



THE WORLD AGRICULTURAL SITUATION AND
ITS IMPLICATIONS FOR NATIONAL SECURITY

Mr. Stanley Andrews

NOTICE

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Reviewed by: Colonel P. B. Klein, USAF

Date: 8 January 1960

INDUSTRIAL COLLEGE OF THE ARMED FORCES
WASHINGTON, D. C.

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FOR NATIONAL SECURITY

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Reporter: Ralph W. Bennett

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CAPT. BURKY: General Houseman, Gentlemen: Many Americans who would worry about manganese or perhaps shortages of iron ore would conveniently overlook food as a natural resource because it's so abundant in our great land. But this abundance is not worldwide by any means, and food is ^{of} a major concern to most of the nearly three billion people who inhabit this earth. Come to think of it, it's a real personal problem to each of us about three times a day. Nevertheless, agricultural deficiencies can influence the attitudes and the destinies of both allies and potential enemies throughout the world; and for that reason, food is a factor in shaping the course of politics in this world. I think, therefore, that it's most appropriate that we examine the world food situation and its implications for our own national security.

Now, to discuss this vital subject we have a speaker who has concerned himself with agriculture for many, many years. You have read his biography and you know that it shows he's had first-hand experience with major food problems throughout the world as an officer, a Government executive, a private citizen, and a consultant. He's a recognized expert in his field.

Really he would need no introduction except for the fact that you

are new here, because the College holds him in such high esteem that he's been invited here annually since 1952 to address us on the subject of the world agricultural situation and its implications for national security.

Mr. Andrews, it's an honor to have you with us again and a pleasure to introduce you to the class of 1960, or maybe I should introduce them to you. I don't know which it is. Mr. Andrews.

MR. ANDREWS: General Houseman, Captain Burky, and Members of the Class of 1960: It's pretty hard for a fellow that has tried to give some sort of a lecture on this subject to a distinguished group like this since 1952 to not get in a position where he's damn tired of listening to himself talk. And so this morning I am going to take just a little different tack, and I'm admittedly going to get into an area where I expect most of you people are far more competent than I am. You have had a lot more competent speakers than I to more or less set the stage from a political and economic environment standpoint of this question of food; and getting away from the normal attempts I do to be factual, I may get a little opinionated. If I do, I hope you will excuse me.

I will explain my situation by a story which I sometimes tell about a situation down in Arkansas. Mary and Sam had been married quite a long while and suddenly decided that they ought to have a will, to settle up the estate in the case of the death of either one of them.

So they went down to Pine Bluffs and went to a lawyer's office and went into the business of making a will.

In the course of the will, in dictating the transcript of it, the statement/a bout "Sam and Mary, who are the parents of five children. " was made

The lawyer looked up over his glasses, and the little pickaninnies were lined up here across the wall, and he counted them, and he said: "Wait a minute. You say five. I see seven." "Well," Mary said, "you see, Mr. Lawyer, it's just like this: Five belongs to Sam and me, but I got a couple on my own."

Now, some of this stuff is going to be on my own. So don't get too worried about it, because, you see, I don't have to explain myself to anybody; and I don't have any bosses that could fire me if I get wrong.

But I am going to start--and, gee, I'm getting to talk more like a professor all the time--with three generalizations: one, that either through an indefinite postponement of a settlement of the basic issues between the United States and the Soviet Union--and let's don't kid ourselves; those are the two fellows we've got to talk about--there will be, and there will be certainly, a lessening of the tension and the real possibility that somewhere in this long, indefinite effort, there will be some sort of a disarmament, and some sort of a means of living together without a shooting war.

The second generalization is that if this does happen, or if it doesn't happen, the political and ideological drive of the Soviet Union,

and the economic or trade drive of the Soviet Union will intensify rather than drive off.

And the third thing is that a likelihood of a very early adjustment or settlement of basic issues is rather remote, because neither side will pay the price for such agreement. In other words, we would have to give up some things that we think represent our vital interest if you reached an agreement. Russia would have to give up something that represents their vital interest. And so it's going to be a long time of flitting around.

So it's within this general atmosphere that I want to talk this morning about food; and I am going to use a little bit of the world setting in which we find ourselves as we talk about food as a part of our national security. So if the young man will give me the first slide.

(Chart 1) This is an old one. Some of the staff I am sure have seen that. To you new fellows it may not even be new to you. But that black line is this so-called Iron Curtain. Actually it starts at Stettine on the North Sea, crosses Central Europe around the borders of the Black Sea, goes up across Turkey, across Iran, across the whole Middle East, up around the border of China, and ends up actually in the Bering Sea.

Now, that's more than an imaginary line. It's a real line. And no trade, no people, no trains, not even a dog cart crosses that line in either direction without the most elaborate set of papers and permissions

and red tape and going here and there.

It's true, this line is being breached just a little bit now, with this exchange of people. It's being breached just a little bit with exchanges of goods between the East and the West. But that line is still real and it does divide the Soviet world and the free world; and nobody ventures across it without the danger of being shot at. We ventured across, of course, and got shot at, and they have ventured to cross and got shot at. And so that's where you are, and that's what you've got to recognize as you get into this business. That line is real.

Now, the other thing about ^{it} is, what keeps that line in that position, and why is this so real? Well, both sides have some real concerns. We're worried a little bit. And let me relate ^{this} to food in just the next second or two with the next slide.

(Chart 2) This, of course, is Europe. This is where the Iron Curtain started. This is where the mischief began. And this is where the mischief is right now.

This area right in here, from a food standpoint, that cross-cross area, is the Balkan or the Danube Basin. This is the area that prior to World War II 20 per cent of the food that 270 million people west of that line used to eat came from that area. It doesn't come any more; and, thanks to that fact, the United States, Canada, and Argentine have a very fine market for food in Western Europe. That's something you've got to smoke in your pipe, because that's a fact of life.

