

WORLD AGRICULTURAL SITUATION AND ITS IMPLICATIONS FOR  
ECONOMIC MOBILIZATION

23 September 1953

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COLONEL WING: Admiral Hague, General Greeley, and gentlemen: Today, for the first of the series of lectures and discussions in specific commodity areas in the field of natural resources, we have chosen the subject of agriculture. I believe it is quite apparent why agriculture was chosen to lead off this series. We all know that products of the soil, for food, clothing, and shelter, are the bases of any economy. Some of us might not realize quite so well however that these products are the major concern for the vast majority of that 2.5 billion world population that Colonel Van Way told us about.

The subject of this morning's lecture is "World Agricultural Situation and its Implications for Economic Mobilization." Our speaker is Mr. Stanley Andrews, of the Kellogg Foundation. I believe you will agree that, with Mr. Andrews' background as editor, publisher, agriculturist, and as an officer in the military and civil governments, he is in an excellent position to tackle this subject.

We first heard Mr. Andrews two years ago. We were quite impressed with his ability to relate world agricultural problems to our own national problems, and planning for national security.

It is a pleasure to welcome you to this platform again this morning and to present you to the Class of 1954. Mr. Andrews.

MR. ANDREWS: Colonel Wing and gentlemen: I am awfully glad to be here. I feel I am almost in a role where I can get up here and lecture to you like a professor. I am now with the Kellogg Foundation and our host institution is the Michigan State College.

When we undertake to discuss a subject of this kind worldwide, I don't think it would be fair, or I don't think it would be realistic, for us not to face up right at the beginning to the facts of Russia. Regardless of what we like to think and regardless of what we like to do, when we talk about mobilization, world resources, anything, this world is cut in two. The Iron Curtain is real. So, no matter where we start, we have to face up to the stark facts of Russia in all of this picture and relate our thinking to that problem.

So, in order that I don't overspeak myself as I sometimes have a habit of doing, I would like to read about seven points here to delineate where we face up to the Iron Curtain, to the Russian situation, when we talk about the economic mobilization, particularly of the food resources of the world in relation to our general world picture.

Our number one point is this terrible fact: Either by accident of history, western blunders, or by far-sighted design, when we divided up the world into spheres of influence after World War II, we left Russia in control of most of the food resources and most of the surplus food-producing areas outside the Western Hemisphere. That is one thing you want to get clearly in mind. Outside the Western Hemisphere, and particularly in western Europe, Russia ended up World War II with the only surplus-producing areas of food that amount to anything.

Number two--and I am going to talk about this later--with the collapse of China and with the Communists overrunning China, we have placed the Iron Curtain countries in position to threaten within a matter of hours the last remaining surplus-producing areas in the Pacific with the exception of Australia.

Number three--only in this year, out of the past decade, has the world food and fiber production increased at a rate equal to the rate of increase in population. That is one thing you want to put in your pipe and smoke. In every year since 1945 the world population has increased faster than the increase in food production. If you want to get that down to figures, the world population has increased about 13 percent, while the world food production has increased about 9 percent.

Number four--280 million people in western Europe must get 30 percent of their food requirements and more than 50 percent of their fiber requirements from outside their own borders. About one-third of that used to come from areas that are now behind the Iron Curtain. A total of 750 million people in South and Southeast Asia must get at least 20 percent of their food from outside their own borders. This in tons means anywhere from 3.5 million to as high as 8 million tons of food, depending on the season and the growing conditions.

Number five--this same Pacific area, short of food, used to trade its rubber, fiber, copra, and ores to the West for its needed food and industrial imports. This is not happening now to the extent it did in the past, first, because production of many of these items has gone down; second, because the growth of synthetics and increased production in other areas, plus the cutting off of the China market, has dislocated production, distribution, and trade until we have a situation out there that is almost static, and everything moves on a barter basis or transactions of that kind.

Number six--the next terrible fact staring the West in the face is Japan, an industrially aggressive and overcrowded nation, now cut off from China as a source of raw materials and markets. This country must eat or die; and, unless Japan finds raw materials and food supplies in the Pacific area generally, Japan will be trying to expand again by aggression, or we will have to absorb more of its industrial goods so that more food and materials can go out of the United States for Japan.

Number seven--it is extremely difficult, and, I venture, almost impossible, for a country forced to depend on Iron Curtain countries for its food and raw materials to remain outside the Russian orbit very long. While Russia is now advertising a new model in trade, until proven differently, I am afraid that trade with deficit countries, unable to get their needs anywhere else, is merely in the long run another means of Communist political aggression.

I am speaking from a great deal of factual statements and factual data that prove that statement. There is just no question about it. In every instance that I know of where there has been an attempt to make a trade agreement and have an exchange of goods between the Iron Curtain countries and some free countries in the West, it has either ended up by a concession being made on the political basis, or a lot of quibbling about high prices and running out on the contract or not even delivering the goods.

An example of this last year was the case of Israel. Israel thought it had a good trading arrangement to exchange some of its citrus fruit to Russia for some grain, which Israel desperately needs. They made the trade agreement, Israel shipped the fruit, and Russia doubled the price on the grain after making the agreement. They are still arguing.

The same situation is true of Pakistan. Pakistan is in rather desperate straits right now. It made a deal to ship jute to Russia and take 300,000 tons of wheat in exchange. Pakistan shipped the jute at a very low price and Russia doubled the price on the wheat. I understand that just recently Pakistan decided just to cancel the deal altogether. But Pakistan was already stuck, because it had delivered the material.

