

INTERNATIONAL AFFAIRS AND U.S. AGRICULTURE

*Report of Seminar Sponsored by
M. G. and Johnnye D. Perry Foundation
and University of Missouri*

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INTERNATIONAL AFFAIRS AND U. S. AGRICULTURE

In November 1980, international affairs was self-legitimizing as a topic for a seminar on agricultural marketing and policy. Export volume of farm products was surging, a trade agreement had just been signed with the Peoples Republic of China, and the atmosphere had changed from the surplus of a year before to actual or feared shortage.

By design the seminar, in Dr. Frederick's sum-up words, was "more than another trade conference." As the list of contents below implies, and as the papers reveal, the focus was on improving understanding of U. S. agricultural trade in its "historical, political, geographic, economic, and social contexts."

One paper given at the seminar, by Harold F. Breimyer, was devoted to a different subject, the UMC-Perry Foundation seminars as education in public policy.

This is the eighth in a series of seminars jointly sponsored by the University of Missouri-Columbia and the Perry Foundation. Under terms of an agreement the object of the seminars is "to promote the development of information relative to the socio-economic forces that bear on the welfare of family operated farms and ranches, and upon the income to those operators; to disseminate that information widely among agricultural leaders of the nation; and to provide a forum . . . for discussion . . . by leaders of organizations, institutions, and legislators."

The Perry Foundation was established in Robstown, Texas in 1946 as a memorial to members of the Perry family who did much for the agriculture of South Texas. It both sponsors and carries on research in agriculture. The Foundation is dedicated to working toward a prosperous agriculture and the welfare of the people on the land.

Contents

Global Food Politics Richard E. Bell	Page 5
America and the World, 1980 Herbert K. Tillema	Page 8
A Bird's Eye View of a Trouble(d) Spot -- The Middle East Christopher Lucas	Page 14
The World Dimension to U. S. Agricultural Trade Abner W. Womack and Maury Bredahl	Page 19
The International Monetary System in Retrospect Don Schilling	Page 34
Political Economy of the World Grain Trade Alex F. McCalla	Page 38
World and U. S. Agricultural Outlook J. Dawson Ahalt	Page 44
The Future in World Trade: Probable, Possible, and Unpredictable Don Paarlberg	Page 47
What We Have Learned A. L. (Roy) Frederick	Page 53

Education in Public Policy: Eight Years of the UMC-Perry Foundation Seminar Harold F. Breimyer	Page 57

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GLOBAL FOOD POLITICS

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World carryover stocks of grain in the summer of 1981 will be at pipeline levels. Those stocks, wheat, rice, and feed grains combined, will be below six weeks' requirements at current rates of consumption. At least six weeks' requirements are needed to meet normal pipeline levels. This level will be the lowest since the summer of 1975.

World soybean stocks will be down to eight weeks' requirements. But this projection is based on harvesting a normal soybean crop in the Southern Hemisphere in the spring of the year. Whether this assumption can be realized is only a guess. The 1981 soybean crop in the Southern Hemisphere was planted only at the time of our Northern Hemisphere 1980 harvest.

The world's potentially tight supplies of grain and oilseeds in the summer of 1981 is the result of a unique circumstance: substantial production shortfalls in grain and oilseeds in both the United States and the Soviet Union at the same time. It is unusual for the two major countries to have substantial production shortfalls during the same year.

Irrespective of the reasons for the potentially tight supplies next year there will likely be a scramble for supplies, and international politics will play a major role in determining which countries obtain supplies and at what price levels. The world's two super powers -- the United States and the Soviet Union -- will play major roles in the drama about to unfold.

United States Dominance

The United States plays a dominant role in the production and international trade of basic foodstuffs. The United States produced one out of every five pounds of grain consumed in the world last year, and 65 percent of all soybeans. Over half of the grain, and two-thirds of the soybeans and soybean products, moving in world trade last year were produced in the United States.

As is well known, the United States suffered major production shortfalls in 1980 in both grain and soybeans, owing mainly to severe heat and drought in the Middle West. Grain production fell to 262 million metric tons compared to the 1979 record 297 million tons. U. S. corn production was 17 percent below the 1979 record.

Soybean production suffered a similar fate, dropping especially in the dry and hot South. The crop of only 48 million metric tons compared with the 1979 record 62 million. Nonetheless, the crop was the third or fourth largest on record, and will account for 60 percent of the world's expected soybean production in 1980-81.