Before World War II we shipped, for instance, barely 100 million bushels of wheat into Europe. Last year we shipped 345 million bushels of wheat into Europe. That will give you some idea of what this really adds up to. That is the Balkan Basin, and, of course, by an accident of history or design or whatever you call it, the Russians in this dividing up of Europe came out with the food supply areas. They even got the Macedonian plain for a while and they even got the one area in Austria that produces a pound of food more than they eat.

So much for that picture from the food standpoint, and the breakup after the war, and the formation of the Iron Curtain.

(Chart 3) This is a terrible slide, but it does show you those areas there. Just ignore those rings for the present. What I want to show you here is this line here and this line here. This line here, of course, is the border of China. These three states here are the old Indo China, Siam, and Burma area that used to be a part of the great rice bowl complex in this area.

This area here now is the last and the only area in this great Pacific, South and Southeast Pacific area, that produces a pound of food more than they eat. As a matter of fact, 850 million people, a little more than that, without this supply have got to get their food supply from the West, principally the United States. And this is the reason this is so important in here from the standpoint of national policy than anything else, because any time that China comes down over this, you have knocked out the one place where there's a chance of a surplus

food supply for the teeming millions of India, of Indonesia, which has to have some, Japan, and all those places.

It is true that a great amount of food is coming from the west, out in here, particularly Japan and these places; but here is the heart of the Asian food supply-- Burma, Siam, and Indo China. Prior to the war, about 5 to 8 million tons of rice came out of this area and spread all over the world. At the present time only about 200,000 tons ~~comes~~ comes out of the lower part of what used to be Indo China, about a million to a million and a half ^{tons} in Siam, and about a million to a million and a half in Burma. Those are the two areas that are the principal, outside of the western hemisphere, surplus producing areas in the entire world, on a globe that has 2 billion 900 million mouths to feed.

(Chart 4) I started to say something about the fears which beset and concern both sides in this war. This may be something that is a little far-fetched, but I think right there is a slide that illustrates one of our fears. And, of course, that slide was made when the long-range bomber was the principal way of attack. That shows that in 9 1/2 hours you could pick up an atomic bomb and land it in Chicago and obliterate a city of that size. And we had, though, under that arrangement 9 1/2 hours from the time that the guy pressed the button in Moscow until Chicago blew up.

Some of ~~the~~ you people are far more competent to discuss the question of intercontinental ballistic missiles than I, but the chances

are that the time lag here is somewhere between 30 minutes and 45 minutes and even less than that from the time you press the button here till a city the size of Chicago goes up. That's one of the fears and one of the situations under which the United States lives today. And that's one of the things that do concern us. Don't kid ourselves. That's the reason we're spending 41 billion dollars for military and missile and all kinds of defense. That's the reason we're having people being talked into building shelters and things of that kind.

(Chart 5) Here is a concern of ours. This shows you the credit and the trade agreements which Russia has entered into with countries of the world in the last three and a half to four years. It also gives the amount. It gives the amount of economic aid, the amount of military aid, and so forth. Notice it runs to \$2,384,000,000.

Note also that these green spots are the areas where those agreements have been made. Note also that these are areas where in the past the Russians never even dared to try to get even a trade foothold. These are areas, a great many of them, where the United States, Great Britain, and France, and Holland felt were their bailiwick when it comes to trade and economic relations.

And there is something for you to smoke in your pipe so far as concerns the United States. We're concerned about this, not only from the standpoint of the ideological penetration, but we're concerned because it may knock us in the creek on a lot of the trade that we used to enjoy.

So these two things are some of the concerns and some of the fears that are on our side of the ledger. But, you see, Ivan has some fears too. Let's look at the next slide and we'll see what fears he has.

(Chart 6). Here is a picture of our bases, before we got the missile bases. This is a picture of our bases that surround Russia. Those are the military and the naval and the air bases around the world. I think, if anyone looks at that and was sitting where Ivan is, you would be just a little bit concerned, because, regardless of what you say about the intercontinental ballistic missiles, you can blast him off the face of the earth most any time somebody on this side presses the button. And, of course, Ivan has our word that we will not use these things, but he's in the same position that we are. Can he believe us and can we believe him?

← So that is another fear. This is on the Russian side.

Let's look at one more fear that the Russians have. (Chart 7) This is the potential of the American production. The point is that while Russia is making tremendous gains in heavy industry and some of the more basic types of industry, we in our country here are putting great emphasis on the consumer side.

Now, I'm not going to argue at all whether we should or should not do that. Personally I think we shouldn't. But, anyhow, we are doing it, and this is making a dangerous contrast for the awakening Russian masses, and particularly the countries where Russia has taken over with great emphasis and great austerity and great effort on basic

industry rather than consumer goods. And so I'm expressing an opinion that probably what Ivan wants is at least a little bit of lessening of tension, so they can put some attention to providing a little better life for their own people.

So much, then, for the two fears that we have on both sides as we look and try to relate this to the world food situation.

(Chart 8) Here is another slide. This, of course, is a picture of the uncommitted areas of the earth. The blue are the people, the land areas, the land mass that is on our side. The red, of course, is the land mass of the Soviet bloc. These great clear areas here are the uncommitted areas of the earth, where we are scrapping and where the ideological and the economic or the trade problems enter into this picture ^{and} ~~are~~ are part of the war.

Here also are found the 20 new sovereign nations that have come into being since World War II. Here also in Africa is where about six new nations have come about in the recent years, and where eight more will be sovereign nations before you know it. So that's the world, the world as it is, and the world to win--this clear area here.

(Chart 9) This is a picture of these 20 new nations. The brown area indicates where they are. Down here is Indonesia and the Philippines, and over there in Africa and all through there. Those are the new sovereign peoples that have come into existence since World War II.

