

EIRSpecialReport

The deepening crisis in world food production

by Christopher White

At this moment about two-thirds of the world's population, rather more than 2 billion people, are living on a desperate border-line between life and death. They suffer from chronic under-nourishment in energy-dense, protein-rich forms of food, such as meats and dairy products. They are forced to depend for subsistence, from day to day, on hand-out levels of grains, including rice, and on root and tuber crops.

At the same time, we have been told for the last three years, if not longer, that the only problem facing the world's farmers is chronic over-production of basic foodstuffs, which depresses markets and prices. Those who retail this murderous nonsense include spokesmen for the leading grain companies, like Cargill, Continental, and André, which control the major part of the world's woefully inadequate food supplies. They have demanded that production of vital foodstuffs be decreased in the advanced-sector countries. And their demands have been heard by officials in U.S. government departments—such as the Department of Agriculture under Daniel Amstutz—who have acted to reduce production of grains, meats, dairy products, and fruits, to the point that advanced-sector nations, including the United States, are on the verge of food shortages.

These same interests ally with the World Bank, the International Monetary Fund, the "small is beautiful" crowd around the United Nations and its agencies, to insist that so-called developing sector nations eliminate modern technology-based approaches to food production, in favor of labor-intensive subsistence agriculture.

These people argue that the problem is not under-production of food, but over-production of people. They retread the old nonsense of Parson Malthus, that world population growth outruns the world's capacity to produce food, and that the human population must therefore be reduced.

The combination of destruction of advanced-sector productive capabilities, in agriculture and the industries which support agriculture, with an imperial-style veto on the development of food production capabilities outside the advanced sector, means that people do not eat. If people do not eat, they die. This is what



The Malthusians have ordained that "Third World" countries be kept backward, relying on subsistence agriculture instead of gaining access to the most advanced agricultural technologies. Here, Indian women transplant rice, stalk by stalk.

USDA

the neo-Malthusians ordained when they issued the commandment, "Thou shalt not eat."

We have reached the point where this policy, on the global level, must be changed, or else we face disaster on a scale unparalleled in human history. We have to decide to do something very simple, to enable people to eat at the level we here in the United States take for granted. Together with our allies in especially Western Europe and Ibero-America, we can do this. And if we mobilize our populations, as if for war, to do it, we can begin to turn the potential disaster around very quickly. But we do not have very long to bring about the necessary changes.

Who is allowed to eat?

Figure 1 shows the average daily food consumption per capita, of individuals in different regions of the world, measured in ounces. This will perhaps make more sensuous than protein or calorie intake counts could, how much and what the world's population are eating.

First, contrast the crude totals consumed. The advanced-sector nations consume approximately 50 ounces per diem of the different elements of the commodity basket, on average. The populations of the developing nations consume amounts ranging from Asia's 28 ounces of the foodstuffs counted here, on a daily basis, to Africa's 34 ounces, and Ibero-America's 37 ounces.

The composition of these daily diet sheets shows that we have basically two kinds of people in the world: those who are able to eat meat and dairy products, and those who are not (see Figure 2). Forty-five percent of the daily consump-

tion of a North American is made up of meat and milk products. For the Ibero-American, this ratio is 25%. For the inhabitant of Africa and Asia, it is about 11%. Averages are misleading, of course, but here we see that most of the world's population does not see a piece of meat, or even milk, but is instead dependent on cereals and roots for 40% of its daily diet in the case of Ibero-America, and 60% in the case of Africa and Asia.

At these levels, Africa is already dying. And at these levels of crude approximation, we see that Asia is condemned, and the continent of Ibero-America is third in line.

FIGURE 1
Daily food consumption
(in ounces per capita)

	meat*	milk	cereals	fruits and vegetables	roots and tubers
North America	10.7	14.3	6.6	18.2	5.4
Western Europe	7.6	10.7	7.1	17.8	6.8
Eastern Europe	5.7	12.4	13.1	14.7	9.3
Ibero-America	3.7	5.6	10.7	12.0	5.1
Africa	1.6	2.3	12.0	8.3	10.0
Southwest Asia	2.8	5.5	16.5	21.3	2.7
Asia**	0.7	2.6	14.6	8.3	2.4
Oceania	9.0	13.6	7.5	13.4	5.3

*Meat refers to meat of all kinds. Milk refers to cow milk and derived products such as butter and cheese. Cereals include rice. Roots and tubers include potatoes for North America, yams and sweet potatoes for Ibero-America, and cassava and manioc for Africa.