I could go on by the hour on that sort of thing that is going on all over the place, because of my own personal experience that I have had until just recently. If a non-Communist country tries to trade with an Iron Curtain country, and if it is not in a position to reach back and protect itself, it is absolutely sunk when it makes a deal on a strict food basis. That is one of the dangers of the present world situation.

I am going to confine this talk to agricultural crops that relate to food and the industrial fibers, rubber, copra, and oil. I am not going to discuss the question of forests, for two reasons. In the first place, it would take too long. In the second place, I am not competent. I am sure that in the discussion of resources you are going to have in your course some discussion of the forest resources of the world and their relation to the present world situation, and particularly their relation to a future mobilization.

During the occupation of Germany, our American scientists, digging around in the ruins and in the files and records of the I.G. Farben combine, came upon some very, very interesting reports of those Farben scientists. One of the reports made the point that the country that

controls or has an excess of wood products, of the timber products of the world in the future, is going to be in a stronger position than the countries that control the oil supply, because the wonders that are coming out, or going to be coming out, of the developments of the chemical industrial uses, and even the power uses, of wood and wood fibers, are something that is absolutely phenomenal.

It may be--at least these fellows thought so--that the timber supplies of the world would be in the long future just about as important, and probably more important, than our oil resources, because timber is a continuing, repetitive thing. They are finding ways to use wood in our economy in phenomenal ways. So I would recommend, if you don't already have it listed, that this business of forest resources and their relation to economic world mobilization ought to be looked into.

Now I am going to show you a couple of maps here. I am not going to talk from the maps, but I want you to look at them. They illustrate some of the things I am going to talk about here on the food resources (maps were not reproduced).

This line up here, of course, is the line from the Black Sea across the Balkans, clear across from Turkey, across the Middle East, and Iran to the borders of China and of India. That is the Iron Curtain. The green area up there is the central part of eastern Europe. There is where 15 to 20 percent of the food supply of western Europe used to come from.

This is the Danube Basin, that green part. That used to be in this area before World War I. That represents the Ukraine, the Polish plains, and the Danube Basin, Hungary, Rumania, and so forth. Before World War I about 12 million tons of food came out of that area and went into western Europe.

If you recall, back in about the 1850's and before, we had big famines in western Europe, just the same as we have famines now in China, and just as it is the accepted thing in some parts of the Middle East. But the rise of production and the development of trade between the Danube Basin and western Europe, the development of transportation and the ability to move this Danube Basin and Ukraine food into western Europe, the rise of mercantilism in the 1850's and later in that area, and--along with that--the development of the United States food and fiber supply have banished and wiped out famine in western Europe. Famine there has been unknown for at least 150 years and even more. So that gives you just some idea of the importance of that area.

Now, beyond this line in western Europe live 280 million people. That population is growing rather substantially faster than it was even before the war. Those people have to get 30 percent of their food and 50 percent of their fibers from some area outside their own borders.

As I said before, a lot of it used to come from these Danube Basin countries and also from the United States. And up until the end of World War II a lot of it came from Argentina. Some came from Australia and even some from Manchuria. Manchurian soy beans used to find their way into Europe. But since 1945 Europe has been primarily supported by the United States and Canada; and about half of that is coming out of the American taxpayers' pockets in the form of grain to these countries through the Marshall Plan, through the Army, and other ways. Our taxpayers have paid for 30 percent of the food and 50 percent of the fibers shipped into western Europe since 1945.

That gives you just some idea about western Europe. While its production is 23 percent higher than it was prewar--and I believe some countries have increased much more than 23 percent--it is still about 30 percent short on what it must have. And, even if we wiped out the Iron Curtain, I am not too sure whether again the development of the food trade between the central and western Europe would come up to the past.

Between World War I and World War II this normal trade dropped to about a maximum of 6 million tons a year, or to as low as 2 million tons unless we take in Eastern Germany. Of course, in Eastern Germany the movement was as high as 12 million tons, of potatoes, rice, wheat, and things of that kind into what is now Western Germany. But, anyhow, the break-up, the revolutions, the distress, and destruction that took place in the Danube Basin, the self-sufficiency drives and the formation of the little states, the Balkanization of that country after World War II, simply reduced the production, while the population increase went on the same as before.

We hear a lot of talk about the increased production behind the Iron Curtain. I am not an expert on that; you gentlemen probably know more than I do about the actual figures because of your information from intelligence sources. But I have a feeling that the future is never going to find as much stuff coming out of that area into western Europe as came out in the past, although the potential for production in Poland, the Danube Basin, and the Ukraine is almost unlimited if you apply modern methods of agriculture, of distribution, and of fertilization. So that is the picture of Europe.

In the Western Hemisphere Latin America raises a large part of the industrial crops. Of those, sugar is a very important item. Western Europe has gotten, and is still getting, about 30 percent of its sugar, rubber, and copra from these Latin American countries. Latin America however will do well to just about balance out its food needs in the future. The South Pacific area is still down and copra used to come from down in here and go up through Holland and England for distribution. It is not coming like it used to, primarily because of the breakdown of

the collection and distribution in Indonesia. The Philippines, of course, do have a little better record on the collection of copra and the development of the copra industry. We in this country are getting more of our copra from the Philippines; we have no copra problem so far as the Indonesian situation is concerned.

So much for that particular side of this particular problem. Let us look now for a moment at this part of the world. On this map here, the black lines delineate the so-called surplus areas, the red lines show the deficit areas, and these yellowish-looking lines, if you can see them, designate the areas that are sometimes self-sufficient and sometimes must have a little food.

You will notice that South Korea is listed as a black line country. You will notice also there that Pakistan is listed as a black line country. That is not quite true now; it was true when I made that map and in normal times it is true. South Korea used to ship to Japan 700,000 tons of rice. Even after about 1950 South Korea was beginning to feed itself and ship about 100,000 tons of rice per year to Japan.

