansion of the war. Some high ranking officers responsible for young people and some associated with the National Security Council have resigned. Two hundred and fifty State Department officers signed a resolution expressing their lack of support. Time magazine pointed out in June 1970: "It is not yet a revolution, but there has been some anger and dissension within the Nixon administration. In Washington, a loss of faith in the leadership of the President has spread to public officials and government employees, as well as to members of the cabinet." According to the Western press, the United States is experiencing the most profound political crisis in its history since the end of the 19th century civil war. According to a Harris public opinion poll conducted in early September 1970, Nixon's prestige dropped from 40 percent to 35 percent in July.

An Ever-Weakening International Position

By prolonging and expanding an unjust war which has been clearly lost, Nixon is increasingly weakening the international status of the United States. Fantastic stories about the unlimited power and potential of the United States have been completely dissipated. The neocolonialism of the United States under various forms has been exposed. Previously, when it has been unable to use economic, political, and cultural methods to block a national liberation movement, the United States has used military force or overthrown the government with varying degrees of success in some places. In Indochina today, the people of Vietnam and Laos are totally defeating the special and limited wars waged by the United States.

For the first time in the world, a nationalist government in Cambodia used by the imperialist United States to overthrow another, has boomerangcd.

The war in Vietnam has prevented U.S. military forces from keeping pace with the expansion of the major powers in the world and the dominant position of the United States in Western capitalist countries has bogged down and pushed the United States into a position of serious political isolation.

To correct this, the Nixon administration was forced to adjust its world strategy so that it would fit the weakened position of U.S. forces while, at the same time, striving to continue the scheme to master the world.

In a report on 18 February 1970, Nixon stated three "basic principles" of U.S. foreign policy, saying that in order to obtain world peace it was necessary to "shoulder the burden together," acquire "strength," and acquire "an attitude of readiness to negotiate." The substance of that policy was to appeal to other countries in the imperialist bloc to contribute their strength so that the United States could carry on in its role as international gendarme and rely on force to make the people of the world accept U.S. "peace" conditions.

However, in the face of the weakening of U.S. imperialism, its allies and satellites were anxious to reexamine their relations with the United States, and they did not want to "shoulder the burden" with the United States. An attitude of independence and neutrality concerning many or some U.S. problems became more and more apparent. The capitalist countries of Western Europe are attempting to straighten out relations in Europe, which are not subordinate to their relations with the United States. On his recent trip to Western Europe, Nixon was strongly opposed by the people of those countries. Since the United States expanded the war into Cambodia, some countries have exchanged their dollars for gold and do not intend to allow the United States to saddle them with a long-lasting inflation. Japan, although it reaps the greatest profit from the U.S. war in Indochina, has not yielded to the United States over some trade problems between the two countries, notably in the field of textiles. The U.S. balance of payments is in dire straits because of the tendency toward ever-worsening deficits. Even the satellites of the United States, who have traditionally obeyed the orders of their master, are now taking advantage of the weakened posture of the United States by means of abuse or by refusing to "shoulder the burden together"; i.e., to share the failure as the United States had hoped. Pak Chong-hui "opposes" withdrawal of U.S. troops as a means of getting more money; Thailand "threatens" that it will not send troops to help the Lon Nol clique as a means of getting aid money; the Philippines refuses to participate in the conference of countries taking part in the war in South Vietnam. Issuing the so-called "Nixon Doctrine" from a position of weakness and requiring that it first be implemented in Vietnam, the place in which the United States is most

bogged down, shows the great difficulties of the United States which must call upon its allies and satellites to contribute troops so that it can continue to act as the international gendarme at a time when even the United States cannot act and must consider troop withdrawals from Asian positions.

The long-term threat to the international status of the United States is a reflection of the ugliness and viciousness of the United States which has been illustrated throughout the world by the war in Vietnam with its indiscriminate bombing, its barbarous and spine-tingling massacres such as the one at Son My, and the scenes of the "tiger cages" in the Con Dao prison. Such fraudulent images built up by the United States as "freedom," "human dignity," "civilization," and "the American way" have been toppled to such a degree that members of the administration have to be prepared wherever they go to cope with demonstrations and rotten eggs and tomatoes. Ordinary American citizens visiting foreign countries have also felt this wrath because they are citizens of a country which has committed atrocities in Vietnam condemned by all of mankind.

Increased Obstinacy Makes Escape More Difficult

Having taken office at a time when the war in Vietnam was failing seriously, Nixon planned to control South Vietnam by more insidious means. His aim was to reduce the problems in the United States caused by the Vietnam war while continuing to carry out neocolonialism in South Vietnam and perpetuate the division of Vietnam. According to Nixon's foreign policy adviser Kissinger, it was necessary to reduce the Vietnam war to a level that was politically acceptable to the American people. From that plan came "Vietnamization" of the war, which involved withdrawing some U.S. troops and replacing them with reinforced puppet troops so that the war could be continued at a level politically acceptable to the American people. In a press conference on 30 July, Nixon boasted that time was on his side.

The situation of the past two years has totally refuted that boast:

Time was not on Nixon's side in the United States. The piecemeal withdrawal of troops and the reduction of the level of direct participation in the war of aggression by the United States did not decrease the intensity of the American people's antiwar movement. It continued to demand that the Nixon administration totally withdraw all U.S. troops in a short period of time and end the war in Vietnam, thus indicating that no level of participation in the war was acceptable. As the Vietnam war grew longer, a more forceful awakening of many classes of the American people took place and they rose up to resist the power structure by more violent means. As Elridge Cleaver, the minister of information of the Black Panther party, said in a meeting in Hanoi on 22 August: "The truth is that the struggle of the Vietnamese people to drive out the hated enemy and the murderous

mercenaries of U.S. imperialism from the sacred soil of Vietnam has given birth to a revolutionary generation in the United States."

Neither was time on Nixon's side on the battlefields of the three countries of Indochina. The plan for "Vietnamization" of the war in Vietnam has produced signs of destruction which cannot be hidden. Those areas which the Americans and puppets considered to be "pacified" have been demolished by the people of Vietnam. Although the puppet army has been better equipped by the United States, its combat spirit has continuously degenerated. The puppet administration has seriously eroded and run up against the ever-stronger resistance of popular campaigns in the cities of South Vietnam. The U.S. special war in Laos has clearly failed. The Nixon administration's scheme of aggression against Cambodia, which expanded the war into all of Indochina with a view toward implementing the "Nixon Doctrine," i.e., using Asians to fight Asians and using Indochinese to fight Indochinese, has forced the United States into a position of unprecedented peril.

"The position of strength," which the Nixon administration hoped to secure in order to force the people of Vietnam and those of the other countries of Indochina to accept his conditions, is altogether a mad illusion which can never be realized. The joint communique issued by the Indochinese Peoples' Summit Conference pointed out the path of unity and in combat and the path of common struggle and common victory of the peoples of the three countries of Indochina. Together with the people of Laos and Cambodia, the people of North and South Vietnam are determined to comply with the sacred testament of Ho Chi Minh. They will persist in and accelerate the anti-U.S. resistance for national salvation until complete victory and will move toward "the building of a peaceful, unified, independent, democratic, and prosperous Vietnam while making a significant contribution to the world revolution."

6915
CSO: 3909-W

- END -