THE WORLD AGRICULTURAL SITUATION AND ITS IMPLICATIONS FOR NATIONAL SECURITY

Mr. Stanley M. Andrews

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CAPTAIN BURKY: General Mundy, Gentlemen:

You know food is often overlooked as a resource in this country, simply because we have such an abundance of it. I'll admit that it becomes a minor problem to each of us about three times a day when our stomachs begin to growl, but we can satisfy that very easily.

Nevertheless, food is a major problem for the majority of the nearly 3 billion people who inhabit this earth. It is important for us, I think, to discuss the world agricultural situation, because food deficiencies can color the direction which nations, both potential enemies and our allies, might take in the future.

To discuss this vital subject we have a gentleman with us who has concerned himself with agriculture for many, many years, as his biography very ~~adequately~~ inadequately shows. He has dug into and solved real food problems as an officer in the United States Army, as a government executive, as a private citizen, and now as a consultant. He has only recently returned from a trip around the world to study agricultural problems. In fact, I got his acceptance for this discussion this morning from New Delhi, India.

The College has long recognized our speaker's expertness in his field and he has been invited annually since 1952 to address us. He

was kind enough to accept again this year. It is therefore my very great pleasure and honor to introduce to you Mr. Stanley Andrews, who will speak to us on the subject, The World Agricultural Situation and Its Implications for National Security.

Mr. Andrews.

MR. ANDREWS: Captain Burky, General Munday, and Members of the Class of the Industrial College of the Armed Forces:

I feel just a little bit this morning like a guy felt when he was asked to readdress the Chamber of Commerce. This particular fellow worked up a speech and made a whiz of an impression before the local Chamber of Commerce. Everybody congratulated him, and he thought he had really done something. A year rolled around and the Chairman of the committee came around to this man and asked him if he would address the Chamber again this year. And the fellow said, "Well, I don't know, about that, John. I seemed to do pretty well last year, and, besides, I've only got one speech, and I don't want to spoil my reputation by going out and making another talk." Well, the fellow said, "That's just the point." He said, "You know, I went down on the street and asked a bunch of people whether they remembered what you said last year, and I couldn't find a guy who remembered it, so I thought it would be all right for you to just repeat the speech."

So that's what to some extent I am doing here, in the ninth of this

long series of lectures dealing with the so-called world food problems and agricultural problems. I'm in a little better shape today because, in the redesign of your course and the place that this particular lecture falls in it on national resources, I find that you have given me just a little leeway. So I can get out of the docks, so called, from strictly the food and agricultural situations in some of these countries, and talk maybe just a little about some of the human forces that are at work in some of these areas that have bad implications and are largely of a rural nature.

So with that more or less setting, we'll get into the thing rather obliquely, rather than meeting the food situation head on. I guess I'd better start with an old slide that I know this staff has seen, but, since it will be new to some of you fellows, we'll ask the projector now to give us the first slide.

SLIDE 1

Here it is. That is a kind of a world projection map. That black line there is the so-called Iron Curtain. That starts over around Stettin, on the North Sea, goes down across Central Europe over to the Black Sea, across the Black Sea, around Turkey, on the borders of Russia, from there on across India and China, and ends up in the Bering Sea. That's the Iron Curtain that we have been hearing about since 1948, when Winston Churchill so classed it in his speech in this

country down at Fulton, Missouri.

That's a very real line, and, unfortunately, that line hasn't changed a bit since it was first more or less drawn down back in 1947 and 1948, when the Russians began to get rather tough. This line is a line that divides the world economically. It divides the world somewhat on a food basis. It divides the world politically. It divides the world in many, many ways. I don't need to tell this group of people that any violation of that line without proper authority or without proper papers or without proper clearances gets any nation in trouble, no matter which side you're on.

While the line hasn't changed, things on either side of the line have changed considerably in the food way. So with the next slide we'll begin to give you a little picture of where this thing starts.

SLIDE 2

Here, of course, is Germany. After the war, and after the Potsdam Agreement, and after we divided up Germany into military zones, here is where the whole thing started. That's the point I want to bring out here this morning. Right here is where it still exists as it did back in 1945 and 1946, and the chances are pretty good, unless this thing is settled in some way or the other, that we'll be in this situation that we are in now 10 years from now, because this is the key of it.

What is the significance of that? There are four military zones. I want to impress on you that we are talking now about military zones.

Those lines were drawn on the basis of certain military considerations and not economic considerations, and not even political situations. That has more or less haunted us ever since. One of the things that set this off, much to the delight of the Russians, was the division of Germany. Up there in the Russian Zone, of course, is the great food supply area. Over there in the British Zone is the industrial area. Down here in the French Zone is the Black Forest and the Alsace-Lorraine area. And there is the U. S. Zone. I sometimes say we got the scenery. The other boys got the stuff. That was pretty well down here in Austria. We got the scenery in Austria, but we didn't get any of the productive capacity.

But, theoretically, this is supposed to be used as an entirely economic unit. You remember that big proclamation. Germany was going to be an economic unit, and under that economic unit food used to come down out of that Russian Zone into the U. S. Zone, right down through this little place here (indicating) this kind of a little tip here, and right along in there (indicating). That food out of the Eastern Zone pushed food that was produced in the U. S. Zone up into the British Zone, believe it or not. That was a kind of cycle. They had their food economy set up on that basis, in which the food came up from the south into the British Zone.