Pakistan in normal times exported about 200,000 tons of wheat to Japan and India and other places of the orient. Pakistan this year has had a drought, a disaster; and we are shipping, as you know, from the wheat in storage in the United States a million tons out there this year, giving it to them, to prevent famine in some of their provinces.

I might just in passing say that what has happened in Pakistan can happen in several other parts of the world. Pakistan over the centuries or over the years has developed a very fine system of irrigation on the old Egyptian or British system, of digging irrigation ditches, but not drainage ditches. That will last in most areas about 20 to 30 years. But sooner or later the irrigated water, going into the ground and hitting the hardpan, develops either water logging or excess salinity.

Pakistan in the great basin of Indus which is the bread basket of west Pakistan, is right now on the verge of probably turning into a desert unless its people do something about the salting and the water logging. Over the last 50 or 60 years these irrigation ditches have thrown the water out on the ground. The water has built up salt until they have been losing land at the rate of about 30,000 to 50,000 acres a year. So Pakistan may be on the way to becoming a deficit country right down unless by some miracle of engineering the trend is reversed.

In the United States at great expense we have licked this deposit of salt in the Salinas Valley and other places by a system of building drainage ditches at the same time we build the irrigation ditches. And one of the first things we tackled when we sent technical assistance outside our boundaries was to test the system of drainage ditches in

the valley of the Indus, to see if we could lick that salting and return a lot of that land to production. That is, of course, a side issue here, but it gives some of the implications of what we have in this part of the world.

Over half of the world population is over here, about 1.25 billion people. Of that there are 850 to 900 million who are in the so-called free world.

Now, the only place where there is a surplus in that area ever produced in normal times is in Indo-China, Burma, and Siam. In that area since the war only Siam has increased its production above pre-World War II. In the case of Indo-China, a war is on and one can't expect a country in the throes of a war to produce anything like in the past. In normal times 1.5 million tons of rice went from here down through the Pacific. They are now sending less than 200,000 tons. Even if the war stopped there tomorrow, it will be three to five years before they can get production back; and it will probably be longer than that before they will have the boats and the other transportation necessary to get food from Indo-China down into these areas.

In the case of Siam, they have increased production by about 15 to 25 percent. Amounts for export outside Siam have increased in the same ratio.

In the case of Burma, we used to get 2 to 2.5 million tons of rice out of there. We have been doing well to get one million tons since the war. In the last year the Burmese have been able, with a lot of help from the United States, to increase their acreage by about 300,000 acres, which is increasing their rice production about the same number of tons.

I might say, Admiral, that the Navy has helped a good deal in Burma. I was in Burma in 1950. We found all kinds of rice being grown up the Irrawaddy about 50 miles from Rangoon; but the river was infested with bandits and the Burmese couldn't get the rice down. Or, if the rice did get down the Irrawaddy, the bandits put so many squeezes on it that the rice, which cost one cent a pound up the Irrawaddy, when it got to Rangoon, was about 15 cents a pound because of the payments that had to be made to those bandits.

So when I got back home, I made a recommendation that the Navy give the Burmese some of its surplus gunboats to patrol that river. I think that was the only recommendation that I ever made as a bureaucrat that anybody ever paid any attention to. But the Navy gave them 10 river boats. I was in Burma about six months ago; those boats are patrolling the river and rice is coming down.

This Burma area is now exporting about 1.5 million tons of rice a year. That gives some idea of the importance of that rice bowl.

The Philippines in recent years have been a deficit rice country. We are however now getting some abaca and sisal out of there. They are now back to about normal in rice production and are producing about what they normally need in the way of rice.

The Philippines are a sugar-producing country, but never since 1945 have they been able to make their international quota on sugar. There are two reasons for that. One is that the Philippines now are free. Before we turned the Philippines completely free, our commercial interests who were managing this sugar production took a lot of it for sale in the United States, because it could be sold more profitably here than in the islands. But now the Filipinos are free people, and they like sugar. Their sugar consumption has more than doubled. The result is that they are eating the sugar and little is coming out of the Philippines.

Abaca has increased in here, and copra has been coming up very strongly. Abaca has been threatened by some very serious mosaic diseases. The United States has a bunch of scientists out there trying to stop the spread of this disease. It could happen that copra production in this area could be completely wiped out by this mosaic disease. It looks like one of our scientists has found a way of combatting that mosaic disease and it may save this important industrial crop.

Indonesia has all kinds of resources and all kinds of potential. There are 75 million people living in these islands of the Indonesian Republic. It used to be one of the great producers of industrial crops--rubber, copra, medicinal plants, and all sorts of things--under the aegis of the Dutch, probably under their more advanced colonial policy of increasing production for the people. But these people are now free and they are pretty much concerned with strengthening their own government, with the voice of sovereignty they have been so busy in politics they have let a lot of their resources go to pot. Their rubber plantations down there are in pretty bad shape. Some of them are owned by United States and Dutch interests. The copra plantations are bad and the roads are bad--so are the bandits in this part of the world. Although this potential is literally terrific in industrial crops and in food crops, we can't expect too much out of that area in the near future.

They are actually not even producing enough rice to take care of themselves. As a matter of fact, we have shipped in there about 200,000 to 300,000 tons of rice since about 1946, when it ought to be by all odds a rice-exporting country. It is just a matter of organization and getting the potential developed.

Ceylon is another deficit country. It is a country that must have about 150,000 to 200,000 tons of rice or its people just don't live.