**China is not included in these or any of the following figures.

FIGURE 2

Daily food consumption

(percent of diet)

	meat*	milk	cereals	fruit and vegetables	roots and tubers
North America	19.3	25.9	11.9	32.9	9.8
Western Europe	15.2	21.4	14.2	35.6	13.6
Eastern Europe	10.3	22.5	23.7	26.6	16.8
Ibero-America	9.9	15.0	28.8	32.3	13.7
Africa	4.6	6.7	35.0	24.2	29.2
Southwest Asia	5.7	11.2	33.8	43.6	5.5
Asia**	2.4	9.0	51.0	29.0	8.3
Oceania	18.4	27.8	15.3	27.4	10.8

*Meat refers to meat of all kinds. Milk refers to cow milk and derived products such as butter and cheese. Cereals include rice. Roots and tubers include potatoes for North America, yams and sweet potatoes for Ibero-America, and cassava and manioc for Africa.

**China is not included in these or any of the following figures.

Millions, we are told, will be dead in Ethiopia by the end of the year, unless we do something now. We are also told, by NBC and the BBC, that other parts of Africa and the world will follow into the holocaust that is now unfolding in the Horn of Africa. But what are we to do? The liberals say, "send relief," "send food aid," and then attempt to turn us into a television-age equivalent of the audience in a Roman imperial arena, as we watch the "poor people" die. What about the rest of Africa? What about the rest of the world? Are we to watch two-thirds of the world population waste away through mal- and under-nutrition?

If the continent-wide consumption picture is broken down into smaller regions, three levels of crisis in world food consumption can be determined.

First, those of the world population, for whom the question of life and death is now posed, because they cannot eat.

This list includes the whole of the African continent, except for the population of the Mediterranean littoral, and, perhaps, the white minority of the southern part of the continent. The number of human beings directly affected amounts to 450 million.

Second, those of the world's population who are on the verge of the descent into the kind of horror that now exists in Africa.

This list includes populations in the following regions: Southeast Asia and Indonesia, countries of the Andean region, such as Peru and Bolivia, Central America and the Caribbean, and perhaps Brazil. Populations in this threatened category total 650 million.

Third, those regions of the developing sector which will descend into category two sooner rather than later, if present policies are not changed.

This list includes the nations of the Indian Subcontinent, Mediterranean Africa, and Mexico. The total number of people thus threatened amounts to over 1 billion (see Figure 3).

The listing, not accidentally, corresponds to a division of the world into a "Third" and "Fourth" world, made by Robert McNamara during his tenure at the World Bank about 10 years ago. The "Fourth World" was to be left to die. And so it has been. Meanwhile, what McNamara and his friends called the "Third World" has been pushed down.

Within Africa, NBC shows us the plight of the largely nomadic, cattle-raising population, which inhabits the belt of land just south of the Sahara across to the Atlantic coast. This population includes that of the Sahel. NBC does not report on the emerging catastrophe among the populations dwelling at below subsistence levels on the rest of the continent, where per capita production of the staple cereals and roots has declined by between 20% and 30% in the period since 1968.

Nor does NBC report that major parts of Asia subsist with levels of meat and milk consumption that are lower than in Africa, although they have twice as much grain. Nor that parts of Ibero-America, within Brazil and the Andean region, are as dependent as Africa on consumption of roots, and that per capita consumption has been collapsing at African rates. Nor that cereal production in per capita terms in parts of the Andean region and Central America can only be compared with the worst of Africa. Nor that, as in the case of India, it is primarily the availability of buffalo milk and fruit which has kept such populations just above the survival line.

The food weapon

During the recently concluded U.S. electoral campaign, Lyndon LaRouche and Billy Davis warned that Walter Mondale's campaign, insofar as food policy was concerned, was a front for institutions and individuals who had put together a master plan for global starvation, directed primarily against peoples of black, brown, and yellow skin. LaRouche and

FIGURE 3

The danger lists

LEVEL 1

Northeast Africa, East Africa, Sahel, West Africa, Nigeria, Central Africa, Southwest Africa, Southern Africa. **Population affected:** 450 million; 12.5% of world population, excluding China.

LEVEL 2

Southeast Asia, Indonesia, Andes, Brazil, Central America, Caribbean. **Population threatened:** 656 million; 18.25% of world population, excluding China.