Now, you say, What does all this have to do with food? Well, every one of those new nations was geared under their colonial arrangement,

including the Philippine Islands, to the economies of the mother countries. Of course we deny all that stuff, but you can go right out here to the Philippines and you will find that the development in the Philippines on the food and agricultural line was designed to supplement the agriculture and the economy of the United States and not to make the Philippines a self-sufficient and viable economy. And that is true of every single one of these others: ^{of} /The Middle Eastern areas / ^{that} were tied to the French and the British, of the African areas that were tied to the French and the Belgians, and so forth. They are set to complement the mother country.

But when a country becomes sovereign, it has a new currency. The whole business of trade is dislocated. It's got to have all the trappings of sovereignty. It's got to have an army. It's got to have an embassy. It's got to have all the gew gows that go with a sovereign state. Their trade situation has to be unraveled and their currency problems, with the result that every one of these 20 countries is in confusion and turmoil. They have come into existence at a time when they do not have a hundred years to mature. They've got to mature yesterday. They've got to be mature states and so forth.

There are food problems that every one of those 20 states has to face. In some instances they are trying to get self-sufficient. In some instances they are trying to have areas where they can export. For instance, in the Middle East, in the case of Syria and Iraq and those countries they are trying to find export outlets for their agricul-

tural products. And around and around and around and around.
This, then, is life.
/ These countries all want to industrialize. They all want to be big things all at one time. They want to be independent. They want to stand on their own base.

So you have these countries struggling first for food; second, to industrialize; third, for trade; and, fourth, to get some kind of a government that will work, because in all of the years they have promised their people a little bit more of the sun when they became independent. Now they have the sun and the governments are finding it awful hard to deliver on those promises.

Now, there are some interesting characteristics about this bunch of areas here. They are mostly, as you notice, the so-called underdeveloped areas. Take down there in Africa. Only 15 percent of the arable land of Africa is in production at all. There's the greatest area for expansion of food any place on the globe. Yet the people in Africa have a relatively low diet. In nearly all these areas the calory intake in terms of energy is around 1800, with a maximum of 2200, in terms of calory intake.

In the matter of clothing, they wear about four pounds a year per capita, as against about 35 pounds in this country and about 30 pounds in Western Europe.

In the matter of education, they have about one school teacher for each five thousand students of school age; and school age is from 6 to 12. They have one doctor for anywhere from one to 50 thousand people.

And in Indonesia, down here, there's one accredited medical doctor for each 75,000 people.

I could go on here for the next hour and give you the characteristics of these peoples in these under-developed areas. They are convinced of one thing--no question about it--and that is that they feel things that ~~they~~ need not be as bad in the future as they have been in the past. They are moving for a place in the sun. They are listening to voices, and that voice might be the voice of Moscow or it might be the United States. But there is the great battleground of this ideological and trade war which I think will go unabated for the next 50 years.

(Chart 10) All right, now. Let's look at this business just a little bit. Referring back to this other map, here we are. You see, we wouldn't have an agricultural problem, you wouldn't have a world problem, you wouldn't have a war problem if it weren't for people. You just can't get rid of them. There they are. There are 2 billion 900 million people. The developed areas, you see, have about 600 million. That includes the United States, western hemisphere, and parts of South America and Europe. In these under-developed areas you've got 1 billion 300 million. And over here in the Soviet outfit, including China, you have a billion.

Well, these 700 million up here is what we are fighting for. They are the people whose minds we're after. That group, put on either side of that bloc, is going to have something to do with history. If they're won over to this side, you've got about a billion 700 million

people here, that are choosing, or will choose, or will take, or will have to live under the Communist system or the Communist ideology in an even much more divided world that we have now. So those are people, that 700 million, and that billion 3, that represent most of the uncommitted peoples of the earth in this so-called ideological structure.

(Chart 11) I referred a while ago to the problems of these new countries. This is purely a picture of Africa. Notice that this is what you call a one-crop type of economy. In Liberia 71 percent of its exports are rubber. In Somaliland it's 65 percent bananas. In Ghana and Ethiopia / it's 62 percent coffee, and so forth.

Now, you can make a chart like that for ^{practically} every one of these other countries. They're one-crop outfits. They depended on these crops to go out to buy stuff that comes in, and mostly food products. They can all grow food products, but it was better for the international economies and the type of world that we were in at the time to develop these commercial crops and not the food crops.

If I had the time, I could go into great detail here into India and the implications of the break-up of India for Burma, Kashmir, and Pakistan and what it has done to that big subcontinent in the way of balancing up food supplies and trade and all of that sort of thing. But this is characteristic of all those countries.

And so all of these countries are stirring around. They want to save this income for their industrialization program. They don't

want to buy food. So they're all scattering around here to try to bring up their food supply.

(Chart 12) Now, just another slide which you ought to look at. I'm sure you've seen it. It gives you some idea of the importance of Africa today in the area of strategic materials. I just throw that on there just to remind you that this Dark Continent down here, which was just a place on the map, is pretty darned important to us.

(Chart 13) Now we'll switch along and we'll finally get a round to talking a little bit about food.

And here it is. I am talking now strictly from the overall viewpoint of the world food situation. Since 1952, in other words, the world turned the corner from the distribution and the rationing of deficits in food to the beginning of the building up of stockpiles in food on a world basis in 1952. And since 1952 every year since, stockpiles-- I mean, stocks of food in existence over and above the annual requirements of the people of the world-- have been going up. And there's the picture. You notice there that red block shows a terrific jump in this last year.

Naturally, this yellow streaked area here is North America, principally the United States and Canada, where most of the world's food supply is in storage. But this red represents other areas. It represents some increased stocks in Germany. It represents some increased stocks in Italy. It represents increased stocks in Burma, in ~~China~~ Indo China, Burma, and Siam. Practically every country

in the world, either through trade and pulling into reserve in its own country or in the total world supply, has increased stocks of food this year over what it had last year.

So much then for the stock position. We have plenty of it right now. But if you cut all the other food off, it wouldn't last the world very long. But the important thing is that these stocks have been rising.