In spite of the production shortfalls, the U. S. will maintain high levels of exports of both grain and soybeans in 1980-81 due to the availability of substantial reserve stocks from the outputs of earlier years, especially the record harvests of 1979. Exports of U. S. grain are presently projected at a record 118 million metric tons during 1980-81, up from the record of 111 million tons set in 1979-80. Combined exports of soybeans, oil and meal are expected to be nearly 30 million metric tons during 1980-81, not much below the record 32 million tons of the year before.

As the U. S. will supply huge volumes of grain and soybeans to world markets in 1980-81, U. S. reserve stocks of feed grains and soybeans will be exhausted by the end of the marketing year. Consequently, the world will be dependent on U. S. harvests of grain and soybeans in 1981 to meet world needs during the 1981-82 season.

Soviet Shortfall

There is no longer any doubt that 1980 grain production in the Soviet Union was well below expectations. Soviet officials apparently believe their 1980 harvest was only about 180 million metric tons. This is not much better than the disappointing crop of 1979, and 55 million metric tons below the Soviet Government's 1980 goal of

235 million metric tons.

The Soviets will not be able to meet their expected 1980-81 grain requirements. They probably will be 25 million tons short of their earlier anticipated consumption of 235 million tons. No reserve stocks are left, having been used in 1979-80. At best, the Soviets probably have the port capacity and internal transportation facilities to import only 35 million tons of grain in 1980-81, or an average of 3 million tons per month over the course of the year.

Unless the embargo is lifted on U. S. agricultural exports to the Soviet Union, the Soviets probably will be able to obtain no more than 30 million tons of grain for import in 1980-81. In fact, whether they will be able to obtain 30 million tons will depend on the grain harvests in the Southern Hemisphere during the spring. A more likely import figure is 25 million tons unless the embargo is lifted.

The Soviets will need to stretch their grain supplies as far as possible in 1980-81. They will do this, in part, by using more soybean meal in order to improve the conversion ratios of the livestock rations being fed. They will buy as many soybeans as possible from Brazil and more soybean meal from Western Europe. The soybean meal being purchased from Western Europe is produced from U. S. soybeans. The Soviets may also buy soybean meal from Brazil, depending on whether they can overcome their fears of introducing African Swine Fever into their country from Brazil.

Despite all that can be done to import and stretch available grain supplies, the Soviets will need to cut their livestock numbers in 1980-81. They will do this primarily by reducing their hog numbers. This will cause a temporary increase in Soviet meat production, but will eventually lead to the Soviets' buying large quantities of meat from the world market later in 1981.

Despite the disappointing Soviet grain harvest in 1980, it is not a disaster by earlier Soviet experiences. The Soviets harvested 168 million tons in 1972, and only 140 million tons in the disastrous 1975 year. The 1980 Soviet crop was about an average crop for the 1971-75 period. The problem, of course, is that Soviet grain consumption is much higher than it was in the early 1970s when the Soviet Union had just begun its policy of upgrading the diet of the average Soviet citizen.

The disappointing 1980 crop does point up, however, that the Soviet Union has by no means solved the agricultural production problems which have plagued the Communist Party since it first came to power more than sixty years ago. Annual grain production averaged only 203 million metric tons during the Soviet Union's Tenth Five-Year Plan covering the period 1976-80. This was 20 to 25 million tons below average annual grain consumption during the five-year period. The Soviets have had to make up the shortfall by imports of grain from the United States and other countries.

Soviet grain production was highly erratic during the 1976-80 period. Production goals were met in only two of the five years. The average year-to-year fluctuation in grain production was more than 30 million metric tons.

As a result of erratic and disappointing grain production during 1976-80, the Soviets were not able to initiate an effective grain reserves policy. In all years but one, the Soviets had to depend on imports to fill the deficits in their grain production.

These deficits turned the Soviet Union into the world's second largest importer of grain. Only Japan imported more grain than the Soviet Union during the last five years of the 1970s. There is no evidence that the Soviet Union's status as a major importer of grain will change during the early 1980s.

Chinese Grain Agreement

On October 22, 1980 the United States and the People's Republic of China concluded a grain trade agreement covering the four calendar years 1981-84. The agreement commits China to buy, and the U. S. to supply, 6 to 9 million metric tons of U. S. wheat and corn during each of the four calendar years.