Well, when General McNarney was faced with the fact that we didn't have quite enough food to feed our own people in the U. S. Zone, and

when the Russians were rather slow about moving stuff down in this natural cycle, the General, as all good generals do, realizing that he was responsible, under the Geneva Convention, for disease and unrest and for looking after the civilian population, decided and ordered that no food leave the American Zone. What that meant was that the British up here who were getting food from that zone were almost out in the cold and screamed to bloody heaven and caused all kinds of trouble. Anyhow, that was it. The Russians were delighted, because they didn't want any food to come down anyhow and were not doing very much with it.

So it wasn't very long until we said, "Well, if we can't move the food we are going to control the inputs of food." It happened right there where we got in trouble. Most of the fertilizer plants were in the British Zone. We had one machinery plant here in our zone that incidentally was cut in there largely because we wanted the warehouses. That made the frame. But the magnetos and other stuff were made in the French Zone and the carburetors were made up in the British Zone. So we had a hell of a time getting a tractor together under that system.

All I am trying to say is that, when you put in arbitrary military lines for military purposes--and nobody criticizes that at all--and then try to fit your economy into that situation, you get into all kinds of trouble. I could go on here for an hour explaining the problems you had here in

trying to get into food production with that sort of thing, because fertilizer and input, and manpower, and exchange of stuff are absolutely essential for top production these days. You can't just go out and scratch the ground and put some seed in and expect the sun to do it.

So here is where our trouble started, and here it still remains--believe it or not--with isolated Berlin up there which we have sworn to defend and which we must defend, and 2-1/2 million people up there dependent on the whim of somebody who cuts the rail line or forces an airlift. And I doubt now whether we can supply West Berlin with an airlift as we did a long time ago. I could tell you quite a story about that, but we'll go on now to the next slide.

SLIDE 3

Here, then, is the getting into this food production business. Here is the division of Europe as it was visualized at the Potsdam Agreement. Here's that Iron Curtain line on a larger form. Those blue and cross-hatched areas are the Danube Basin countries of Yugoslavia, Rumania, Bulgaria, Poland, and Eastern Germany, where the great food basket of Europe has been for centuries. We are going to talk a little bit more about that further on. Twenty percent of the food which 270 million people in Western Europe and the West used to eat came out of this area right here.

That is not happening now. As a matter of fact, those three countries

that you see there that used to be the major exporters of food are now importers. We could discuss at great length why that is, but that's a fact of life. We'll see a little bit later Russia, which was usually regarded as a so-so country, one time self-sufficient and the next time underfed, and is now becoming a major exporter of food, namely, to these very countries that used to grow it--behind the Iron Curtain. That's the picture. That's the Danube Basin, the countries which are the main breadbasket of Europe, and which you will notice when we drew the lines the Russians got. We've still got some scenery.

SLIDE 4

Now we are getting around to the food situation. That's the slide that I showed you last year. I didn't change it. The reason is that the world food situation in terms of stocks has not changed very materially. These are the food stocks. In other words, here is food that is not distributed. Here is food that nobody has eaten. Here is food in existence on the earth right now, waiting for another crop to come.

This lower portion here is, of course, North America--Canada and the United States. This is the major part. But you will notice in the rest of the world food stocks, uneven stuff, undistributed stuff, are increasing throughout the world and over the world, increasing rather rapidly, and in 1959 they are a little bit higher, but not enough

different to change the general picture.

Those are world food stocks. Those are stocks we have to call on in the event of a disaster some place or something of that kind. Of course as you can see they are most in North America.

SLIDE 5

Here, of course are the places in the world where production is going up and where it's going down. The red is where food production is outrunning the population increase. You hear a lot about the population rates and all that sort of business. This slide shows you the areas where there is to some extent a deficit in terms of production rate of food versus the population increase.

Notice this red area, which is mostly Russia. It is going up by more than 3 percent per year. Back over here in the other area it is 1 to 1 percent and 1 to 2 percent to support. You see there is only one little crosshatch area there, and that is Pakistan. Most of Pakistan and some of the other countries there are places where the food production is not increasing at the rate of population increase.

In other words, this is per capita now. This is per capita production in food versus population rate of increase.

SLIDE 6

This gives you the picture in statistics. Production is increasing worldwide on an average of 2 percent per year--food production. Population increase is increasing on an average of 1.6 per year. You see that's

a very narrow range, but at least food is increasing, and production is going ahead a little bit faster, at a faster rate than are new people coming into the world.

SLIDE 7

There is one other significant thing about this whole picture. That has to do with the shifts that have taken place in various parts of the world so far as production and so far as movement are concerned. As I said before, there is very little traffic in food across this Iron Curtain area.

This map here is an old map. Pay no attention to that stuff up there, except that it has some statistics, and they aren't changed very much. Look at the map as a whole, and look at the various dots. The black dots are areas where there is at least a surplus of food production, or where they can ship a little bit out. The red is where there is real danger, where people starve unless they do have some food coming in. The yellow is the so-so land. One year we're in clover and the next year we're hungry. This big dot up here near the top of course is Soviet Russia. If we were remaking that map today, that dot would be black, because Russia has become a major exporter of certain foods. They import still a good deal of cattle and a good deal of butter and things of that kind, but they are an exporter of cotton, of wheat, barley, and various cereals.