LEVEL 3

Mediterranean Africa, India, Indian Subcontinent except India, Mexico. **Population threatened:** 1,074.3 million; 30% of world population, excluding China.



Of the world's 200 million cows, it would only take 90 million to produce all the world needs, if the cows were as productive as American herds.

Davis also charged that those institutions and individuals, among them Orville Freeman (agriculture secretary under the Kennedy administration), were running the food and agricultural policy of the first Reagan administration for the same purpose. Freeman, who is connected to the major grain companies, had prepared the policy which guided, in particular, the foreign economic policy of the State Department, the Agency for International Development, and the Foreign Agricultural Service of the Department of Agriculture, from his position as Chairman of Business International, and his years' long relationship with the major grain-trading companies.

The policy is known as the use of "food as a weapon." Countries and whole continents are simply told, "if you do not do what Freeman and his friends among the grain companies insist, then you get no food from the United States." Major U.S. allies in the so-called developing sector are kept on a string with supplies of grains limited to what is necessary for several days' consumption—and no more. For such countries, which are not allowed to produce for themselves, or produce enough, food from the United States is the margin needed for survival.

Now Freeman has been appointed chairman of the Joint Agricultural Commission, a body representing private inter-

ests—that is, the grain companies—which advises government agencies on food policy. The man who represents the interests which have planned the death through starvation of hundreds of millions of people has been, in effect, appointed chief of U.S. food policy.

This has got to be changed. We need a policy for food as part of a republican foreign policy. Instead of starving, or merely blackmailing, continents, countries, and peoples, let's simply do what we have the capability to do, and what far too many people need. Let's provide the food.

The food the world needs

Why should meat and dairy products be the privilege of a relative handful of the world population? It has been proven in scientific studies, for example those of the Fusion Energy Foundation, that there is a correlation between the absence of meat sources of protein in the diet and malfunctions of metabolism, including of the immune system. We have been told for years that eating meat and dairy products causes heart attacks and obesity, but actually the reverse is the case. Meat and dairy products are a necessary part of a healthy diet, and therefore of the capacity to lead a productive life. In Western civilization, this has been recognized since the time of the

Golden Florentine Renaissance, when Lorenzo de Medici developed a fine herd of livestock in the hills of Tuscany, and the circle of republicans around Leonardo da Vinci produced a cut of steak known now as the T-bone.

Why don't we attack this problem directly? It is obvious from the pattern of world consumption shortfalls that what we really lack are meat and dairy products. If we determined to close those gaps, by bringing the world level up to the U.S. level, for example, it should be obvious that the increased grain production required to accomplish the objective would cover whatever grain shortfalls there may presently be.

Why don't we apply the technology that has put men on the moon to solve this problem of hunger? Between Ibero-America, Western Europe, and the United States, we could resolve to produce the protein the world requires. We should produce poultry, rabbits, fish, pork, and beef to fill the gap. The produce could be prepared NASA-style according to specifications for those whose digestive capabilities have been impaired by malnutrition. Prepared foods, high in protein content, could be irradiated to solve problems associated with decay, and shipped where needed in boilable bags, like a Stouffers frozen dinner, but not frozen. This would ease problems with transportation, help solve problems with stor-

age, and simplify, on an emergency basis, the problems associated with the preparation of food, in areas which lack the technological capabilities taken for granted in the advanced sector.

Something like this approach has to be undertaken for two reasons. First, the infrastructure capabilities do not exist outside the advanced-sector countries to permit the scale of improvements necessary to close the gap that already exists. Chicken, hog, and fish production could be increased rapidly, but to do so requires the basic stuff of a functioning industrial economy already in place, in terms of transportation and storage, energy requirements, availability of feed, and so forth. Second, this kind of crash effort from outside the Third World countries would free up resources within those countries to do the other things that have to be done, if one is thinking of what the world will be like in 25 to 50 years' time. And unless we begin to solve this problem now, there will not be a world worth thinking about at all, within that time frame.

Figures 4 and 5 show the amount of meat and milk that is required to bring world levels, with the exception of China, up to the 10.7 ounces of meat and 14 ounces of milk per capita that is consumed daily in the United States. The continental regions are ordered in terms of priority requirements. On the basis of such a standard, the world requires about 370 million metric tons of meat per annum, or almost 500 million metric tons, if China is included. Present annual consumption of meat worldwide is at one-fifth of that amount.