For obvious political reasons, the agreement was rushed to a premature conclusion before the November 4th general elections. Consequently, the agreement contains some serious flaws which may work to the disadvantage of the United States.

One of the more obvious flaws in the agreement is that each of the four calendar years of the agreement spans two U. S. crop years. Theoretically, it is possible for the Chinese to purchase up to 18 million metric tons of U. S. grain, including more than 15 million tons of wheat, from a single U. S. crop without consulting or notifying the United States Government. This is because the agreement is on a calendar year basis while the U. S. crop marketing year begins in June for wheat and in October for corn.

For example, the Chinese theoretically could purchase for shipment in June-December 1981, 7.6 million tons of U. S. wheat from the 1981 U. S. wheat crop, and later purchase another 7.6 million tons from the 1981 crop for shipment in January-May 1982. This could all be done within the terms of the agreement and without consulting or notifying the United States Government.

This is different from the 1975 US-USSR Grain Supply Agreement under which the Soviets cannot purchase without prior U. S. Government approval more than 8 million metric tons of U. S. wheat and corn in any October-September period, and no more than 5 million metric tons can be either corn or wheat. The October 22nd agreement with China makes an extraordinary supply commitment to China without getting much in return.

The China agreement also contains an "escape clause" whereby the Chinese need not purchase 6 million tons in a given calendar year if there are "unusual circumstances." Furthermore, the agreement provides an international sharing arrangement if the Chinese do purchase less than 6 million tons of U. S. wheat and corn in any given calendar year.

This has rightly angered the other major grain exporters, especially the Canadians and Australians, who see China and the United States making bilateral agreements unilaterally affecting their grain exports. It would appear to be the type of decision that could be better left to the international marketplace.

The agreement with China also commits the United States to carry reserve stocks of grain for the Chinese. In the Soviet agreement, this responsibility is placed on the Soviets.

Bilateral Commodity Agreements

It is important that there be no proliferation of U. S. bilateral commodity supply agreements beyond those with China and the Soviet Union. These agreements are designed to meet special circumstances, particularly the one with the Soviet Union. The Soviet Union and China have the capacity to buy huge quantities of grain in a single year. The both have a single government agency that buys all their grain for import.

The purchase systems and policies of China and the Soviet Union are not compatible with most of our Western-oriented trading systems, especially the market-oriented system of the United States. Our market-oriented system has served us well. We do not want to change it. Therefore, we must build a structure to deal with the problem of trading with the two major Communist countries if we want to continue to sell grain to them. Bilateral agreements are one way of doing this, but we do not want bilateral agreements to become a part of our general trade policy. A series of bilateral agreements would, in fact, foster market volatility if too much of our trade became tied up in them.

Western Europe Grain Supplies

Western Europe may have the trump card in the grain supply situation for 1980-81. It has just harvested a record grain crop. The European Community has over 30 million tons of grain available for export in 1980-81, including 15 to 20 million tons of wheat. Part of this grain could be sold to the Soviet Union if the Europeans made a decision to do so, for political or other reasons.

AMERICA AND THE WORLD, 1980

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Summary

The United States has faced disturbing difficulties in the world during the last decade; among them Vietnam, the decline of the dollar, the oil embargo and oil price increases, new communist or anti-American governments abroad, hostage-taking in Iran, and the Soviet invasion of Afghanistan. Many Americans are ambivalent about their new-found inability to control events abroad and direct America's own future. At one and the same time some persons demand that Washington take strong action, ask for American retrenchment and independence, and express fear that the United States is falling irrevocably behind other nations. This ambivalence affects domestic politics as well as foreign policy, contributing to the uncommonly short careers of recent Presidents, Senators, and Congressmen.

Much of the variability in recent public attitudes about foreign affairs is attributable to unrealistic expectations about America's role in the world. Some of these expectations in turn are based upon a misunderstanding of U. S. and world history. From time to time in the past the United States has enjoyed an exceptionally privileged world position, though often a position not entirely of its own making. Before World War II major nations allowed the United States to exist outside the mainstream of world politics. America's early insignificance, the European balance of power, and geographic isolation all contributed to the granting of this license. At the same time the self-contained character of the U. S. economy insulated Americans from some unwanted effects of world economics. After World War II, largely as a result of damage done to others in the war, the United States suddenly found itself not merely a great power but the dominant world power, controlling a majority of the world's political and economic resources.