This black dot over here which represents Europe would be a little

bit bigger, because there are four countries which, at the time when this map was made, were deficit countries and belonged to the International Wheat Agreement as importers of wheat. Those countries today belong to the International Wheat Agreement, signed in 1953, as exporters of wheat. Here are the countries: Sweden, France, Italy, and Greece--believe it or not, Greece exported 150,000 tons of wheat last year. There is a thrilling story in that, and to some extent I think the Americans can take a good deal of credit for it, but the Greeks themselves can take some credit, too. It is significant in this one respect. I can say it in two seconds in support of Greece's concern. Prior to World War II, 5 percent of the public expenditures of Greece went behind agricultural production. I mean by that in terms of capital investment, in terms of education, in terms of extension services, and all that sort of thing, 5 percent of the Greek budget went to agriculture. Last year 30 percent of the Greek budget went behind agricultural production in the form of extension services, in the form of irrigation systems, publicly constructed irrigation systems, publicly constructed tube-well systems, research stations, experiment stations, and things of that kind.

So that gives you some idea of what a country can do that has nothing, if they really get at it. So that picture was changed. The big black dot there representing Bulgaria, Rumania, Hungary, and every country

there except Yugoslavia, that would be yellow and maybe red, because those countries now are importers of food, believe it or not. And a lot of it is coming from China, also, believe it or not, through Russia. This whole agricultural trade pattern that used to move stuff from the Danube Basin to Europe has stopped, and the movement now is out of China into Russia and from Russia down to Poland, Eastern Germany, and those countries that used to be the breadbasket countries.

So much for the European picture. Down here in the Middle East there is growing production in cereal, particularly, and in parts of Turkey, and so forth. We'll get hold of that as we move on to the next slide.

SLIDE 8

I am going to stop for just a minute and look at another factor in production. This is a thing that is very significant as we look at the world. This has to do with the new and sovereign countries and the break-up of the trade pattern that follows those countries. Here are, of course, 20 newly independent countries. They represent a high percentage not only of people but of production. I show you this slide merely to show you the kind of world that is going sovereign. All that black area there covers the countries that have recently become sovereign. When a country breaks away from the mother country and launches out as a new and sovereign state, the problems that that country faces are almost insurmountable, and they are facing them at a time

when they must move quickly. We had about 100 years in our country here to adjust ourselves after getting out from under the British colonial rule. But these countries don't have 50 years, 100 years, or 25 years, or even 1 year. They've got to get functioning as sovereign states.

Here's the problem that presents itself in that. All colonial areas, including our own Philippines, are geared to the domestic economies of the mother countries. That included our own Philippines. That meant that they developed those countries to complement their economies. So in the Philippines we developed the great cocoa plantations, abaca plantations, sugar plantations, and all of these industrial commercial crops, just as the British developed the rubber in Malaya and the Dutch developed rubber in Indonesia, and right on down the line.

When the Philippines became sovereign their agriculture, so far as food production is concerned, was as primitive as it was 200 years ago or 500 years ago. So the Philippines, with land to feed 80 million people, had to import wheat, corn, rice, and everything else, principally from the United States. They were so happy with their new freedom that they forgot that they had to work a little with it. So they went on a binge in the Philippines and had really come almost to the break of disaster, largely because they failed to solve and failed to handle their food problem. It has taken them 10 years, with a great deal of effort

on the part of the United States in helping them. In the early 50 years that we were in the Philippines, about all we did was to give them schools, and that was wonderful, because we have the well educated group of people out there at both the lower and the top levels, and right on down the line. So we gave them an appetite for education, constitutional government, and coca cola, but we didn't do very much on producing wheat, corn, and rice. Only this year, believe it or not, after 10 years, have the Philippine people met their quota to the international sugar agreement, and in this year they exported 250, 000 tons of corn and 150, 000 tons of rice.

What I am trying to get at is, it takes a country about 10 years to 15 years after sovereignty to adjust itself to the world situation.

SLIDE 7

This is Africa, again, and the new countries that are going to be sovereigns this year. Here's a place you want to watch. In the breaking up of these various colonial areas here and the going back to sovereighty, every single one of them is going to have a food problem, and, unless there are federations, unless there are alinements, economic alinements, boy, chaos and trouble are going to come in this part of the world, largely over food. It almost makes you shudder to think about it. I could talk for an hour about the particular problems that are right here. This is one place you can't ignore. Remember this--15 percent of all the arable agricultural land in the world is within the confines of that

particular area right there. It's totally undeveloped, totally untouched in many, many ways, and yet it's there, and I don't think these new sovereignties can get themselves together in time to exploit it without a tremendous amount of help from the outside--the old mother countries, the United Nations, or somebody.

SLIDE 8

Here is the picture of that African situation. They are single-crop economies. What happened was--you developed coffee in Ethiopia. You sold $130 million worth of coffee, and some hides, and a few other things like that, and you bought maybe some rice and other things, and even sugar, which they can grow there in great abundance. But only within the last few years have they grown any sugar in Ethiopia.

There's Ghana--it supplies the world pretty well with cocoa, but it doesn't grow any corn, or very much corn. You've got some land over here which grows bananas. That's about all that country will grow, except a little bit of grain and some livestock.

And of course there's Liberia, with rubber.

That is characteristic of every country down there. The whole country's economy swung around one cash crop which supplemented the home country's economy, and the home country then shipped them food and other things.

SLIDE 8

Well, now we get into the Far East. I am going to sketch that for about a minute. This gets back to the maps. I've got to hurry along. These red places, of course, are the danger areas on this map. The black up here is the one little place in production. Over here is the rice bowl, that black line. Getting down to Malaya here, we see the rice bowl of the Orient. This represents Burma, Siam, and Indo-China. That dark line up here at this particular place is the 17th parallel in the old Indo-China complex.

There are about 850 million people in this area, if you include China. This is the only area, with just a very minor exception, that produces an ounce of food more than they eat. As I have said here in the past, if you were to come down across the rice bowl and cut it off, you would have 850 to 900 million people in that area that would have to get 20 percent of their food from the western part of the world--the United States, or wherever they could get it. There would be real trouble.