Another thing, that is pretty important to the agrarian side of the world with this political unrest, is that as these stocks have gone up, prices have gone down. Presumably that would make the consumers happy. It's making the farmers very unhappy, because their incomes are going down, with the cost of production going up. That's true in this country. It's true in Japan. It's true in the farthest stretches of agriculture over the world. Incomes, net incomes, of agriculture are going down.

The other thing is, world prices are going down; and the income which exporting countries get from their agricultural exports is also going down. And international trade in agricultural products is going down. As a matter of fact, it dropped 8 percent last year over the year before. It's 16 percent below in terms of volume, and 23 percent below in 1957 in terms of money from exports. Which means that all of these countries that have such exports are having trouble getting anything out of the things they have.

It's a pretty sound rule that whenever you increase stocks or produce in a normal year somewhere from 2 1/2 to 3 percent more than

the people can eat and the market will absorb, you have declined income. That has held true for the last hundred years. I just checked it.

(Chart 14) This is an attempt to try to show you quickly, maybe just give you kind of a visual image, of where these increases are and where the expansion is going. This is annual gain or loss in production versus population. You will notice that you had a loss of over one percent in the black area. That's over there in some of the Scandinavian countries and up in that area. This 9.9 percent to 1 percent, of course, gives you the increase. That's those gray areas up here in Canada and back over here in the Orient. And there's reason for this. This drought caused a situation over here in Canada, and there's been primarily a designed program of holding down production.

From .1 percent to plus one, of course, is this great yellow area there, which includes the United States. In other words, we are gaining on the population increase by that much annually. On down below there is the darker ^{1.1 to} _{to} 2 percent, 2.1/3 percent, and more than 3 percent. That's the red part. That's the Russian bloc. It does not include China in those statistics.

This seems to be a rather significant thing. For at least seven or eight years after World War II, the Communist bloc seemed to be falling behind. Its production was lagging against population increase and returning to prewar times. Within the past two or three years there's been a little explosion in production in this Soviet area. You see, right here they're increasing more than 3 percent--the red.

(Chart 15) Here are some figures. I don't expect you to even read them or try to remember them. This puts it in a statistical context here. It shows the average annual growth of ^{agricultural} production pitted against the growth of population. You see up here in this Western Europe, North America, and Oceania you have the principal areas of English-speaking part of the world and Western Europe. You see your production in 1948 and 1952 to 1953 and 1955 is 2.7; 1958, 1.7; and then your population increase in this same period back there was 1.2. Notice that your production was way ahead in your '48, '53, '53, '56. And over here in this last column it ~~gives~~ gives you 1.2. You are still ahead, even in this western area, where there are attempts to hold down production going on with the population versus production.

On down here you take Latin American, your Far East, the Near East, and Africa. You see that your picture here, with all of the reasons, you have a 2 percent annual increase in production rate, and a 1.6 annual increase of population rate. And that indicates that, with all of the scares that we have had from the population demographers at the present time, that population is going to outrun production, that at least of now--and I'm predicting that as of the next 50 years--you're going to be able to keep ahead of population growth in this category.

(Chart 16) This will give you a little closer view and a little closer look. This is per capita. The other one dealt with the ^{rate of} increase of production versus population. Here it brings it down to per capita. Here was the average there of '48, '49, ~~production~~ and so forth.

Here is 1959 preliminary. And look at our friend Russia over there 122 percent, in ~~with~~ all of the agricultural products, which includes rubber, copra, coffee, cocoa, and all of those things, thrown into this area.

Down here, of course, is for food products only, which is our concern here. That gives you 103 percent, 23 percent for Russian and Western Europe; and the total of all of them 106 percent versus 94.

So you have on a per capita basis worldwide, but also remember that most of the surplus is in the United States, but the big increase in agricultural production versus population is not necessarily in the United States. That gives you at least a picture of what we're talking about in the present-day world, and particularly with special emphasis on the Soviet bloc in this business of food.

(Chart 17) This is a final slide. This was made in 1954, and it's just as good today as it was then, because the general pattern of agricultural trade hasn't varied very much, that is, with reference to where it comes from and where it is going, and only in percentages and volumes.

The black lines represent exports from the red area, and the black dots represent exports from the areas to the red area. You notice here that the width of those lines is representative of the volume of agricultural products to the red areas where they're going.

Notice that there is an increasing market in the Orient. Practically no agricultural products except cotton went to the Orient, except under a condition when you had famine or something in some of the countries there. No grains or other food products went prior to World War II to amount to anything. But now there is a tremendous volume of grain products going into the Orient along with the cotton and the traditional fiber crops.

In this business of trade, of course, the big question arises-- and I'd like to have an overlay on that to show you where the Soviet trade is coming right into these areas. Down in Cuba the other day they bought 300,000 tons of sugar, which was an unheard of situation. The big point about the Soviet handling of these things and the Soviet penetration is that she does not grant aid to a country. She sells the country the stuff and takes whatever the country has. That gives a sense of independence, gives a sense of no strings attached; and, whether we like it or not, apparently some of the countries like it. Although they have had some trouble with their agreements, this is one of the things which is rather rough in the present-day world so far as this business of trade. In my opinion, the great offensive of the Russian bloc is going to be in this area of trade; and I think we're just going to find ourselves with a real tussle not only on agricultural products, but industrial products and so forth.

We'll talk now for the next three or four minutes--I haven't got time to go into American food policy in relation to this. I merely

want to say that we are the country that has surpluses. We have them in tremendous volume. We have the Mutual Security Act, called P. L. 480, which has to do with the disposition of these surpluses, presumably to increase American trade and for humanitarian purposes. We have disposed of on the average a billion to a billion and a quarter dollars worth of these products each year over the last five years. We are set up to handle about a billion to a billion and a half in the next year. We have a great many high-sounding phrases that have to do with food for peace. And I sincerely believe that food, used properly, can be a tremendous force for peace. Take these new nations that are struggling to get themselves in some sort of order. If we could supply those that need it ^{with food} on a long-term basis, until they can get their own economy straightened to take care of themselves, I think it would add greatly to the political stability of this country.