American dominance has dissipated since World War II. Among causes are the inexorable recovery of other nations from war damage and the diffusion of political independence, technology, and wealth. The U. S. economy has also become more intertwined with that of other nations. The United States is still the single strongest country in the world and it is likely to remain so for some time; but she is no longer the equal of the rest of the world put together. The United States alone cannot easily direct the destiny of the world nor even assure her own destiny. This is an entirely normal situation. Almost all great powers of history have had to accept limits and even failure in their efforts to influence others. Our present disaffection reveals that our unusual history has failed to prepare us to accept this international reality.

Introduction

The United States has faced disturbing difficulties in the world during the last decade. Protracted war in Vietnam cost lives and dollars. Arab oil exporting nations embargoed shipments to America and radically increased the price of oil. Unstable exchange rates forced revision of the role of the U. S. dollar in the international monetary system. Communist or other anti-American governments emerged among a number of states of the Third World, including Vietnam, Cambodia, Laos, Angola, Mozambique, Ethiopia, Iran, and Afghanistan. The Soviet Union's military capabilities continued to increase. In 1979 Iranian militants, sanctioned by a revolutionary government, seized the U. S. Embassy in Tehran and its personnel. At almost the same time the Soviet Union intervened in Afghanistan with military force; it has persisted since despite an American-led grain embargo and boycott of the summer Olympics.

The world has become troublesome for America. Moreover, events abroad create difficulties at home. The world fails to respond easily to U. S. efforts to shape the course of events, and in doing so presents Americans with problems they do not want to face and alternatives they do not want to choose. Many Americans have become ambivalent about world politics and the international economy. Many are likewise

ambivalent about America's role. To be ambivalent is to hold inconsistent attitudes simultaneously. To be ambivalent is to express unstable preferences. Many Americans demonstrate an almost schizophrenic reaction to world events. At one moment they bitterly criticize increased oil prices or the seizing of hostages in Iran and demand that the U. S. government do something, perhaps including the use of military force. At the next moment these same persons ask that America withdraw from the world, remove troops from foreign soil, suspend foreign aid to other countries, and end dependence upon the international economy. At yet another moment these same Americans reveal a third and more fearful attitude, speculating that the United States may irrevocably fall behind others in the world including the Russian military machine and the Japanese or West German economy. They ask whether the United States can any longer prosper or be secure, and they fear the coming of the 21st century.

Public ambivalence affects domestic politics. People do not like America's alternatives for dealing with the world. None of them will cure anti-Americanism abroad, political instability in regions of special U. S. interest, uncertainties of energy supply, or foreign-induced inflation. All programs dealing with these problems involve both costs and risks.

In this setting the mood of electoral politics has shifted against incumbents. No President since Eisenhower has been elected twice and completed both terms. Lyndon Johnson, pressured by opposition to conduct of the Vietnam War did not seek a second election. Nixon resigned when he was faced with the prospect of impeachment arising mainly from the Watergate-related scandals but also reflecting increasing disaffection with foreign and domestic economic policy. Ford sought an elected term but lost to a candidate inexperienced in national politics who criticized Ford's knowledge and ability to cope with the world. Carter lost his second bid for office, amidst charges of incompetence and widespread dissatisfaction. Members of Congress, too, have suffered from public disaffection with those who hold office. Incumbent Senators and Congressmen, Republican and Democrat, conservative and liberal, have been defeated more regularly in the last decade than during any other comparable period in this century.

Public unease and the volatile character of our recent elections reflect in part our inability to cope psychologically with recent changes in the world and America's place in it. There is profound conflict between public expectations and international reality, and this conflict has disadvantaged every Administration since that of Lyndon Johnson.

The United States has enjoyed an exceptionally privileged history. We tend to take those privileges for granted. Many expect the privileges to continue indefinitely. We sometimes assume that our past insulation from foreign-induced problems is a natural condition, or even a natural right. Such expectations are doomed to be disappointed. Unusual circumstances in the past have protected us from many frustrating experiences normally experienced by nations great and small. Lately, we have lost some of those special privileges. Many were acquired by historical accident; most have disappeared due to predictable developments outside the United States. But we are accustomed to our past special status and our society has not yet learned how to face international realities as an ordinary great power.