Here is India, where you have normally a deficit of some 3 to as high as 7 million tons. The production is now coming up a little bit, with the combined efforts of the Indians and our technical assistance. To get those 360 million people within at least shooting distance of self-sufficiency--the potential is there and it can be done. It is going to take a lot of organization and a lot of work. If we could get India within 2 million tons of self-sufficiency, it would not mean disaster in the normal year. But a 5-million-ton deficit, out of a potential of about 55 million tons, would simply mean that those people would have a famine in central India if they didn't have 3 to 7 million tons coming in from the outside.

If the worst should happen--and, after all, the Communists are right down here in Cambodia--there are about 200,000 Communist Chinese on this border here--they could overrun this whole area in a 30-day period, because the Burmese have said time and time again: "We have seen what happens when we are liberated. We have seen what happens when we are defended. So we don't want any defense. We don't want to be liberated. We will have to learn to live with those who overrun us."

Back here you have a bunch of states, including Siam. The Siamese have never fought. They have always been conformists. We can't expect Indo-China to fight unless the French are there. So this whole area could be knocked off in due course with an invasion. That would simply mean that Japan and the Philippines, India, and, of course, now Pakistan, would be forced to go back again to the West for its supply of food. There are about 750,000 to 850,000 people in here, who get about 20 percent of their food from this area in here, or from the West.

The most difficult one is Japan, where you have the highest production per capita in Asia of food and industrial crops, the highest per acre of any country in the world. It makes me just a little bit sick to think of it. For 50 years the Philippines have been under our benign influence and we haven't done too much in improving their production. Japan's rice production is just about three times the average per acre of the Philippines. The Japanese are producing about 80 percent of the food of this area. Japan has arable land about the size of the State of California. Its population is 80 million people. We say they can't trade with China, but they have to trade with Asia, or they have to trade with the United States, because 80 million people are not just going to die. These people have to eat or die.

So you have a great problem. There used to be a great demand for industrial goods here. When Japan had Korea and Formosa, it got 700,000

tons of rice here and a lot of other food products. Japan got about 300,000 to 500,000 tons of rice and sugar and wood pulp and various types of palm nuts out of Formosa and paid for them in types of palm nuts out of industrial goods.

Now, I haven't said very much about Africa, which is, of course, a great country of the future. It is still largely a colonial area. It is producing a great part of our oils and a great part of our fibers. It is comparatively free from any threat of aggression.

I haven't said very much about Latin America. That is certainly a country of the future. But in my honest opinion we can't expect too much out of Latin America more than coffee and the few industrial crops that we are getting out of there now. With the rising population down there, and with the people on the march for a better place in the sun, they will do awfully well in Latin America to increase the whole production of essential foods, fibers, and raw materials to meet the rising demands of that population.

The Argentine is an example of what can happen when people have a wrong policy. If you recall, the Argentine used to be the great source of meat, wheat, corn, and oilseeds for Europe and the United States. We used to get nearly all our flaxseed from Argentina. After the war Peron's policy was industrialization of the country. He set out to mulct the farmers and the rest of the world for money. So he shot the price of oilseed up to 6 or 7 dollars a hundred, wheat up to 6 dollars a bushel, and corn up to 3 dollars a bushel.

The United States in about 1950 decided to subsidize flax production in this country. We now have surplus flax in this country, and that whole situation in Argentina has pretty well collapsed. People are having meatless days now down there. Only in this year out of the last few have they been able to meet their commitments for raw materials, particularly corn and wheat, to the outside world. I doubt whether Argentina will ever come back as a producer of meat, wheat, and oilseed as it has been in the past.

There is one great underdeveloped area in Africa that might well offset Argentina as a future production source. I think that if the United States can continue its technical assistance to Ethiopia over the period of the next 10 years, it might be possible for it to offset Argentina as a producer of meat for Europe. It is almost phenomenal what can be done in Ethiopia. I think the European countries should be alert and be helpers and builders rather than exploiters.

There is one other comment I want to make. I would like you to get a picture of the rising production and the rising alertness of the Middle East, and not only in food production but in international politics. The Middle East is on the march. It is a very, very critical area. The

developments that are planned and the developments that are going on there would lead one to believe that if this trend continues, and if the help goes on there, if private capital from the outside goes in there, which people need, the chances are they can offset this whole Danube Basin by the rising production of food and certain of the raw materials in the Middle East.

Turkey now has a surplus of wheat and is, of course, selling it to Europe. Its cotton and oilseed output is rising. There is considerable competition with the United States. As a matter of fact Turkey now ranks fourth in the export of wheat.

Syria and also Turkey had more cotton this year than they needed. Syria, Iraq, and Turkey are certainly going to become cotton producers. Iran will come up in cotton production. Iran can easily be a surplus producer of wheat, although it does need a good deal of sugar, because sugar is pretty important in there.

If the plans that are now on the board for the building of dams on the Tigris and Euphrates are carried through, that part of the Middle East will raise enough food for its own needs and may become an exporter in the future. I wouldn't want to bank on that too much, however, because the political tensions there are fantastic. The Middle East is definitely on the march. The people are awake and they are demanding action in their leaders. The United States has a great stake in that area as a land bridge between the West and Asia.

I think Turkey sold a couple of million tons of wheat this year and Syria, 500,000 tons. Iraq had a considerable surplus of barley.

Here again is a part of the world that used to support a population of 30 million people. It is now hardly supporting 12 million. We have here by the Tigris-Euphrates valley, land that has soil 30 feet deep and as rich as it can be. It was blacked out centuries ago; we don't know why. Maybe they kept pushing the irrigation and didn't take care of the salt. Whatever it was, civilization died there. But there is a possibility of rebuilding a civilization that will certainly be the equal of what existed in the pre-Biblical days.