To bring world milk consumption up to U.S. daily levels would require about 440 million metric tons, against present annual consumption of 60 million metric tons. However, milk is produced at levels far in excess of what is consumed by human beings. The production level worldwide is at about 410 million metric tons. This is only a 15% shortfall from the level required to have everyone drinking milk in the way we in the United States are accustomed to. The milk is just in the wrong places and in the wrong form.

Most urgently, Africa needs about 50 million metric tons of meat per annum, about half of present total consumption. Asia, with its huge concentration of population, requires about 155 million tons beyond the 10 million it presently consumes. Similarly, Africa would require 75 million metric tons of milk, against present consumption of 6.7 million metric tons, while Asia needs about 220 million tons, against present consumption levels of 8.9 million tons. Increased meat consumption would improve the health and productive capabilities of the adult population. Increased consumption of milk would simultaneously have a major beneficial impact on the health and life expectancy of the world's children.

If these numbers seem daunting, let's break them down further. As we saw above, we were at 85% of the necessary production level for milk in the world—that is before Amstutz and Agriculture Secretary John Block decided to cut back the U.S. dairy industry, and the European Community

FIGURE 4
Meat requirements to reach U.S. levels of daily consumption
(in millions of metric tons)

	population	meat requirement	actual	deficit
North America	259.1			
Africa	507.7	56.2	8.3	47.8
Asia	1,479.9	165.7	10.7	155.0
Ibero-America	388.6	43.0	14.3	28.7
Southwest Asia	148.2	16.4	4.1	12.3
Eastern Europe	436.7	48.3	26.7	22.7
Western Europe	338.1	37.4	26.5	11.0
TOTALS (without China)	3,835.4	367.0	90.6	277.5

FIGURE 5
Milk requirements to reach U.S. levels

	required million metric tons	actual million metric tons	deficit	dairy cows*
Africa	75.1	6.7	68.3	20.8
Asia	221.5	8.9	212.7	35.3
Ibero-America	57.5	14.8	42.8	35.6
Southwest Asia	21.8	2.5	19.2	10.5
Eastern Europe	64.5	27.2	37.4	57.5
TOTALS	440.4	60.1	380.2	159.7

*millions of head

FIGURE 6

How to fill the meat gap

Beef, pork, and poultry requirements at U.S. proportions of consumption—45%, 26%, and 21%, respectively—to fill the deficit of meat in the world.

	beef	pork	poultry
	— millions of metric tons —		
Africa	21.5	12.4	10.0
Asia	38.75	0.0	116.0
Ibero-America	12.9	7.4	6.0
Southwest Asia	5.5	0.0	6.7
Eastern Europe	10.2	5.9	4.7
Western Europe	4.9	2.8	2.3
TOTALS	93.75	28.5	140.0

began to cut back on production there.

Apart from this kind of political restraint, the limitations on milk production are principally two-fold: How well we are prepared to feed our cows, and how much we are prepared to invest in their health. We have just over 200 million milk-producing cows in the world. In the United States, each of our approximately 12 million cows produces an average of 5.6 metric tons a year. Africa has almost twice as many such cows, but they produce less than one tenth of the amount of milk each in a year. Of the world's more than 200 million dairy herd, it would only take 90 million—that is less than half—to produce all the milk required for everyone to have as much as an average American does today, if those cows could be brought up to the levels of the U.S. dairy herd.

All that's required to do that is to feed the cows and vaccinate them against the diseases to which they are subject. But that requires the development of a modern infrastructure. Therefore, we have to unchain production in North America and Western Europe in particular. We will return to the question of feed requirements to accomplish this, after we have looked at the meat question in more detail.

However, we can note that there is in principle no reason why the world's children should lack the milk that is essential for their physical and mental development.

Requirements for meat

Let us now break down the requirements for meat in the same way (see **Figure 6**). We do not consider here what can be done with rabbits and with farming of fish, both of which have an important part to play in upgrading world meat and protein consumption rapidly. Instead we look at poultry, pig meat, and cattle. In the United States, our meat consumption breaks down into 45% for beef and veal, 26% for pork, and 21% for poultry.

Given the proper feed, in terms of grain and added nutrients, we can produce a broiler chicken of about 4 lbs. in seven weeks. We can take a piglet that weighs 4 lbs. at birth and turn it into a hog with a slaughter weight of 225 lbs. in

five months. For cattle, the feeding cycle is much longer, about 18 months to produce a 1,400 lb. steer. But poultry and hogs are both force-developed in facilities designed and built for the purpose.