A brief look at U. S. history helps to explain our past advantage and present problems. America has enjoyed different unearned benefits in succeeding stages of her history. Before World War II the United States was protected from many unwanted effects of world politics and the international economy by political insularity and economic independence. After World War II and as a direct result of it, the United States enjoyed a dominant share of the world's politically-relevant and economically-relevant resources.

The United States Before World War II

Major world powers permitted the United States to exist outside the mainstream of international politics for most of her history. At first this was largely due to America's insignificance. In 1800, when size of population was a fair indicator of national power, the United States had a mere 5 million people, one-fifth as many as Britain, France, or Japan, and far less than Russia's 45 million subjects. America was too small then to threaten any major country. Her insignificance also muted predatory practices by major nations. To many, she was not worth the trouble Britain, for example, never brought the full weight of her military power to bear in efforts

to suppress the American rebellion, nor again in the War of 1812. In part this was due to the belief held by some Englishmen, including King George III, that America was a less valuable colony than others such as India.

The United States also benefited from the workings of the European balance of power. In the nineteenth century the major European powers, including Britain, France, Austria, and Russia, possessed roughly comparable capabilities. No one of them alone could dominate the rest. Together they created a mutual threat system by means of constantly shifting alignments that after 1815 deterred major war for a century. At the same time the European balance of power tended to restrain foreign adventures by any major power into the Western Hemisphere. Should one intervene others would likely counter-intervene so as to avoid permanent shifts in the balance among the major nations. This situation, so advantageous to the United States, was not created by her own foreign policy. George Washington's proclamation of "no entangling alliances" (meaning no alliances with major European powers) and the Monroe Doctrine promising U. S. non-interference in European affairs were necessary to assure our country the benefits of Europe's mutual threat system. They did not create that system and did not by themselves create America's advantageous isolation.

Late in the nineteenth century the position in the world changed. Population grew. Industrialization dramatically expanded the economy after the Civil War. By 1900 the United States was herself a world power, albeit a less important one than Britain, France, or Germany. Nevertheless, circumstances continued to permit the United States to participate selectively in world politics, by her own choice rather than under the press of events forced upon her by others. One special circumstance was geographic distance. Not only was North America far removed from Europe given transport of the time, but U. S. foreign interests were geographically concentrated. The United States acquired colonies in the Spanish-American War, but these imperial holdings were few in number and lay mostly in the Pacific, far from Europe. In addition, military technology before World War II gave the United States effortless advantage. Even without a meaningful standing defense, and without international alliances, the United States was spared international war with another major power on American territory. There existed then as now no plausible means to conquer the United States by land-based or sea-borne invasion. The technology of distant punishment -- long-range bombers and ballistic missiles -- was not invented until World War II.

From its independence until World War II the United States was uniquely privileged. Unlike most other countries she did not need to play the game of international politics daily in order to protect her own security. Since she could avoid the game when odds were poor, the United States was permitted to retain the illusion that international politics is a game which some nations may consistently win. At the same time, the U. S. economy was more insulated from foreign-induced disturbances than is common among large nations.

Traditionally, the U. S. economy has not been as dependent upon world markets as that of many other countries. Early America was a largely self-sufficient and relatively wealthy agrarian society. Unlike many present day less-developed countries, she was not a major supplier of raw materials to more industrialized nations. The United States was heavily involved in only a few world markets, and her exports such as tobacco, beaver pelts, and whale oil contributed only a little to the total national product. The insular character of the American economy became even more evident with industrialization after the Civil War. From the beginning, American industry has tended to produce primarily for the American mass market. This stands in marked contrast to the experience of other industrial countries such as Britain, France, Germany, and Japan, who in the 20th century have depended upon world markets to consume 15 to 20 percent of annual product. Until recently the United States exported less than four percent of what it produced.

Before World War II the United States was also largely independent of foreign suppliers. As late as the turn of this century imports averaged only about \$10 per person per year, which is not much even in 1900 dollars. Although American firms began before World War II the practice of direct foreign investment, which has since produced great U. S.-based multinational corporations, the economy has been exposed less to the world than that of most significant nations. Only one other major industrial nation of modern times is so autarkic -- the Soviet Union.

The self-possessed economy of the United States long insulated her people from

events in the world economy. Major changes abroad had only belated, and in most cases limited, effects in America. Even more important to American illusions, the United States did not often need to play the game of world politics in order to protect vital economic interests. Unlike most countries, the United States did not have many economic interests that could be endangered by the acts of other nations. The few that were exposed were not vital to her economic health.