These countries down here are Indonesia, in the southern part. And there's the Philippines. As I said before, the Philippines are now at least exporting a little corn and a little rice. It looks like the Philippines are on their way and may be able to become a fairly stable exporting nation.

These other countries are just getting back. South Viet Nam, which used to export 1,500,000 tons of rice, is back in the export market this

year with about 250, 000 tons. They are very happy about it and feel that they are on their way. But we have actually been shipping in P. L. 480 wheat to Viet Nam to feed the people, particularly in the cities. This country looks like it may be coming out again. We're shipping stuff into Laos, all over the place in that old Indo-China area that used to be one of the great food-producing parts of the world.

Down here is Indonesia, this yellow line away down here. There's all kinds of land there, in Sumatra, and many places, to produce all the food they'll need down there. But they again are cut off from the Dutch management, the Dutch technology, the Dutch advice, and all the things that go into making a real Western-type economy. They're on the verge of one-year starvation and the next year a great amount of stuff. We are shipping into Indonesia this year under the P. L. 480 about 200, 000 tons of rice. That makes us very happy, but it makes Siam, up there, that has about 900, 000 tons of unsold rice very unhappy. This is their market. But that's another story. That's another political problem. It's another problem which you face in the world at this time.

Up here is Japan which must have anywhere from 3 to 4 million tons of food from the outside. They are doing a remarkable job, a tremendous job, of keeping their production race up with the population race, so that the gap in Japan is not widening at all. It's holding about steady. They've got to have the stuff from the outside, but it's not getting any worse there.

Korea out there, which has a dark line, of course, out to have a red line, because they haven't fed themselves since the war.

SLIDE 9

The one important thing to remember in this whole business--and I don't want to get you wrong on this--is food production increase versus population increase is true as I have said. Production of food is going up faster than population increase. But there is another factor which has thrown this whole thing off. It is throwing the picture off in the present world situation. That is food consumption. There is a difference between per capita production and per capita consumption, and food production is going up all over the world, in every part of the world, by leaps and bounds, and food consumption. That results from two things mainly: that people who are free and sovereign have a greater tendency to eat what they grow and not sell it for money, because money doesn't amount to too much in some of these countries. The second thing is that millions on millions of tribesmen, little villagers, and other people are moving out of the hinterland into the big cities. Cities like New Delhi, Saigon, Bangkok, and even little old Amman in Jordan, are growing by leaps and bounds, and when you move this little tribesman from behind his goat, and this little fellow in the village from his 1/8 of an acre of land, you not only lose what he produces but when he gets to town you've got to feed him and his family from outside.

So that consumption, for instance, in Jordan has shown an increase of 5 percent per year in the last 6 or 7 years, although production in Jordan--a little miniscule country--is growing at the rate of 3 percent per year.

In India consumption is going up. In Pakistan consumption is going up by leaps and bounds.

In places like Formosa a remarkable job of agricultural production has been going on. Formosa is one of the few countries in the world that have shown a persistant increase of about 3 percent per year right straight through. Yet consumption is racing that production increase remarkably, largely because people are coming into the cities and working for wages--pressing each other's pants or whatever it is. They are getting a little bit more money and they are buying more food and are eating better.

Now we are going to take the next few minutes to touch just a little bit on some of the countries that I have visited and to touch just a little bit on some of the agricultural implications in them.

Here is India, and on either side, of course, is Pakistan. India has been putting most of her energies, particularly the last five years, on their industrialization program. They haven't been putting too much capital in agriculture. They haven't been putting too much capital behind research, or behind education, or behind any of the things

that work for production. They have taken that calculated risk on the ground, I think, that they felt pretty sure the United States, with all the food we've got over here, some of it going to waste, would come to their rescue and would ship food in there so that they could offset their food cost with free food and use that exchange for their industrialization program.

You remember that the imported cost of food to feed India at the present time is about $500 million a year. If you divert that $500 million to industrial inputs, you make a great surge forward on your industrialization program. We have been picking up the check for that so-called food import by pushing in P. L. 480 wheat. Just yesterday our American Ambassador celebrated the arrival in Bombay of the 11th million ton of food that we have shipped into India in about the last six years. He also accepted a 15,000-ton cargo, which is the first cargo on 17 million tons, which we have agreed to ship into India in the next five years.

So that is the impact of this situation on India. I think probably that India, and the so-called P.L. 480 concept, are working better than any other country. What we simply do is ship the food that we've got in store in this country over to India and take their currency for it, and then we give the currency back to them on their economic development. In theory that makes one dollar do the work of two or three. Some people call it Mickey Mouse currency. Some people even say that

we give it to them and then pay them to take it. But that's neither here nor there. This is a part of a program which is working fairly well so far as India is concerned. And I guess that's because we want to get rid of the surpluses anyhow. We've got plenty of them to ship out.

Switching over to Pakistan on the two sides here: This is the place I think--and I am saying this as an agriculturist or one interested in agriculture--where all of our know-how and all of the stuff we are supposed to have in technical assistance and all that business has signally failed. It has failed in Pakistan even in a way to keep Pakistan moving with the board. Believe it or not, in 1949 I arranged for the shipment of 329,000 tons of wheat out of the Indus Basin in Pakistan to Japan. That meant that Pakistan in 1949 was an exporting nation. This year, 1960, we have shipped into Pakistan 1,228,000 tons of wheat to keep them going.