If we break down the world meat deficit into the proportions in which we consume different meats here in the United States, and allow for religious or cultural objections to the consumption of pork and beef, we find that we need about 94 million tons of beef, 29 million tons of pork, and about 140 million tons of poultry worldwide (see **Figure 6**). The meat deficit in Africa could be filled with about 22 million metric tons of beef, 12 million metric tons of pork, and 10 million metric tons of poultry. Asia would require much more poultry.

How do these requirements measure up against what we presently produce? We presently slaughter about 220 million head of beef, including veal, to produce about 44 million metric tons of beef and veal globally. The amount of meat produced from each of these animals varies from a high of 0.268 metric tons in North America, to 0.199 metric tons in Ibero-America, or down to 0.141 metric tons for Africa. Worldwide we presently slaughter about 520 million hogs per annum, to produce about 39 million metric tons of pig meat. Again, yields of meat per hog slaughtered are higher in North America than anywhere in the world.

In these two categories of meats, if we again set U.S. levels as the standard for the world, we would have to be slaughtering another 350 million head of beef annually, and about another 400 million hogs. The amount of poultry meat necessary would require a six-fold expansion of production. The increase in hog slaughter would take us 75% above present levels. The beef requirement is a 160% increase.

All of this is within the realm of possibility. For the hogs alone, we could do it by doubling the output of North America and Western Europe. In North America we have a war going on between Canadian and U.S. producers, that's being incited by the grain companies who control feed stocks. They're fighting over a market that is being forcibly shrunk as people are starved. In Europe, advanced production capabilities in Denmark and Holland are being shut down. But

FIGURE 7

Slaughter animals needed worldwide

Million head required at U.S. kill weight—0.268 metric tons per head of beef; 0.07 metric tons per head of pork.

	beef	pork
Africa	80.2	177.0
Asia	144.5	
Ibero-America	48.0	106.0
Southwest Asia	20.5	
Eastern Europe	38.0	84.2
Western Europe	18.3	40.0
TOTALS	350.0	408.0

we need twice as much meat as we are presently producing (see **Figure 7**).

The magnitude of increase required for beef reflects the fact that, led by the United States, advanced-sector nations actually turned their backs on expanding beef production nearly 20 years ago, when Orville Freeman headed the USDA. We in the United States have been kept at zero growth, more or less, in the intervening period. But that doesn't say anything about our capacity to produce beef. It simply says that we have been operating under the constraints of a wrong-headed and murderous policy. As for the poultry production, we simply have to do it.

The constraints here are imposed by animal breeding cycles, health, and of course feed requirements. If we resolve to do something about the latter, we can solve the other problems in the process. **Figure 8** shows how much grain would be required, under present conditions of development of animal husbandry, to produce the increased yields. The total of 2.6 billion extra metric tons of grain includes half a billion tons required as feed for the world's dairy cows. This means more than doubling that portion of present world grain output that is not consumed by human beings.

However, of this total only 100 million tons of corn would be required to produce the full complement of pig meat, while another 300 million tons would be required for the full six-fold increase in poultry production. That is, only 25% of all the grain that is presently produced in the world would meet the requirements of those two categories alone. If the feed for dairy cows were added to this, we would still be at a level less than two-thirds of present total grain production.

In summary, there is a problem of both time and scale in the production of the amount of increased beef required, but everything else can be done, and could actually be done very

quickly if we determine to bring about the changes indicated. We can produce all the meat and all the milk that are required to eliminate malnutrition and starvation. If we can do it, then why don't we?

The political obstacles

Particularly since the assassination of President Kennedy in November 1963, and increasingly since Henry Kissinger's 1972-73 grain deals with the Soviet Union, U.S. food policy has been subordinated to an overall set of agreements concluded between representatives of the Eastern Establishment and the Soviet Union.

Under the terms of those agreements, the threat of Mutually Assured Destruction in atomic warfare was used to shift the entire world in the direction of Malthusian policy. It was argued that nuclear weapons made warfare and technology obsolete, and that therefore progress could be stopped, and human freedom to develop frozen under the permanent threat of thermonuclear annihilation. U.S. food policy and U.S. food production capabilities became a bargaining chip to be used in securing such agreements with the Russians. We would not produce the technology that would permit others to produce food for themselves; instead, we became the biggest grain producer and exporter the world has ever seen. Under those agreements, now under negotiation with the Russians again, we would fill Russian grain deficits, for consumption or strategic stockpile, and dump our balance of production onto other markets at rock-bottom prices.