I don't have very much faith in all these slogans we hear, because we talk one thing and do another. The actual fact is that we are looking for holes to dump food in. We don't give a darn what hole it is or who it hurts. And this is creating some ruptures in our relations with some of our friendly nations. It is in effect, and we can lay it squarely at our door, disturbing and breaking up the normal trade patterns and economic patterns and things of that kind. We could talk that at great length. I think I could give you some facts and figures that might indicate that there is not quite as much humanitarianism behind this food for peace or this getting rid of surpluses as we like

to brag.

A good case in point, which happened within the last ten days, is this: For a number of years the United States has supplied UNICEF, CARE, and/a number of other organizations and some countries with powdered milk. But ten days ago we woke up over in Agriculture to find out that we only had two million pounds left of powdered milk. And so we had to announce to the world that we would not be able to supply the powdered milk for these programs that we have sponsored and that have been going on all over the world. And these countries that have been getting the milk haven't got the money to go into the world market and buy it. They can't afford it. They have developed a dependency on this stuff, the kids like it, and now they can't get it; and they're going to be just a little unhappy.

All I'm trying to say is that, if we are really sincere and mean what we're talking about, we will, as a part of our foreign policy, as a part of our agricultural policy in this country, as a part of this total position that we have placed ourselves in before the world, use this dirty word that people don't like to use, called "planning" and we will plan our agriculture to do these things we say we're doing on a humanitarian basis and on a policy basis because it's the thing to do from this national standpoint rather than to get rid of ~~the~~ ^{some} stuff we can't eat.

I thank you.

CAPT. BURKY: Gentlemen, Mr. Andrews is ready for your

questions.

QUESTION: I see where Russia has a Seven Year Plan to try to increase agriculture by 70 percent. That's a terrific increase. First, do you think they're going to reach their goals? Second, if they reach their goals, what impact will it have on the rest of the world?

MR. ANDREWS: Well, frankly, we can all set goals and we can all set big objectives. I doubt whether Russia will reach it; but if she reaches half of it, it's been a tremendous accomplishment.

The impact of that will be simply this: An increase of 35 percent in seven years will go considerably beyond the immediate needs of Russia and particularly the Balkan bloc. It simply means that you're going to find Russia walking into Western Europe. You're going to see pressures on the part of Russia to open up the east-west trade. And in my honest opinion I think this is a part of the general present drive of the Russians to talk in terms of trade and want to get things in the United States off of the restricted list and all of that sort of business. The exchange of trade I think is very definitely coming, and the way they operate, it can get pretty rough if we operate in our traditional way.

QUESTION: I think the College certainly owes you a debt and in compensation should provide you with some nice new slides. My question is about these stockpiles that we have in this country. We have heard that we spend maybe two or three million dollars a day to

keep all these stockpiles up. Would you tell us your feelings on how we can get rid of some of these, and what policy we should adopt and what effect it might have in ^{the} a world if we do pass some of these stockpiles out to the under-developed countries?

MR. ANDREWS: Well, that's a good question. In the first place, the cost of keeping this stuff in the warehouses in this country is a billion dollars a year. That's the present-day bill.

This question of stockpiles in other countries has been one that has been debated around the Government here for at least ten years. In 1949 over in Agriculture we undertook at that time to make a deal with India to put a million tons of American wheat in India and just store it there, with India carrying the storage cost, as a food reserve. The deal broke down because India at that time thought that their agricultural drive was going to get them self-sufficient in about five years. And India wouldn't agree to eventually buy that million tons. And so the whole thing collapsed.

Now, I understand that under the present program, which I think is a highly desirable thing, India is going to take about 5 million tons of this food and store it in a warehouse system in India as a food reserve, as a kind of guarantee against drought and things of that kind. It doesn't necessarily say that India is going to use it.

We had the same sort of thing for Europe at one time at the beginning of NATO. We thought, well, one of the things you've got to have in the event of a war is food in Europe. You've just got to have it.

Certainly you could circumvent the submarine threat and a lot of other things by just storing these ^{surpluses} ~~things~~ in Europe. But what you got into there was that nearly all of those countries were driving to get themselves more self-sufficient. You take France. France, which is a country that's in perpetual trouble when you get into a war, have a fantastic potential for their own production. The same way with Italy, the same way with Germany, and so forth.

And so these countries were a little reluctant. You see, you get back to peace time and commercialism and all this sort of thing. You put a stockpile of a million tons of wheat in the middle of Europe, and even though you say that you're not going to sell it except in emergencies, it is a weight on that market; and, of course, farmers get awfully unhappy when the market goes down. And so you have all kinds of things like that.

Now, I feel that to the extent that we can do this, it's the most sensible thing that we've done in a long time.

You talk about how we're going to get rid of the surplus in this country. The only way in the world you are going to get rid of surpluses in this country is to quit producing them. What we've done here, we've spent an average of about a billion five on this give-away and ~~and~~ up to three or four billion on other ways of getting food out of this country in the last five years; and we have twice as much food in storage as we had the day we started. And so you just can't go on and produce it and fill these warehouses up just as fast as you empty them.

If anybody says: "Well, there's a point where farmers can't produce" don't kid yourselves. The production potential of this country that we know about is just fantastic. It's just fantastic. I don't know when we're going to face up to it. But the only way to get rid of surpluses is to quit producing them.

Now, I think that if we could keep 3 million bales of cotton, 500 million bushels of wheat, soybeans, rice, powdered milk, butter, things of that kind in a revolving storage as a perpetual reserve, we ought to do it. There's just as much sense to that as there is to stockpile minerals and to stockpile airplanes. It's just as essential. But there's no need to go crazy with it.