Now, there are a lot of factors in that. One of them is that Pakistan, to some extent like India, felt, "Well, we'll not put our capital investment and our effort behind food production. We'll let Uncle Sam give it to us and we will go ahead with our industrialization." There's some of that factor in it. Another thing was the great Indus Basin areas are salting up, and on some of that great plain there out of Kashmir the water hasn't come down as well as it used to. And there are a whole lot of other things. But mainly it has been disorganization in Pakistan. The Hindu supervisors

who used to own and run that country in an administrative way are back in India now. They haven't been able to get themselves together and you have not only a military dictatorship but a country that's thinking economically in the general sense about tremendous aid from the United States.

They may come out of it. Their second five-year plan provides for a major effort on food production to close that gap. Pakistan just this year did not quite reach its total production that it had in 1949. It means that Pakistan has been sliding back instead of going forward on food production and all that sort of business.

It's a very critical area, and a tremendously vital area to us in terms of the Soviet threat and all that sort of business. But it is still in chaos, and the land reform and a lot of things there have simply knocked the thing into a cocked hat so far as any organization is concerned. I want to repeat that, in order to get agricultural production in any country in the world, it takes capital investment, it takes education, and it takes work and more work.

SLIDE 10

This is a little bit different kind of chart. I want to particularly call your attention to it. Notice that that dot is blue. That dot is not black, where it's all dark, and it's not red, where it's danger. But it's a problem area. This is Iran. Iran is little more than self-sufficient

most of the time on wheat, on cotton, on tea, and on practically anything you want to name. It has vast resources of all kinds. It has good land. It has water which is not used but water that could be used. It has great timber resources, and all of that. But the thing that is involved in Iran is something more than that.

That's this thing that I can get into in a dozen other countries, but I am spotlighting it here. That's the rural unrest and the distress of the villagers. Iran is owned by 6,000 landlords. I mean they own the villages, they own the people, they own the mules, they own the tools, and they own the whole business, and have since the time of the early Persian kings. Whoever has been king owns the country.

There is a great foment. We've got armies in there and we are putting great aid in there, but yet the country is just teetering and steaming all over the place. Great efforts are being made in extension service, education, and so forth.

The Shah is giving his lands away. He's not giving them away; he's selling them to the people who have lived on them. I witnessed the other day one of these land-distribution ceremonies out at the palace of the Shah. I tell you, it's a fantastically moving thing. Here are these people all around the great lawn here, each representing a village. This village is populated by this man's people, his ancestors, who, for 4,000 years, in that village, could expect no more than the right to till this land--not to own it--and the right to have at least a part of

the return, and the return was usually 20 percent. In other words, 80 percent of the crop went to somebody above him. I could go into detail about where it went, but he got 20 percent.

Here comes a day and he marches up, and here's the King who says, "I am distributing this land in the village to the people in the village. You get about 12 acres apiece. Here's the title to the land. Here are the notes that you sign. You pay me in 10 years. You are now a free-born citizen and you are a landowner." It's a tremendously moving ceremony. There were people with tears in their eyes. They tried to kiss the Shah's hand and tried to kiss his feet. They tried to do everything under the son.

But the Shah is only one of the 6,000. There are 5,999 more. And the Shah has got about 3,000 villages out of the 42,000, in Iran. The landlords are opposing this, and the Shah is trying to move it as fast as he can. A lot of people say it's not fast enough. You don't solve a problem when you give a guy 12 acres of land. He's got to have credit. He's got to have markets. He's got to have supervision. There are all of these things.

The Shah or the landlord supplies all those things to the villages. He is the owner. He supplies the credit. He supplies the seed. He arranges for the water. And he's exactly the market, because the grain is turned into the King's storehouse. And all this fellow has to do is work.

Now it comes out that he is the owner of land. What is he going to do? Well it shows that a handout, just giving a fellow land, doesn't do the job. He's got to organize cooperatives. He's got to have credit. He's got to have supervision, and all those things.

As the administrator of the old Point IV Program back in 1952 and 1953, I gambled $13 million of the American taxpayers' money on an experiment on the Variman Plain to see whether you could organize coops and see whether these little people could manage their own affairs and could go ahead as citizens and landowners and get along without the landlords' supervision. I am happy to say on this trip that I took that that has succeeded beyond any hope that I had at the time, and it is working. It is not spreading fast enough. There are lots of lessons learned in it. You've got to take time. You've got to educate the people to make loans and to collect loans and supervise loans and you've got to educate the people on how to get along and how to look after their affairs themselves.

The big thing is, you don't do this by simply educating a few people. You've got to educate the populace. In our education program in the village, when we told the people what credit meant, what this land meant, what this freedom meant, and all that, this was the base on which these successful coops did work out, and the unsuccessful ones didn't work out because they didn't have that education at the base.

It's a slow process. I asked one of the fellows how long it would take to give the Shah's land away and how long it would take to set up these coops, to make this great social revolution, this terrific thing, stick. He said it would take about 20 years. That doesn't solve the problem unless the other landlords come along. Then you're still in trouble.

SLIDE 11

Here's Viet Nam. I'm not going to go into that because the time is running out. This is another one of these purple countries. Here's a country that has great potential and normally can export. Here's a country that is seething with trouble. I don't know if you can see this shaded stuff here. These are Communist areas out there where there are known infiltrations, known cells of Communists, who dash out into these deltas here and cause a lot of the trouble and give us a lot of pain and so forth and so forth. Lots of them come down from the North, but most of them are just there. A lot of them are guys with not too much to do, and some guy comes along and says, "Let's raise a little hell," and they raise a little hell. And they are causing all kinds of trouble there.