The existence of such agreements has been proven repeatedly in congressional investigations since 1973.

Not surprisingly, those who have argued most vociferously for what they call arms-control negotiations with the Russians, like Orville Freeman and Walter Mondale, are those whose political careers are often most closely associated with the grain companies and with the Venetian, Swiss, and British financial and insurance interests behind those companies, whose political power has been increased through the implementation of such policies.

As we dumped our surpluses of grain, we destroyed our own farmers, whose costs of production were not covered, and we prevented the people of the so-called developing sector from becoming food producers. We would not provide the technology for them to do so, and our dumping prices would always undercut fledgling efforts to build up such production. The world population's capacity to survive was undermined in exactly the way that the framers of the doctrine of Mutually Assured Destruction (MAD), such as Bertrand Russell and Leo Szilard, had intended. In the period since the great grain swindle of 1972-73, it is only countries such as India and Thailand which have been able to make significant strides forward as food producers. But at what cost they have violated the world policy of the cartels, and endeavored to feed themselves, is shown by recent developments in India.

As long as the doctrine of Mutually Assured Destruction

FIGURE 8

World grain needs to raise livestock to U.S. slaughter standards

(million metric tons)

Beef	Dairy	Hogs	Poultry	Total
1,781.0	500.0	100.0	300.0	2,681.0

The world requires about 65% more grain than total present production, or approximately 125% of that portion of production not consumed by human beings. This assumes:

Beef cattle: 18 months from birth to slaughter weight of 1,400 lbs.; require 8 lbs. of grain for 1 lb. weight; for 350 million head, needs 1.781 billion metric tons of grain.

Dairy cows: A milk-producing cow requires 30 lbs. of grain per day. To produce 500 million tons of milk per annum at U.S. yields would require 90 million cows producing at 5.6 tons each. This requires to 500 million tons of grain annually.

Hog meat: 5 months from birth to slaughter weight of 225 lbs.; require 540 lbs. of corn; 500 million hogs require 100 million tons of corn.

Poultry: 2 lbs. of grain for 1 lb. of poultry meat; turn over 7 weeks; require approximately 300 million tons of grain.

FIGURE 9

World grain production

(million metric tons)

	production	consumption	balance	production/ consumption ratio
North America	384.6	17.3	367.4	22.0
Western Europe	138.3	24.7	113.6	5.5
Eastern Europe	259.5	58.1	201.4	4.4
Ibero-America	104.5	40.9	63.5	2.5
Africa	77.6	59.5	18.0	1.3
Southwest Asia	42.1	23.8	18.3	1.7
Asia	318.3	217.8	100.4	1.4
Oceania	24.5	1.4	23.1	17.6
TOTALS	1,644.9	443.5	1,201.4	2.7

remained in effect in the advanced-sector nations, and particularly in the United States, prospects for changing this arrangement were slim indeed. But on March 23, 1983, with President Reagan's televised speech announcing the end of the age of MAD, the bargain which underwrote this genocidal madness was swept away.

Our science and technology can be unleashed to secure human survival against the threat of thermonuclear holocaust. But to do so is also to unleash the capabilities of the human race to free itself from the other horsemen of the apocalypse—famine, disease, and pestilence. And that requires breaking the political power of those interests typified by the grain companies and their financial backers, who used the age of thermonuclear madness to perpetrate crimes against humanity which are more than 100 times worse than the genocide committed by Adolf Hitler.

We can meet the world's requirements in protein and dairy product consumption only if we can expand grain production to the necessary levels. To do that it is necessary to curb the cartel, in the way that Presidents Truman and Kennedy trimmed the power of the U.S. Steel Corporation. We must dump people like Cargill's Daniel Amstutz, who have organized present drastic cutbacks in production, or those from Continental Grain who argue that a calory intake of 1,100 a day is sufficient. We must put policy back in the hands of those who will produce.