QUESTION: Recently I read an article that Cal Tech has devised a new compound which could be used to grow the winter grains in tropical areas in a very short period of time. Are you aware of this and would you comment on it?

MR. ANDREWS: I'm aware of it. I think it's a little gimmicky. But it is true that you can grow a temperate zone grain in tropical areas. The point that I want to make is, Why is it necessary to do that, for this reason: You see, rice, which is a tropical thing, which can be grown in the temperate zone but does best in a highly wet climate and a warm climate, will produce the greatest number of calories per acre of any crop. That's the reason they grow it so much in the Orient. So if you're talking about energy into a population, and not talking about steaks and cherry pie for breakfast and that sort of thing, why shift

when rice does the job?

Now, I may be very foolish on that, but if you're going to get right down to business now, if you're going to talk about world survival from a food standpoint, then what you talk about is food energy that goes into the human being, not necessarily the ~~steaks~~ ^{steaks} that I like and the broiled chicken that I like, but the calories that go into making that chicken. And you will find, for instance, that in our country here the calories that we get out of our diet of good vegetables, fruits, and all these other things which we like, cost in terms of directly produced calories on the soil about 8900 calories.

In other words, what I'm trying to say is this: When you produce 2000 calories through chickens and pigs and cows, you consume ^{the equivalent of} 8900 calories of directly consumed food to do it. While we in this country emphasize the processing type of agriculture, that is, the agriculture which feeds grain through something and makes something else, the human race actually is getting away from that and going more to a directly consumed food intake, that is, rice as it's grown, wheat as it's grown, soybeans as they're grown, and so forth and so forth. And so if you're looking at mere survival, my God, the sky's the limit.

Here's one other thing I want to bring out. It has to do again with this map of 20 industrial nations. There is a theory, for which there is great fact to ^{base} ~~base~~ it on, that a western type of economy can only be developed by a new country, no matter where it is, to the extent that the total energy put into the population steadily increases.

In other words, the food energy has got to go up in places like India if you get the labor and skills and energies and the alertness to handle the western type of civilization.

Also energy has got to be produced from coal or from water and atomic or whatever it is, in order to supplement that human energy. So you talk in terms of the economic and social development of a country in terms of the total energy; and the total energy is involved in this business of food which goes into the human being.

QUESTION: Do you think this is going to affect the food situation in this country?

MR. ANDREWS: No. Not materially. And the simple ~~ANSWER~~ answer is this: You see, all these things, just like hydroponics-- you can produce tomatoes without a stitch of soil, but they're pretty damn costly. This whole food problem is involved with what you're willing to pay for it in the situation which arises requiring that.

I think one of the greatest outlets for science and study is to use these what they call lateral soils that are in the Orient and in Africa and other places with great vegetation on them, to find the mineral and chemical supplements to put into that soil that will make it grow food abundantly. That can be done, but it will cost money to do it. In other words, it may be better to produce the wheat or the product in a temperate zone and haul it there than to haul the chemicals and materials down to those places, which is what they're really getting at, you see. They are putting the chemicals into this soil or into this

situation which will make these things grow.

That is still a pretty unknown area. For instance, in Siam, in the old Point Four Administration we got to experimenting with how you could improve the edible quality of grass in Siam. We thought, as is the case in this country, that you could put ammonium sulphate or a few minerals on it and produce a grass there that will produce pounds rather than bloat. Most of the time they can just eat a ton of that grass and just get up and blow up; they don't get fat. But we found that wouldn't work; that plain old ammonium sulphate and some of these ^{wouldn't make} things ~~work like~~ elephant grass, for instance, with more nutrient that made fat and milk in an animal. But there are things that do that, and these people are probably getting right at the thing. There's a tremendous area there.

If you want to get theoretical, if you use these soils that are available, if you find a way of using them, you could support a population on this earth in terms of food of about 50 billion people. Of course that's like these ~~statisticians~~ statisticians do, you know--start with a base and run the curve on up.

QUESTION: I gathered from what I read that the Russian food production that they're planning, this great increase, ~~depends on~~ depends upon raising a lot of food on virgin lands. One, do you think that Khrushchev is going to have any more success working this virgin land, which I'm beginning to find out is not so virgin because they tried it once before? Is there something coming in agriculture that gives him

reason to think that he'll be successful this time?

MR. ANDREWS: Well, you can. There are some things that you can do on this that will help.

For instance, this is something we did out in Turkey: There is a weather cycle, and except in the absolute desert there is always some moisture that falls at some time of the year in nearly all of these countries, in Siberia, in the Anatolia plain of Turkey, even in Jordan in the Middle East; and by getting varieties of wheat or corn or oats or barley--barley is an awfully important one--that will mature, that and you plant at a specific time/that will mature within a rather rigid and specific area, and by really scientifically pacing that, you can overcome a great deal of this drought hazard.

It's always going to be there, but on a seven-year cycle, for instance, you'll find that the ^{drought}~~drought~~ will catch you maybe less than two years. If you go back to the Bible, as they are down in Jordan right now, and store the bounty years for the lean years, you've got the thing made there. Jordan, for instance, has through a system of storage--that little old country that's right there in a desert--virtually stabilizes its economy, I mean, the running economy of that country, with this system of storing the bountiful harvests in storage places and feeding this out in a drought year, and not exporting any wheat. They used to export in bountiful years and had to import in unbountiful years. But they've pretty well balanced it out.

QUESTION: You mentioned that these recipient countries had a

a better feeling when they got a program of sale by barter rather than an outright grant. If we went into such a program, wouldn't we have trouble with quality? I'm thinking of such things as powdered eggs and some of the ^{junk} ~~things~~ that we've got in the stockpile.

MR. ANDREWS: Well, I don't know. I don't know what you can do about this. It's pretty hard to comment on what you say because I've been on both ends of this deal.