I think it is a little more serious than my levity would suggest. Here's a part of the world, this whole business, which is Thailand, Burma, Cambodia, Laos, and Indonesia, and which you want to watch. That's the key not only to the Asian food problem but it's the key, in my

opinion, to the whole Asian area vis-a-vis Communist China and India.

SLIDE 12

This of course is the Western Hemisphere, where all the food is, and where we're giving away a considerable amount. China is also giving it away. This is Latin America where there is need for some real education. You've also got the agrarian unrest there. You've also got the same problems in most of Africa and in most of South America that you have in most of Asia, and this thing is not going to stay settled. You are going to have explosions, revolutions, overturns in government, unrest, and everything else.

I don't know whether you'll ever solve it or not. We ought to have started solving it 10 years ago. We are starting on it now. I don't think we can keep up with it in the face of events.

One other thing--what are we doing with our great production in the United States and up here in Canada? Well, we have shipped as of today $12 billion worth of this food to other countries of the world. We have given/away it and have sold it for currency. The prices that we sold it at were at cost. It cost the United States about $20 billion. So we have actually fed into the world food hopper in the last eight years a little better than $2.5 billion worth of free food a year. Yet the world is still producing food at a pretty good rate, but it is absorbing this. I could talk at great length on what some of the problems are on that, but I

suppose that, as long as we know what we are doing, and the countries know what to expect, maybe we'll just go on with it.

Thank you.

CAPTAIN BURKY: Mr. Andrews is ready for your questions, gentlemen.

QUESTION: Since you have just come back from New Delhi, I am curious as to your impressions of the ability of the Indians to become self-sufficient in food production at the end of their third 5-year plan. I understand that's the basis on which the Food Minister came over here.

MR. ANDREWS: Frankly, the Indians can become self-sufficient at just about any period that they really get down to business. I don't want to use the word "won't" but they don't get organized. The trouble with India is, it's a country that feels that everything has got to be done through bureaucratic channels. The bureaucracy of India is wonderfully efficient in one way, but, when it comes to a dynamic thing like production and the mobilization of resources and the mobilization, say, of fertilizer, manpower, and seed, to get it all in the same place, they are not much better off than Russia used to be. They have the faculty of having the fertilizer come over here and the seed come over here (demonstrating), and they never get together.

Actually, India--and this is a purely personal opinion--has got to have an awful jolt to realize that their government machinery and the way they are going about increasing agricultural production simply will not work.

There's a big experiment now going on out there on how to get the village people to increase their food production. Hell, they learned that ten years ago in a demonstration down there in 100 villages, but it was too simple. You've got to have something very complicated to do this big five-year planning. I don't mean that in quite the critical sense it is, but India is going to have to have a real jolt. They've got the land, they've got the people, and if they'll apply the technology and apply the inputs that go into agriculture and readjust their incentive system and their credit system, they'll do better.

For instance, if you get somebody to put fertilizer behind wheat you've got to have some assurance that he can sell that wheat for enough to pay for his fertilizer bill. The next thing is, in order to get the fellow to buy fertilizer he's got to have the money to buy it, and most of them don't have any money. They're like you and me. They're about six months behind with their bills. So they've got to borrow money. Right now the little fellow borrows his money from the money lender, or his kinfolks, or someone like that. He pays anywhere from 12 to 180 percent a year for that. Well, he just simply won't pay that tremendous amount and take the risk.

You have a production credit. You have production coops in India but they have a ruling in what is equivalent to the Federal Reserve Bank that they cannot lend money against anything except immovable things. In other words, you've got to mortgage your land, you've got to mortgage

your cow, or you've got to mortgage your house, or you've got to mortgage something, and you don't have the system of making production loans against the crop, which is common in this country and common in quite a lot of other countries where it has been introduced, and it has always produced results.

So they have all those pretty archaic systems that have got to be knocked out in India before they really go at it and get agricultural growth. It's there and they can do it, but it is going to take more than five years. Even if they have the five years' time, it's going to take a lot of changing inside.

QUESTION: Will you explain why the basin of the Danube has changed from a producing basis to a deficit area?

MR. ANDREWS: Yes, sir. It's mostly because of the Russian collective system. Two things happened. One is that when that country was taken over after the war and was given through the Potsdam Agreement to the Russian sphere, they seized all the great German estates and in there, the great church estates that had mostly German managers. There was a large production, well organized, highly scientific agricultural system in those countries. First they had land reform and gave this land to the people--7 acres and 6 acres--and made a lot of people happy. They gave it to barbers and to anybody who voted right. They got the land. The fellow who got the land, though, had nothing. He

didn't have any credit, he didn't have any animals, and he didn't have anything else. The Russians have a system whereby you pay for this land in common, and each fellow is given a production quota. So at the end of the year the Russian commissar comes around and says, "Where is the state's quota?" Well the fellow says, "I'm sorry. I didn't get my crop in," or "my mule died," or something. He didn't produce the quota. Well the Russian says, "Since you have been unable to use your rights on this land for the benefit of society, therefore the state takes it over."

So the state took it over and collectivized it. Of course the peasants, and the people who really knew how to produce, dragged their feet, and they have been dragging their feet all along, all these years; with all the cajoling, all the fighting, all the brigades, and everything else, the rank and file, the great mass, are simply dragging their feet. Also, fertilizer is not coming out; also new seed is not coming out. There are all of those things. Incidentally, a big seed farm has been broken up and parceled out, and then they have collectivized again.