The United States After World War II

World War II changed many things but it did not give Americans a realistic picture of what to expect in the world. The war destroyed one set of special privileges but substituted another. Just as many Americans are prone to exaggerate U. S. importance to the world before World War II, they are also inclined to underestimate U. S. control of the globe immediately after the conflict ended. In 1945 America stood astride the world as few nations have done since the fall of Rome. For a time the United States could and did have anything she wanted with little effort.

America's privileged post-war position derived as much from what the war did to others as from her own efforts. World War II involved all the major countries of the world and all except the United States suffered extensive damage. The war was fought in the Atlantic and the Pacific, in Europe, the Middle East, and Asia. It touched the territories of all major countries except the United States. And although we committed great quantities of money and material to the war, our land, industrial plant, and people were little hurt. Fewer than 400,000 U. S. citizens died in World War II, less than half the number that perished in the Civil War of a century before. No other country was so fortunate. All other major nations lost in the war, in one respect or another. Japan and Germany surrendered unconditionally. France technically "won" but part of her territory had been occupied by Germany and was freed only at the cost of bloody battle. French agriculture and French industry were a shambles at war's end. Moreover, the war forced France to withdraw from many of its overseas colonies; she could regain her Empire only at great cost. Britain was similarly damaged. Although England escaped invasion, she suffered from air attacks. In self-protection she diverted an even larger portion of her economy to the war effort than did the United States. Britain, too, lost effective control of many economically significant overseas possessions. Even today, her economy has not fully recovered. In one sense, the Soviet Union was the greatest loser in the war. Most of the biggest battles took place on the Eastern Front, on some of Russia's previously most productive agricultural lands. Important portions of her industrial plant were destroyed. Ten million Russian soldiers died in World War II, and ten million civilians beside them. This is a greater loss than any other nation has sustained in modern history. It amounted to one-sixth of the entire population.

Because of the war's effects elsewhere the United States possessed dominant shares of world resources immediately after World War II. At the end of 1945 she controlled at least 50 percent of the world's gold held for currency purposes. She produced 40 percent of all the goods and services in the world with only six percent of the world's people. Fifty percent of the world's effective military manpower at war's end wore American uniforms. The United States alone had the technology necessary for nuclear weapons, the new horror weapon. The United States occupied what amounted to a globe-girdling empire. She ruled unilaterally in Japan, the Philippines, South Korea, portions of Southeast Asia and China, and numerous islands of the Pacific. Together with war-weakened Britain and inconsequential France, the United States occupied Italy, Western Germany, former German-occupied France, the Netherlands, Luxembourg, Belgium, and part of Austria. The only other country that could begin to rival this American empire was Russia, whose rule extended only to immediately-neighboring territories in Eastern Europe, Manchuria, Northern Korea, and the Azerbaijan province of Iran. But Russia's economy in 1945 was reduced to no more than one-quarter the size of that of the United States.

International organizations that emerged from World War II were also dominated by the United States. The United Nations Security Council identified five permanent members with right of veto over substantive resolutions: the United States, Great Britain, France, China, and the Soviet Union. Immediately after World War II America controlled four of these votes because Britain, France, and China were totally dependent upon America. The United Nations General Assembly allowed each member nation an equal vote, but nearly half of the original members were Western Hemisphere nations

subject to U. S. influence. As late as 1954 an absolute majority of United Nations members were military allies of the United States. U. S. dominance was even more evident among some new specialized international organizations. The World Bank gave voting rights to nations in proportion to financial contributions. The United States contributed most of the original funds, garnered the major share of voting rights, and established a continuing practice of designating an American as executive director. The United States acquired similar rights in the new International Monetary Fund.

The United States further enjoyed special advantages in the international political economy. Immediately after the war America was disproportionately wealthy -- as other previously great economies had sustained heavy damage. The international monetary system created at Bretton Woods in 1944 gave the U. S. dollar a pivotal role in the national monetary systems of all member nations of the International Monetary Fund. U. S. monetary practices could, for a time, affect other countries' economies in ways that other countries could not affect the United States. At the same time the United States remained little exposed in international trade markets except through direct foreign investment. The historically low levels of U. S. dependence on exports and foreign imports continued until the late 1960s. Disruption in international markets, therefore, had muted effect on the U. S. economy; and efforts by others to manipulate trade with the United States for political purposes generally failed, as in the abortive oil embargoes of 1956 and 1967.