I do know that the Department of Agriculture shipped us in Western Germany some cotton that wouldn't even make mouse nests. I protested like hell about paying for cotton when they didn't really get cotton. But they were giving it to us, you know; and even though the Germans didn't know it--the Germans had to pay marks for that, and you weren't giving the Germans a thing. You weren't giving the German individuals--I'm talking now in terms of people--you are not giving the German people a thing ^{when} ~~when~~ that fellow has to walk up with his currency and buy this, you see.

Some of our soybeans that went over there--you see, there's a tolerance arrangement by international trade and trade in this country ~~there's a~~ where by there can only be so much trash in a sack or car load or cargo of soybeans. And so you had one of the great exporting companies-- a good outfit--that had some very clean soybeans. And so they sold them, but to be sure that they got everything just right, they dumped several tons of trash right in on top of them and brought this tolerance up, you see, to the international tolerance. That's trade.

That's sharp practice. That's business and all these things. But it made us look pretty sick when the Hungarian Trading Corporation, that was handling the Chinese Manchurian soybeans for Russia, shipped this stuff right in against ours, and the stuff was almost hand-picked. There wasn't a bit of trash in it. It made us look awful bad, awful sick.

You do have those problems. I actually don't know how to say you should go at it. But the truth is that countries would not pay hard cash for a lot of this stuff that we're sending out. Let's be honest.

QUESTION: My question has been partly answered by another answer you gave, but you indicated that the population and the food supply are pretty well balanced for the next fifty years. I have read in some of these research books that we are reading that in order to bring the world population up to just a practically ~~statistical~~ ^{subsistence} level of nutrition would require about a 25 percent increase in agricultural production worldwide right now. That's just to get us to a starting point, and from there on, of course, you have this population increase. I wondered if in your evaluation of this balance between the two if that is so.

MR. ANDREWS: No. You're talking a pretty realistic point. But, ~~xxx~~, you see, what you're doing there, you're setting up a theoretical base for your calary intake, and you are also putting into that kinds of food. There is what we call preventive foods, we call them the fat foods, and things of that kind versus the carbohydrates. What you say

is true if you give everybody in the world a desirable diet, which would include your cereals, which would include plenty of fats, would include your yellow vegetable stuff, and your fruit juices, and your milk, and all that sort of thing. That point is valid. That's a valid point.

But the question is, it gets around to the practical ways of doing that. You try, for instance, to literally force into India the amount of wheat and the amount of milk and the amount of other things that would bring their diet up to that and you would see what happens to Indian agriculture and Indian politics. They have farmers too. Sixty to eighty percent of the people depend on the soil in ~~the world~~ these little things like that. It's a great ideal. It's worth fighting for. Goodness knows it is. But the real practical achievement of that is a fantastic thing, which will take place, if it takes place at all, over a very long period of time.

One of our problems, I think, in all of our approaches to things is that we want to do it now and go on and drive our automobile up to them. We don't want to take the patience and the time it takes to do that. We want to sign a piece of paper and ship a few cargoes and say it's done and it isn't. There's a whole social attitude change that has to take place.

I made a talk out in Iowa to a farmers' forum the other day and a guy got up in the audience and one of his proposals for our food problems, and also one of his proposals for taking care of the surplus, was to ship brood sows to these twenty countries I've been talking about here.

and then ship them the corn to feed the brood sows so the people can have a meat diet. Of course you could get rid of a lot of corn that way, because it takes seven corn calories to make one meat calory in that business.

Well, again, by statistics you could figure that you would get rid of this corn surplus that you've got. But the point is, most of the people don't eat meat. The people say in the Middle East that to eat pig meat is completely against their religion and it casts them to the outer spaces and all sorts of things.

And so you've got to change the whole attitude. Take in India, you don't dare feed a Brahmin, no one except the untouchables, meat. The only people who eat meat in India are the untouchables, and they're so low that nothing matters anyhow. So what I'm trying to get at is, you have all these things. You've got to have a complete social and religious attitude change. And those are hard to do. You can say the same thing about Burma and all over the place. I don't want to be so negative; but, damn it, that's the way the world is right now.

QUESTION: Mr. Andrews, you stated that the answer to your surplus problem was to cease production. Do you have any recommendation of how to do this?

MR. ANDREWS: Well, you've got yourself in for trouble on that. I could be awfully wrong, but I'm never in doubt.

Well, it isn't as simple as I'm going to make it. But if we really wanted, if we really wanted to get right down to business, if we really

wanted as a nation to handle and take care of this surplus situation, you could do it relatively easily if you are willing to use the power of government and can get away with it and do it. It's very simple. Just tell anybody: "You can produce all the stuff you want to produce but you're only going to sell so much." And that's it. You would soon lose enthusiasm for producing stuff that you couldn't sell. You would quit buying fertilizer. You would quit putting in extra experts. You would produce what you could sell. And the chances are you would get along pretty well.

Now, that's being done in some crops. I happen to be a very small citrus grower. In Texas we have recently organized a mutual down there. We're saying to ourselves, we're going to leave this stuff on the trees beyond a certain point and plough it ~~up~~ ^{under.} We're just going to control it. We're going to control the stuff going out of that valley. You're going to put on the market the things that you can sell at a decent price and let the rest lay on the ground. That's being done pretty well with citrus. The amount of citrus that goes into New York is being absolutely controlled by the California citrus growers. It isn't a complete, airtight system, because you have a lot of people outside the citrus growers, just as we'll have a lot of people outside the Texas mutual. But you'll control enough of it that you can get a decent market price for this stuff and you can plough under and get rid of the stuff that you can't sell, and a lot of it you oughtn't to sell.

That's pretty well true everywhere. You can do this pretty well on wheat. You see, you can take in the case of wheat, in the case of cotton, practically any product, and you could absolutely control the movement through the market. Of course the Supreme Court might knock you out on a constitutional case or something like that, but you can sure as hell try it.