Probably the major handicap is the political situation. We can understand that probably when we realize that this part of the world has never since the dawn of history had a time when some strong state or other up until now was not dominating one or more states in that area. There were the Sumerians and later the Assyrians. There has always been some rising tribe or state that eventually infiltrated and later dominated that area. Those people are worried about that. They think about it. That is their history. So when they see us come in there to help, they are afraid of domination from us.

One of the ambassadors of a Middle Eastern state told me the other day: "You can come in here. You can build these great dams for us. You can help make these irrigation ditches. You can return this country to production as of old. But, if you do it, it will not be ours. Our people cannot handle a modern civilization or a modern economy based on irrigation, based on outside markets, based on industrialization. We have to grow into it. If you come in and do that, it will not be ours. We will still be dominated." That is the mental attitude in those parts of the world. I am not too sure but what it is a sound attitude.

I haven't talked much about food. I haven't talked much about a lot of other things. But during the question period you can bring up some things that you want to hear about.

There is one other thing that I would like to end up with. And I say this not to enter into any of the political discussion that seems to be rife here about the situation. A lot of people are stirred up about the mounting surpluses of food in the United States.

I, for one, with the world situation as it is in these critical areas, don't think we ought to be alarmed. We might try to prevent increasing these surpluses, but I don't think we ought to get panicky and say: "D--- this stuff. How are we going to get rid of it?" because, with the present world situation, when we are spending 50 billion dollars on military and economic aid, I think we have a reasonable right to at least keep in reserve food supply enough to last at least one year of war.

So I look with a grain of salt at all these pat answers that are going out around the country now about what a terrible thing it is to have surpluses. We should not get alarmed about this thing. We ought to go back to a sane way of handling it. I think we should conserve our resources. We should see to it that we don't over-produce and increase these surpluses year after year. We ought to be pretty grateful for what we have. Maybe over the next five years we ought to leave some of these resources in the soil. Then, if the worst happens, we will be pretty well set. If it doesn't happen, we will have something in the bank anyway.

COLONEL WING: Mr. Andrews is ready for your questions.

QUESTION: On this matter of storing away enough surplus food to last for a year of war, I had the impression that some of them are perishable. Could you keep them that long?

MR. ANDREWS: Some of them are what we call storable commodities. Products like butter and powdered milk are not storable over a long period of time. You can store wheat and corn pretty well for two or three years. You can store cotton just about as long as you want to

store it. I recently saw some cotton come out of storage that had been stored during the Civil War, and it still graded good middling. In the case of rice we have a little bit more difficult problem. But if you have these modern elevators locally, you can even store rice for a long time.

We have a lot of wheat in storage. If we will cut back our production now--I know the farmers don't like to hear about that, and the politicians just won't say it, but we could do it--we could build up the plant food in the soil that has been in production.

In other words, say that we have 500 million bushels of wheat in storage this year. If we produce wheat next year on the basis of just what we need, at least 500 million bushels of wheat will come out of storage now. It will keep rotating.

QUESTION: Along that same line: We are trying to get friends throughout the world. We have these surplus goods in storage. Those people are having famine and can't get food. At the same time we are overproduced and are cutting back. Aren't we going to lose a lot of friends in the world?

MR. ANDREWS: That is absolutely true. There again I think that with the reserves we have, we can meet any normal famine situation.

As you know within the last few months in Washington this last Congress passed a bill which gives the President the right to take these surpluses from this reserve of food and ship it to countries where it is desired. In the last few months we have seen authorized by the President the shipment of one million tons of wheat to Pakistan.

The last piece of paper I signed, for instance, before I stepped out of my office 21 days ago was an order to send two cargoes of this surplus free famine food to Jordan. We have that policy now. We are doing it.

I think it is time that we do face up to something that the Russians have been doing all the time. The Russians have used food ever since the beginning of their occupation as an instrument of the cold war or an instrument of political aggression or whatever you might call it. They are using it to squeeze western Europe further.

I think, in the light of that situation, we ought to use it in the same way, because--and I am really serious--if we throw the deficit countries of the free world on to the Iron Curtain countries for their food supply, they are sunk. They are absolutely sunk. If we put Japan in the position where it has to trade with China and Russia to get its food to live, we have lost Japan. There is no question about it.

QUESTION: There is a saying in the South that cattle are moving east and cotton moving west. What is the significance of this evolution or revolution?

MR. ANDREWS: I don't know. I think it is a pretty good thing, to be perfectly honest with you. I think the South ought to become, not a great cattle country, but a good cattle country, for the simple reason that we have all learned that grass will produce beef and produce good beef. It has also been learned that by the use of proper methods we can grow grass 10 months of the year in the South--in North Carolina, Arkansas, South Carolina, Georgia--right down the line. We can raise about 100 pounds of beef on an acre of that grass.

Cattle can be produced in this area a great deal cheaper. We can't produce prime beef, but we can produce good beef that can go into the feed lots later and be sold. I think it is a sound move. The South has long depended upon cotton. I think we ought to grow cotton where it can be grown most efficiently--in the West, through mass production methods. With the cotton pickers and other farm machinery the people in the West can produce cotton pretty well and pretty good cotton. I don't think they can produce it quite as cheaply as the South can, at least under present conditions.

While it may sound a little bad to some of the boys in the South who build their business around cotton, I think it is one of the soundest developments that is taking place in the United States right now, that is, the gradual diversification of the South through grazing, through cattle, vegetables, and things of that kind. It is going to hold a lot of that soil on those hills that is fast washing away and leaching out in the South.