So that has had a tendency to stop production. In Yugoslavia, which is a good case, this went on for several years. We shipped food there in 1949 to keep Yugoslavia from starving when the year before they shipped 300,000 tons of grain out through Germany. Then Tito changed. He said, "No, we will not have forced coops. You can join the coop if you want to, and we'll not have all these state farms collective." Then he

went on to say, "Well, we are going to let people have incentives." The peasants didn't believe it, and they haven't believed it until about the last two years. In the meantime there have been great educational efforts in there. Fertilizer plants have been set up and the distribution system has been worked on, so the peasants have begun to believe that if they produce the state won't take it all away from them and will pay them for it. In the last two years Yugoslavia has exported wheat and corn. My prediction is, if they don't mess it up with some more politics and some more stuff, Yugoslavia is on the way out. Part of it is education, part of it reassessment of distribution, and a good part of it easing of the political thing. You begin to grow corn rather than to grow politics.

QUESTION: Sir, at the end of your talk you sort of indicated, "Well we have a program, and there it is," as though you might have some more comments to make. Have we made some mistakes in the program? Is there room for improvement?

MR. ANDREWS: The P. L. 480? Yes, we made a lot of them. In a world where we have to have friends we're making just about as many enemies with our P. L. 480 dumping as we are making friends.

India is a separate case. India in my opinion is a place where it is a sound way to do it. But so much of our P. L. 480 stuff, and even the attitude of Congress and the attitude of the boys over here in Agriculture--I am not criticizing, I used to be one of the gang myself--makes it seem

that we are looking for holes to dump this stuff in and we don't give a damn who it hurts on the other side. We can rationalize with Canada, for instance, "Well, Poland didn't have any money to buy your grain anyhow, so, so what. If we give them a lot of grain why should you worry?" Canada sees that this is knocking off the market some other place. This world market is a thing that you just don't run in a straight line. So we are causing some dislocations.

Another thing that worries me, and I don't know, maybe we'll have to come to it sooner or later, is, we are developing some people who are depending on us. One place is Pakiston. I think one of the reasons why Pakistans, even farmers, are not putting out as much as they should, and why Pakistan is not straightening out its affairs so that they could do a little better job is, they say, "Oh, well, Uncle Sam has got lots of it, and he'll take care of us." That's true in Libya. It's true in a whole lot of countries.

That's pretty bad on the long pull. How are we going to shift gears some day when we don't have it? It's really going to be pretty serious. This Food for Peace and all that business you are talking about is a nice slogan. I don't know how we can be putting out any more than we are. I'll admit that some of it is not going to the people that ought to get it. But that's the way the world is. You can't even give away wheat so that this little fellow out here is going to get it and so that he knows he is. A lot of people think that when we say Food for Peace we haul out a

bushel of wheat and hand it to this little guy and he's grateful to us. The little guy doesn't know that. We turn the wheat over to the government, and the government sells to the guy. You can't make him believe we're giving him anything. That's what I am getting it.

So a lot of the good will that we thought would come from this slogan just ain't there. And a lot of the farmers are mad, because this wheat causes a reduction in the price.

For instance, when we made the Indian deal the price of rice in Bangkok dropped one-half. The Foreign Minister of Siam had to resign because he hadn't protected the Siamese farmers against this Indian deal. So that's what you have.

All over the Orient the price of stuff is falling. The price of wheat fell in India very sharply when this deal went through. The Indian farmers were mad. One fellow told me out there he doubted whether they would move very much more of this P. L. 480--17 million tons in until after the Congress elections, because they think that probably Congress will get licked .

So this thing cuts two ways. You see, there are more farmers in India than there are city folks.

QUESTION: Sir this is an allied question to the one you just had. Yesterday in the Sunday Washington Post I saw an article by Bernard Berman. The subject of it was "World Food Prices." He indicated that President-elect Kennedy would probably call together his Agriculture

aides the first thing to pinpoint the shortage areas and then come up with a plan as to how the U. S. can help these with our surpluses. Also he had a quote from Senator Humphrey and other Democrats. I would like to quote that. He said:

> "In the past, too much emphasis on short-term supply agreements and on surplus disposal features of our program has contrasted with the capacity of use of food as a tool of foreign policy."

Would you care to comment on that, sir?

MR. ANDREWS: I had better not comment too much. In the first place, President-elect Kennedy and Mr. Humphrey are going to find that these places of real need are pretty hard to find and much harder to get to. As I said before, other countries have farmers, too. And you have some political problems in there. Another thing is, these countries more than anything else don't want to be beholden to anybody. Think of Pakistan. Even though we are giving them this tremendous amount of grain, the rank and file of the people of Pakistan just feel that they are being beggars at our doorstep. I am talking now of the sentiment and the feeling of people, when you get them off to the side. They apologize for having to receive grain from us. These countries want to be free, they want to be sovereign, they want to stand on their own feet. That's the great national aspiration. Every government I know in the world is looking forward to the time when its trade or its production

will make the country stand on its own without the help of anybody. That's the dream.

I think we could do the job better. I think we could do it with a good deal less waste and with less political criticism. And boy! We're getting it in a lot of places. Actually this food program in some countries is really negative, in the great mass.

If we would do this through an international concert, if we would have a committee of nations say, "This stuff is needed here, it's needed here, and it's needed here, and you are not going through this effect of dumping." That's pretty bad machinery. It takes lots of negotiation and all that sort of thing.