Meeting world grain requirements

There are those who argue, for one reason or another, that we should not put resources into the production of meat and dairy products, but should simply produce grain for direct human consumption. The average daily diet sheets we showed above also show that such people are wrong. **Figure 9** shows world grain production as it was between 1981 and 1983. If we allow for spoilage and waste at levels of 20% of production and above on a world scale, grain production is four times what is required to feed the human population. Losses

FIGURE 10

World land use

(millions of hectares)

	Total	Agricultural	Arable	Irrigated
North America	1,834.7	498.342	234.854	21.0
Western Europe	364.404	139.367	70.155	8.8
Eastern Europe	2,431.2	728.425	289.293	27.1
Ibero-America	2,018.9	723.875	144.926	14.5
Africa	2,957.0	963.313	162.666	8.1
Southwest Asia	615.567	226.647	52.953	9.5
Asia	950.735	327.663	263.931	75.7
Oceania	788.659	506.241	46.823	1.8
TOTALS (without China)	11,961.4	4,113.9	1,265.6	167.6

incurred through waste and spoilage would reduce the production/consumption ratio for Africa, Southwest Asia, and Asia, to below one ton produced to one ton consumed at levels of 20% of production and above. But we can still produce enough grain for people to have more than what they need, and we can reduce losses through spoilage or waste, by expanding the use of insecticides, fungicides, and pesticides, and introducing irradiation into this area.

How then, and where, shall we produce the increased quantities of grain that are required? We obviously need to increase both the scale and the intensity of production if we are to generate the magnitude of increase required. That we can accomplish, at least to start with, in the Western hemisphere.

Figure 10 provides a preliminary approximation that is adequate for the purposes at hand. Worldwide we have available four times as much land area as we presently employ in agriculture, including both land used for pasturing animals and arable land used for the cultivation of permanent crops. But the arable land on which we grow our grains is itself only one-fourth of the total agricultural area. We are obviously not employing the land counted as pasture in that way in most parts of the world, because we have not made the technology available to do so. Therefore, worldwide we can increase the hectares under arable cultivation, while reducing the total pasturage available, but still increase the size and quality of the livestock we need to produce for food.

The Malthusians argue that the amount of prime land available for farming is finite—which it is—and that yields from that land are also finite. These are the people who argue that the world has reached or exceeded its capacity to carry people. They go further into absurdity by arguing that overpopulation in Africa is destroying the so-called natural environment. The very existence of the human species proves that such people are wrong. Unlike other species, we are not "hunters and gatherers," condemned to live like squirrels or predators in a fixed mode of existence.

The land available for farming is created as we create

FIGURE 11

Population densities

(hectares per person)

	Total	Agricultural	Arable
North America	7.08	1.9	0.9
Western Europe	1.07	0.4	0.2
Eastern Europe	5.56	1.6	0.6
Ibero-America	5.96	1.8	0.3
Africa	5.82	1.9	0.3
Southwest Asia	4.15	1.5	0.3
Asia	0.6	0.2	0.2
Oceania	43.3	27.8	2.6
TOTALS	3.3	1.1	0.4

other apparent natural resources, through technology. The land area of the globe is of course finite, but what we do with that finite area, and how much we are able to produce from it, is dependent on the level of technology available to us.

In North America and Western Europe, we are maintaining one hectare of arable land for approximately every two hectares of pasture. In Ibero-America and Africa, the equivalent ratios are one to five and one to six, respectively. The difference is a reflection of the productive powers of labor, as measured by technological capabilities in the different continents.

To discuss upgrading the technological content of agricultural production, which is to increase production in both intensity and extent, is thus to raise the question of the necessary increase in the productive powers of the world labor force. Here we will only take up one aspect of this question. **Figure 11** compares the total agricultural and arable hectares per person in the different continents of the world. Ibero-America and Africa are at a level of about six hectares of their total land area per person, North America seven. The three continents are also comparable in terms of agricultural hectares per person; in North America it is 1.9, in Ibero-America 1.8, and in Africa 1.9. But in North America, we maintain three times the arable hectares per person compared to Ibero-America and Africa: 0.9 hectares per person, against 0.3 and 0.3.

In other words, in terms of domestic populations, we here in North America are supporting three times as many people per arable hectare as Ibero-America and Africa are capable of doing. Despite the arguments of the Malthusians, that is not a natural state of affairs, nor should it doom Ibero-America and Africa for eternity.

If Ibero-America alone were cultivated as extensively as North America is, we could add another 120 million arable hectares to the world total. If Ibero-America were cultivated as intensively as is North America, the yields from the doubled hectareage would also be more than doubled. There would be no problem in finding the potentially arable land. We could start most rapidly, for example, in Mexico and

Argentina.