That is just one man's opinion. I could be wrong. A lot of people dispute that. But that is the way I look at it. I think it is a very sensible and a very fine thing economically.

QUESTION: You said that the United States is doing something about developing Ethiopia. Would you tell us a little about how we are going about it, what we are doing?

MR. ANDREWS: I said we are assisting a lot in Ethiopia. The Technical Cooperation Administration of the Point Four Program has quite a heavy program out there. The United States is actually putting a million dollars in an agricultural school and research station out there. We are putting in the equipment, to supplement the stuff that cannot be produced locally. The students and the future students at that college are building it. They are building this agricultural and mechanical college as they go along to school.

That is the beginning of a sound base for development. We can't do much for any country if we exploit it in a colonial way. We have to

build our base techniques among the people. We have a livestock program there. They have millions and millions of cattle down there. They have the peculiar notion that most of them have to be saved for stock. They kill about a million head a year, but they never try to market meat.

You can't market the meat, for several reasons. Some of it is diseased. The second reason is that those people have no refrigeration. Another reason is that they have no port to which they could move refrigerated meat and move it out on ships. They have no canning factories or anything of that sort. Another thing, Ethiopia has no banking system in the general sense. A modern country has to have a commercial banking system if it is to progress.

That country has been a tribal empire for centuries. The emperor, who used to be concerned primarily with adding some additional wives and collecting gold, has switched around. You might say that there is a revolution going on in Ethiopia, such as has happened in Turkey.

The potentialities there are fantastic. That plain stretches away for miles and miles. One can drive for days and just see endless grass. Most everything grows in those valleys.

The Italians were the only people who developed that country. They did all the development that really amounted to anything within the last 50 or 100 years. But it is opening up. The Germans are in there trying to develop the beginnings of a coffee industry. The British are in there. There is some private capital in there developing their mining industry. There is something of a chemical industry and a meat industry. So the situation is changing. A group of American private capitalists is going down there very soon to look into certain development schemes. So it might be the beginning of something very big.

QUESTION: You indicated the importance of the Southeast Asia food supply. How effective is our technical assistance under the Point Four Program? Is it adequate?

MR. ANDREWS: I wouldn't say it is adequate, but it is moving about as fast as we expect it to move.

Americans are very impatient people. We sometimes get the idea that we are going to take out our checkbook, wave a wand, stand at one end of the street, and shout and these miracles happen; they don't.

We can virtually double the food production in South and Southeast Asia over a period of years. We can increase it by 25 percent in the next 10 years. But it will take a lot of patience and a lot of organization, particularly organization by the countries themselves. We can't do the organizing for them. They won't pay a bit of attention to us. But if we work alongside with them, guide them, get their confidence, we really can do it.

Now, India is the one country that is tackling this on a mass basis. Four years ago we used 100 villages to demonstrate what could be done. We sent four people in there and started in by training village leaders. Then we started introducing seeds, fertilizers, and the whole category of things to go into that. In the period of three years we doubled the production of wheat. We more than doubled the production of potatoes and other crops in that area.

We have launched a national campaign with India to train these village leaders throughout India and build up production at its base. That involves a great many things. It is going to be a lot of "bust" and a lot of trouble, but I believe it will be done. But you have to start by training some man to lead the village.

The capital of India is not India. India is villages. There are 500,000 villages in India. Every one of them is a more or less self-contained and self-sufficient unit. They are primarily concerned with producing food and necessities for that village area. When they do that, there is not much incentive for anything else. So we have to stimulate and drive them to produce just a little more for the outside.

On top of that, we have this business of distribution and production above their immediate needs. We have to get in enough gadgets for them to buy with their extra money, and right down the line.

It is quite a job but it can be done. And in India, Pakistan, Indonesia, the Philippines, all over that area, and in Burma--of course, Burma is making fantastic strides now in its development. Burma, has a socialist government but it is a very practical government. It is trying to do a great deal for its people. They are building their rice production with the idea that they will sell that rice to the outside world and take that money and build the hospitals, the schools, and the roads that they must have. Burma is very proud. The Burmese told me time and again: "We don't need your money. We need your technical assistance." I think that spirit is going down through other parts of Asia.

As time goes on, I believe that with a little bit of encouragement, we will hold a steady hand, if we don't throw our weight around. The trouble with us Americans is that we put some money in a country and we think we have bought it. Then we begin to tell them how they ought to do things. We can't do that; we just don't get anywhere that way. Those people have been there 4,000 or 5,000 years before there was an America.

But if we can be patient, if we can work along with them, as helpers, if we go into a village and say to the leader: "I am in here to help you," the things we can do in that way are absolutely fantastic.

What happens is that if we are right--and we must be right--the confidence they place in our judgment is almost staggering.

That is one of the problems. We have to be sure we are right on this stuff, or we get into a lot of trouble. Once we have that confidence, we are all right. But we have to know what we are doing. We have to show the fellow that we know. Once we get on that basis as human beings, we are all right.

QUESTION: I have two questions. The first one is this: You told us about the food picture from our side. I wonder if you would tell us about the food picture from the Soviet side. The Russians have many more people engaged in agriculture than there are in the free world. The second question is about the Kellogg Foundation. Is that a private Point Four program? I don't understand what it is.

MR. ANDREWS: I will give you the answer to both questions. I had on my notes here to discuss the other side of this food problem, but I was so talkative on some of the other questions that I didn't get to that one in the 45 minutes.

The Russians have a collectivization program that is one of the big things they have held onto on a political basis. It has not delivered. It has not delivered the foods to the people that they thought it would. Only within the last two weeks we notice that Malenkov has changed the whole structure of the collectivization system to rely more on the private incentive to get production out of the peasants and workers.