QUESTION: Mr. Andrews, in addition to these other things I notice that you have been associated with the international sugar agreements. It's my understanding that we have imposed certain restrictions on the production by our own/sugar producers, the farmers who are planting sugar, and at the same time we turn around and contract with Cuba for a considerable portion of her annual sugar crop or production and pay them twice the world market price for it. Would you explain this?

MR. ANDREWS: Well, in the first place, we can produce sugar in the United States, but we cannot produce sugar as cheaply as Cuba can. That's just it. While we can produce sugar, and can produce good sugar--and I'm sure that our farmers would find a way to produce a hell of a lot more of it if they could get 4 or 5 cents a pound for it. But a lot of people feel that it's to the international interest, to our own international interest as a part of this world that we live in, to take at least a reasonable amount of products from countries that can produce better and that are our natural trade. In other words, we sell Cuba rice and all kinds of stuff. In other words, this money that we are allegedly giving to Cuba comes right back to us.

At least the logic, if you want to call it logic, of this twice the world price of sugar we give to Cuba is this: You see, in this country when John Jones out here in Louisiana produces a ton of sugar, he is given the difference between the cost that it takes to get Cuban sugar in here and a theoretical cost of the production of sugar in the United States. That's a subsidy that you don't hear Mr. Benson talking much about. You see, that's been going on here for many, many years. And it's a highly successful balancing out of this business of encouraging production and keeping the American farmer in production.

Of course, if you really want to do it in the so-called freedom context, you would just take out all these barriers and let the Cuban sugar come in here at about two cents a pound; but you would wipe out ^{any} the sugar industry in this country. You wouldn't have ~~it~~. But as a part of our national policy we think it's important that at least a part of the sugar that the United States consumes is produced in this country.

So we say that it costs this amount to produce sugar in the United States. We will allow Cuba and other sugar countries into this market at this price because if you put it in low, it would mean we would have to pay our producers more.

Let's say this: I don't know the exact figure. I think we're subsidizing American farm sugar at about 3.5 or 4 cents a pound. That subsidy or that figure is supposed to represent the difference between the price we pay to Cuba and what it costs. But suppose we let Cuban sugar in at 2 cents a pound. We would have to heist the subsidy to

American farmers 2 cents a pound to offset this Cuban sugar.

Really, what you're doing, it's just a question of what pocket you take it out of. You see, the consumer pays it all anyhow. That's really what happens. The Sugar Act, while it's certainly not an ideal sort of thing in the traditional trade economy, in the present-day world is one of the most successful acts that we've had, in doing two things: keeping American consumers supplied with a desirable and a very low cost. The truth of the matter is, the cost of your sugar is one of the biggest calory-producing items in your diet, and it's almost the least-cost item in your diet. And so you are providing the American consumer with the sugar he wants, you are keeping an industry in the United States that from the national standpoint is desirable, and you are affording an outlet for countries which have sugar to sell to come into this country at a decent price to them. And it does afford an outlet for a lot of our industrial goods and other things that those countries buy. Cuba couldn't buy the half billion dollars worth of rice that they buy from this country unless we bought that sugar. There are just no "ifs" and "ands" about it. Maybe that's planned economy and maybe that's rigging economics. I'm not arguing the point, but that's the way it works.

QUESTION: Sir, would you talk for just a minute about the food situation in China?

MR. ANDREWS: China by a forced system has been able to show a very marked increase in their production. But not nearly as much

as they brag about and not nearly as much as they let on, if what I know and what I've read and the investigation I've made on it are true. But you have two things in China that have had a great deal to do with improving the total Chinese situation.

In the first place, they took over Manchuria, you see. Manchuria was the great food basket for Japan. Japan had developed Manchuria tremendously in the years that Japan had it. And so there is a great temperate area with a fantastic potential for food production. Food used to come out of there and go to Japan and it used to be sold all through Japan and all over Europe and all over the place. Now it's all kept in China. And they have built railroads. They are building roads and they are improving the transportation. They are moving some of that Manchurian food back into areas that used to have perpetual famines.

The other thing is that, whether we like to say it or not, although it was started by the West, and started, incidentally, pretty much through the UNRRA organization that worked here during the war in China, they have done a remarkable job of cutting out or at least holding down the disasters from floods on the great rivers; and they're using the water of the great rivers to a remarkable degree, in a remarkably short time, in the use of increased food production. So they are increasing; and, believe it or not, they are going to export some food.

Now, again, it will not be, as I told you a while ago, necessarily because China has all they can eat and they have a good diet; but it's

to their political interest and to their exchange interest and a lot of other things to get rid of some of that food. And the Commies have never hesitated to make people tighten up their belts in order to have something to ship out.

So I would say that you don't want to laugh off this Chinese food production. I don't think they'll ever catch up with the population increase. I think one of the things that is going on right now in China is this: You see, they changed the policy on birth control. When the Commies started in there, they were going to try to hold that population down. For some reason, political or otherwise, they've turned it loose. They're not trying now to do anything to control the births or anything of that kind. And I have an idea that this explosion or this pressure into Tibet and into Kashmir and into this Indo China area that we were looking at, is an attempt to get elbow room and space for those people.

I think if you want to talk about danger in the food situation in relation to an explosion in one of these years ahead, it's going to be right in this China area, and it's going to be an explosion just like Japan made excuses for prior to World War II. It's elbow room to feed those populations. The plains of Tibet would absorb a lot of Chinamen, and I think, frankly, that that's where they're going-- all through there and they're going to move out. If they could get into the Indo China area, it's fantastic the population they could take care of in terms of food. And I think again--and these are all opinions,

and you could argue with them both sides--but I think that there, after you get this German settlement kind of worked out, you want to watch this China situation. I think that's going to be even worse than Russia.

CAPT. BURKY: Mr. Andrews, on behalf of the College, I want to thank you for a wonderful morning and for sharing with us a little bit of your vast knowledge of the food problem.

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