If Ibero-America were permitted to produce as effectively as the U.S. farmer, the increase in hectares to the south would rapidly provide almost one-third of the grain needed worldwide to increase meat and dairy production. That is, apart from what can be done in Western Europe and North America, Ibero-America alone could be producing more grain than is required for the total expansion of poultry and pork supplies worldwide, and still be feeding itself.

Could we not define, in this way, a common purpose for the nations of the Americas and Western Europe, in which we would engage ourselves to develop the productive capabilities to feed the world, and to do what would be required, within our own nations, and between the old and new world, to make that happen as rapidly as possible?

Let's make a start by reopening the closed-down agricultural equipment manufacturers of the U.S. Midwestern industrial belt, and putting the workers, who are now on the streets, back on the job. To increase the extent and intensity of the arable hectares under cultivation, we need to increase the productive capabilities of those employed in food production. We need machinery and we need energy to power that machinery.

Figure 12 shows how many tractors and harvesters we have worldwide, and roughly where those tractors and harvesters are distributed. Between North America and Western Europe we have over half the total of over 21 million tractors, and we have just under half the total number of harvesters. Ibero-America has under one-twentieth of the total number of tractors in the world, and under one-thirtieth of the total number of harvesters. Where we in North America maintain 22 tractors and 3.5 harvesters for every 1,000 hectares of arable land, Ibero-America maintains 6 and 0.8. Africa stands in relation to Ibero-America as Ibero-America does to the North.

To bring Ibero-America up to North American levels in this respect would require a five-fold increase in the number

FIGURE 12

Tractors and harvesters

(Million of units and units per 1,000 hectares of arable land)

	Tractors		Harvesters	
	millions	units per	millions	units per
North America	5.257	22.0	0.836	3.5
Western Europe	6.768	90.0	0.610	8.6
Eastern Europe	4.595	15.0	0.930	3.2
Ibero-America	0.927	6.0	0.127	0.8
Africa	0.469	2.0	0.046	0.3
Southwest Asia	0.669	12.0	0.025	0.4
Asia	2.360	8.0	0.980	3.7
Oceania	0.425	9.0	0.061	1.3
TOTALS (without China)	21.474	16.0	3.617	2.8



SCS/USDA/J.D. Schwein

North American agriculture is supporting three times as many people per arable hectare of land as Ibero-America and Africa are capable of doing under current levels of technology. Shown is a six-row combine in Illinois.

of tractors, and an eight-fold increase in the number of harvesters. But it could be done.

Before Federal Reserve chairman Paul Volcker and his New York banker friends decided to close down production at International Harvester, Massey Ferguson, and John Deere, especially where those companies' international operations are concerned, we were producing worldwide about 1.5 million tractors per year. Seventy percent of that number were produced by the five largest agricultural equipment companies in the world, and of those companies four are in the North American continent, with between one-third and one-half of their work forces laid off. But we were also capable of producing 12 million automobiles in a similar year.

The more fundamental questions, that will not be dealt with here, are identified by the prevailing ratios of rural population and work force to urban population and work force. About 2% of the American population produces food for the domestic population and for export. In other parts of the world, such as Africa, 70% and more of the population is tied up in the relatively bestial routine of subsistence agriculture, doing what fathers, grandfathers, and great-grandfathers did before them over countless generations.

We freed ourselves from that kind of subservience to nature by developing the technological capabilities to feed ourselves. We thereby see a mere foretaste of what man as a whole could accomplish if he were freed from the constant threat to individual life, and to organized society as a whole, that such defenseless dependence on nature, nurtured by the genocidal friends of Orville Freeman, portends.

We have the capability to feed the world—of that there can be no doubt, provided we organize ourselves to do it. But that is not why we have to do it. Freedom from want, and political freedom to accomplish the contributions demanded by that higher purpose for which we were all born, and for which we all have the God-given potential, go together. There cannot be the one without the other. So those who would reduce us to the level of beasts, by controlling our capacity to produce and consume the very means of our existence, thus to determine who shall live and who shall die, must be stripped of the arbitrary imitation of divine power they have so arrogated. Thus we can ensure that the age of Mutually Assured Survival will also be the age in which mankind comes of age and ensures its political freedom. Let us be free to do what we can do, and to feed the world.