In Yugoslavia, where Tito tried to adopt the collective system, it absolutely failed. He isn't even attempting to put the collective system in Yugoslavia now. The Yugoslavs are getting around to private incentives and things like that rather than slogans to get production up.

In the Danube Basin area the idea in the land reform was to throw out the big estates. But the people have been unable up to this moment to get the machinery and the supplies in that area to operate on an individual basis. There is nothing like the production from that land that there used to be.

I had the last food mission behind the Iron Curtain in 1946. I was in Rumania when the land reform laws were put through there. Any barber who had voted the Communist ticket who wanted land got it. He just went out and got a piece of land but that was all he had. He had his bare hands, no knowledge of how to farm it, no mule, no seed--nothing. There were some awfully happy people for a few minutes, a few hours, a few months. But it didn't amount to a thing on the production side.

So I may be very pessimistic, but I think it is just hogwash to think that those people are going to get production back until they stop relying upon that alone and restore a little bit of private initiative and turn a little attention to supplying the fertilizers, the machines, and the tools that they need. You can't produce stuff in the modern world without some leadership, some brains, and some dollars, capital equipment, the same as you have in industry. It just doesn't work. As I referred to a while ago, the potential there is absolutely fantastic, but what they are going to do with it is something else.

Your second question was about the Kellogg Foundation. Well, the actual project that I am mixed up with is merely a part of a project called agricultural communication. Its host institution is Michigan State. It works with the 48 land grant colleges, with the Department of Agriculture, and with private agencies. The objective of it is simply this: It is somewhat reversing Point Four here in the United States.

The idea is to take scientific information from the research stations and demonstration plots, economic and technical know-how, and to transmit that to the door of the farmer, so that the farmer can use it. That is the object of this whole thing.

We have here in this country about 2 billion dollars invested in agricultural education and scientific organizations in the land grant colleges and in the Department of Agriculture. That is just buildings. We have something over 200,000 workers who are working in agricultural outfits. The potential is absolutely fantastic. But it is just exactly like the gasoline in your automobile or the potential in the atomic bomb. Maybe one percent of that is brought to bear on the problems of the farmer.

The Kellogg Foundation, the part I am connected with, is trying to improve the capability of the farmer through mass communication. The Kellogg Foundation as such sponsors and helps. It helps to train selective workers. It helps build buildings and laboratories--the usual things that foundations do. This project that I am with is sponsored by the Kellogg Foundation to do work with the 48 land grant colleges, the Department of Agriculture, and private agencies in trying to do merely a job--improve communications. We have had a lot of experience worldwide. Maybe we can do something about it at home.

QUESTION: We have a list of critical materials which we are trying to stockpile. Many of these items are surplus in or are exported from areas which need to buy wheat from our surplus. What are the chances of improving our stockpiling program by trading our surpluses for their surpluses?

MR. ANDREWS: That's a good question; but I don't know. That is a matter of very high policy, as you know. There are arguments going on right now in the Government on that subject.

I know a couple of years ago I was in on that. I was responsible for getting a stockpile of these fibers that are being grown down in Latin America. Of course, we have zinc. We have political problems with the high-cost production people in this country, who are insisting that this outside zinc, lead, and copper that is coming in here is going to cut off our own industry. The arguments go up one side and down the other.

I don't think I could go all the way with the stockpilers who argue for a 20-year reserve supply. It might be good business, but I doubt whether we can do it. I do think that by a little more liberal trading policy and a little bit more realistic approach to a lot of things, we could improve the situation very, very much.

For instance, down in Indonesia we have a country that sells its tin and some of other ores, like wolfram and a lot of ores of that kind and rubber. We have a synthetic rubber industry. We want to preserve that industry. I think the synthetic rubber industry in this country ought to be preserved. We are subsidizing that rubber industry about seven cents a pound in its synthetic rubber production. We are driving down the price of natural rubber.

We cut off our buying down in Indonesia right at the most critical time, when that country was wavering pretty much toward trading with Communist China. We cut the price of rubber down there to 21 cents a pound. That hit the little boys. It didn't hit the big plantations, because the big plantations are not in operation. It did more to destroy faith in the United States than any other single thing.

At the same time we were pouring money into Indonesia. We gave its people 100 million dollars, and we have a 100-million-dollar loan down there right now. By increasing the price of its natural rubber, and by the United States being willing to say, "We will buy so much rubber at 5 cents a pound over that 20 cents," we could do more to develop the economies in that area and to create stability and a market for themselves for what they want to sell than any single thing we could do.

What happened is that we assisted them in getting 250,000 tons of rice last year. But if we had had a buying policy on rubber which would have permitted the Indonesians to buy from us, everybody would be happy. I don't know whether we could do that. I don't think we could do it outside an international agreement. International agreements are bad in many ways. But there is a terrible lot that can be done in our own

policy to correct a lot of these situations, and reduce the necessity, quite honestly, for a lot of these handouts that we are giving over the world.

I notice that President Eisenhower had a group up here yesterday and is trying to explore all those things. I am not so sure but what we may have a new economic policy in a lot of these areas which is going to consider some of those things.

I don't think, because of the present pressure to reduce the budget, that there is very much opportunity to increase stockpiling, as you suggest, which would then enable these countries to supply us with more materials. I just don't think that it is politically feasible at this time, even though it would probably be good business to do it.

COLONEL WING: Mr. Andrews, you have given us a very good picture of the problems at the national level. Would you take just the last few minutes to give us a little resume' of where these agricultural problems affect the theater of the military commander in North Africa, Italy, and other countries?