The other point is that we ought to use the theory behind P.L. 480, which is this: The point of that bill was drawn in my own office when I was TCA Administrator. The theory is this: Here is a country that has simply got to have (India is a case in point) imported food. That imported food costs dollars. At the time this was passed the great reserves of wheat were in the Western Hemisphere and it was a dollar market. India needed those dollars to buy industrial inputs for industrialization. So we then could put our wheat in there, which was the reason we could place the dollars, and allow them to develop their own economy, and we hoped it would induce them or help them to become, not self-sufficient but close to it, say 2 or 3 million tons leeway on the average year. That was the way it was supposed to work in all countries. This

money would be ploughed back into economic development.

Well, we are scattering money all over the place and we are doing all kinds of things with it, and when we go out to look for a deal, it's not economic development but a deal to dump.

I have great respect for Senator Humphrey, and I know Senator Kennedy is very sincere about this, but when you go to look at it, it isn't as easy as it is to talk about it.

QUESTION: You mentioned that China is exporting foodstuffs to Russia. I wonder if you care to discuss that, in the light of their starvation problem.

MR. ANDREWS: There are two things about China. In the first place, the China starvation problems are in pretty much localized areas. The second thing is, the China distribution system is very much like that in India. For instance, you can have a surplus of rice in the upper part of India and you can have starvation in Madras, because you don't have the transportation system to distribute it. There's a lot of that in China.

China is moving cotton, soy beans, and some grains out of the old Manchuria area into Russia. Manchuria is a very rich area and has tremendous production. Of course that was developed under the Japanese. The Japanese used to take soy beans and rice out of Manchuria back to Japan and sometimes re-export it through the Orient. Now Communist China has Manchuria and Japan is getting its stuff from the West, you

see. You've had this big shift in trade.

About 40 percent of the trade between Communist China, the Chinese Mainland, and Russia is agricultural products. A lot of it is meat and cattle, a good deal of it is soy beans, and lots of it is cotton. Not much is rice, but there is some rice. It's mostly a transshipped business. They make a deal for rice and fill up in Burma and wind it around that country into Shanghai and out, and on up through Russia into Europe.

So in one way you do have localized hunger problems in China, as you've always had, and as you've got in India. In the second place you have surplus areas where it is easier to get it out this other way than it is to distribute it. Besides, the Chinese are pretty cold-blooded about this whole food business. They are getting lots of industrial products from Russia, and Russia is insisting on payment. The only thing they can use to pay is food.

QUESTION: In our reading we have seen that in some parts of the world, notably Western Europe and Japan, there is a relatively higher productivity or yield per acre than we have in this country where we maximize the use of automotive and mechanical equipment. Would you address yourself to the question of why, if farming is done mechanically and ostensibly on a scientific basis, it happens that we are getting less yield per acre than elsewhere where it is done on a less mechanical basis, and does this in any way relate to the fact that we are already

plagued with a superabundance of agricultural products?

MR. ANDREWS: Well, the explanation of this system is simply this: In Europe land is more valuable than human manpower. In Japan land is more valuable than Japanese manpower. So you apply great amounts of hand labor and a great amount of manpower to a small piece of land and you get enormous production out of it. In our country labor is the expensive thing, the thing that we want to save, so we invest in great machinery, and we have lots of land, and with an extensive system we have a tremendous production per man hour of labor, which I think in some instances, in some ways, is really false economy. But anyway, that's it.

In the case of Germany and Japan you have an enormous production per acre of land. Take Formosa. There's some of the best farming I have ever seen in Formosa right at the present time. I was in a Formosan's home the other day. He has a family of himself, his wife, and six children, and grandma and grandpa are also living there. That man has a little less than two hectares, which is a little better than four acres. He lives in a brick house. He has rural electricity, believe it or not. His family is well clothed. He produces nine crops in one year on that piece of land, different kinds of crops. He plants, say, potatoes and interrows them with rice, and then puts some beans in the darn thing, and then has two crops of rice, and an in-between crop

of corn. And he has some pigs and stuff around there. Frankly, his income is relatively high for that part of the world and that part of the country. That 2-1/2 acres, you see, in terms of production and output on the land, is equal to about 80 acres here in this country, where one man uses a tractor, and that sort of thing.

It's a matter of values, and it's a matter of systems. We couldn't any more introduce in Europe and Japan this extensive system we have to keep production up than the man in the moon. A lot of our experts that we send out over the world soon realize that. We get a guy who goes out to, well, Western Europe, when we had military governments there, and he says, "Well, all we've got to do is just get rid of these old cows and get some tractors, and we've got the thing solved." You haven't got the thing solved.

The future of the Orient and all that is, of course, getting as big a plot as you possibly can for the family, but a maximum application of hand labor on that. The Formosans were spraying with a hand sprayer almost each head of that rice in that crop. They had a bug thing out there after the beans, and every other doggone thing. They have coops in which these things are rented for, say, a cent a day, and a man can rent them. A man doesn't have to invest in the stuff. He can come and get what he needs in this little coop. This little coop gives him the chemicals. This is a chemical age in agriculture and you have to use it. You use it on the

sprouting rice, you use it on the growing rice, you use it on the rice seeds, and right down the line.

I don't know whether I have answered your question. It's the simple fact that we've got lots of land and we are short on labor. So we go strong on capital input and extensive agriculture. These other countries have plenty of people and are short on land, and they put a maximum amount of stuff in it and produce about twice what we do.

CAPTAIN BURKY: Mr. Andrews, I am very sorry that once again the clock has overtaken us. The interest you have engendered this morning I know would keep questions going for another hour. But at this point we must stop. I want to thank you on behalf of the Commandant and the entire student body.

MR. ANDREWS: Thank you.