MR. ANDREWS: I will be very glad to touch on that just a little. For one thing, I happened to be in the middle of it. I was selected in one instance, after we got into Italy, to become the food czar of the Danube Basin. That was the time that we were going to invade the soft underbelly of Europe. I was the one who was sent in there to get the potential and the actual facts in the Danube Basin. At that time we were trying to figure ways to keep this civilian population at least quiet and stable as our armies were going through. That was the only time I ever went into a food potential situation in advance.

We started in the Po Valley and took airplane pictures. We had all kinds of campaigns in the Po Valley trying to get the farmers not to harvest and thresh their wheat so the Germans could not use it; but, to leave it in the field so it would be there for us when we got in.

The whole point is if we are going to invade a country that is deficit, as much of Europe is, we just simply have to follow up our army with a food supply or we are in trouble--and I mean trouble.

Let me give you an example. In the case of Naples, the Army took all transport of every kind in there. We promised to send food ships in to take care of the natives. In a matter of hours in that particular place we were out of wheat and out of everything else.

Our food ships didn't get there. The only source of supply was the Foggia plain. Our air force was building a great air base up there. We couldn't get transport moving. This may sound funny, but we organized carrying parties, families, people by the masses. They would carry a 50-pound sack of wheat on their heads over those mountains into Naples. They did that for a short period until we could unscramble the thing. We had to move the wheat supply into Naples that way. That may sound awfully crazy but that is the way it was.

Later we got some British trucks and some American trucks. Later we began getting in some shipments of wheat from the United States. But at first there wasn't a mule, there wasn't a horse, there wasn't a water cart in the whole city. For five days we had no way to get food resources into the city, and we had no transport of any kind to get it in or out.

We ran into a problem there too. We were holding the civilian population in Naples to 125 grams of bread a day. That was their total food, with whatever wine they could get. We had to feed those workers 500 grams a day in order to get them to work, and that sort of thing.

We brought some fertilizer in by an American destroyer. We got hemp seed out of Trans Jordan; an American destroyer steamed into Naples harbor with it. We planted hemp.

The reason we planted hemp was to make ropes for the Navy and the merchant marine. British ships eventually provisioned their rope in Naples out of the hemp we produced. We planted thousands of acres of potatoes in Africa and in south Italy to supply the Navy and the Army, as well as the civilian population.

People are facts. If the human being doesn't eat, there is a lot of trouble. They can cause a lot of trouble. So we finally agreed on the policy, which was agreed to by the commanding general and everybody else, that we would move usually 10 tons of food into a provincial capital the minute it fell. A lot of times the buildings were still smoking, and there was a lot of sniping around in the area. But we moved food in, and the first thing we did we set up a food distribution center with the local people in charge, though supervised by the Army.

We found that the best way to do it was to let the local people do it. They can always do such as that better than we can. We did that in Germany and all over the place. That is something that a commander has to think about when he is going to invade an area. It is something that we will have to look at a lot more carefully than we did this last time.

I will tell you one incident. When the plan was made for the invasion of Sicily, the matter of food was brought under consideration and was discussed. They brought out a book with some statistics, to find out what the situation was in Sicily. They opened the book, which we had in the United States, and it showed the trading in wheat, the production of wheat, and so on. Over in one column it showed that Sicily normally exports about 150,000 tons of wheat. So whoever was planning it said, "We don't need to worry about wheat. That is an exporting country." He said, "Seventy percent of the diet in Sicily is wheat. We don't need to worry about that." Although some fellow did say, "We will be on the safe side and start three food ships on the way with the invasion."

But the boys who looked at that didn't look at the other side of this ledger. Sicily is a hard wheat producing country. That wheat is used for the pastas and the finer types of spaghetti in northern Italy. So normally this wheat went out of Sicily into northern Italy and was sold at a premium price; and then Sicily bought soft wheat to the tune of about a million tons every year, and that was what the people ate.

So we hit Sicily thinking we had plenty and ran into a deficit. The worst was that we complicated that much more by a military law closing down all the cooperatives, which at that time were under Fascist domination. We destroyed the one organization in Sicily that could collect and distribute wheat. So overnight we more than doubled our difficulty. It was straightened out finally, but that just shows some of the problems that we run into.

We had the same situation in southern Germany at one time. One of my good friends, who was operating under the Morgenthau Plan, told me, "Just let them starve." I said, "You just can't let them starve. They will make too much trouble." He said, "If they make trouble, mow them down with machine guns." I said, "You just don't do that with people. You can't move into an area and simply machine-gun women and children, hungry people."

When you have a lot of hungry people, you must have food distribution and communication lines. You must have an organization. If you are going to move into a country where they don't have food, you might just as well prepare yourself to bring it in.

We had that in France. We took in enormous amounts of wheat, cotton, everything, right behind the Army. They moved right along when the Army moved in. In Germany and some other places we didn't do that. The Army thought that Germany was going to be self-sufficient. Of course it wasn't. But that is a long, long story.

There is only one way to get around the problem which I think a modern army has really got to consider. One of the first things that we had to do in the theater of war when the armistice was signed was to start a bunch of ships out of San Francisco with rice for South Korea. So, again, they are using food as a weapon in the cold war.

The fact is that the people in South Korea have just harvested their crops and they are pretty well off for rice. But the psychological effect for the United States of their seeing ships with food move into Pusan, in this area where they were conscious of the fact that they had a pretty good rice crop, was very strong in that whole area.

COLONEL WING: Mr. Andrews, on behalf of the Commandant and the student body of the Industrial College, I thank you for showing us how vitally the world food situation concerns our national policies and plans for our national security.