The United States Today

The United States enjoyed unparalleled good fortune for most of her history. She lived in licensed isolation before World War II. She dominated the world after the war. World War II ended isolation. Then predictable developments since 1945 reduced domination. Massive accumulations of power derived from events such as a war tend to be unstable. The vanquished and the damaged recover, the world changes, and power tends to disperse. This has happened in recent decades. It should have been expected. At most points in history a few major states have dominated international relations. It is uncommon, however, for one nation to acquire power equal to that of the rest of the world combined. When such concentrations do occur they rarely last long due to the centrifugal tendencies seemingly ever-present in world affairs.

The world has changed a great deal since the 1940s. For one thing, the world is more complicated. There are many more independent nations now. The 51 original members of the United Nations have been joined by one hundred others. Many of these new nations, mostly former European colonies in Africa and Asia, have socio-economic structures that make them relatively impervious to great power manipulation by traditional diplomatic means. International organizations have proliferated. The two dozen that existed in 1945 are joined today by 200 more. Many of these, including OPEC, are single-issue organizations that attempt to operate in their chosen domains with the same authority as nations. Quasi-national assemblages such as the Palestine Liberation Organization are increasingly conspicuous. Some persons would argue that the largest multinational corporations and financial institutions also now wield great independent influence. Security alliances formed in the first decade after World War II are disintegrating in both East and West as member nations increasingly pursue independent foreign policies. Where once only one nation possessed nuclear weapons -- the United States -- now there are seven nuclear powers: the United States, Russia, Britain, France, China, India, and (we believe) Israel. Soon there will be more. Brazil, Egypt, Pakistan, South Africa, South Korea, and Taiwan are actively developing the bomb as a by-product of civilian nuclear power production, and probably will soon have it. By the end of this century, as things stand now, nuclear weapons will be routine instruments of foreign policy among most sizable nations and some non-national organizations.

The world economy has also changed in important ways. The quarter century that followed World War II was a period of extraordinary economic growth worldwide. The world economy expanded in size three to four times in real terms. Economic growth has slowed since 1970, and not merely in the United States. Some important resources that fueled rapid post-war growth have become scarcer and therefore more costly, including petroleum and all other forms of energy. In certain ways national economies have also become more interdependent, in some cases by design (as among the members of the European Community), but in other cases as a result of maturing of economies. Even the United States today is more dependent upon world trade than before, importing

eight percent of what it consumes rather than the traditional three percent.

These political and economic changes affecting all countries have reduced American capacity to shape international events. While the United States is still the single strongest country in the world, she is no longer the equal of the rest of the world combined. She remains secure within her own borders, but the Soviet Union has developed comparable capacity to deter attack upon herself and sufficient strength to project military power to regions near her own borders. Other countries, while no direct threat to the United States, are now able to resist efforts to coerce them by force, as Vietnam so amply demonstrated. The American empire has dissolved under the pressure of nationalism as have most of the other empires existing at the end of World War II. Only a few Pacific islands remain. Even the Panama Canal will revert to Panamanian control at the end of this century. The U. S. economy remains the world's largest, but its share of world production has declined from 40 to less than 25 percent. Per person, some other nations are as productive as the United States, including Sweden, Switzerland, Denmark, and West Germany. The U. S. no longer exercises unilateral control of international finance, although the dollar remains the world's single most important currency for reserve and accounting purposes.

The perspective from which we view these changes makes a great deal of difference to our ability to cope with international realities. America has encountered some unsettling limitations in recent years. We can influence other nations but that influence generally bears a price that must sometimes be paid in the form of real domestic sacrifice. We cannot influence all nations all of the time. Sometimes we fail, as when neither grain embargo nor Olympic boycott induces the Soviet Union to behave less blatantly in Afghanistan. Sometimes the price of influence is more than we care to pay, as among the nations of Indochina. Sometimes we can find no reasonable way to alter others' course, as with the revolutionary government of Iran. The intentional acts of other nations and uncontrolled events can hurt us at home, economically if not militarily. We alone do not control our destiny. We do have vital interests abroad that may be threatened and may command reluctant response, even when action is risky and without certainty of success. If we think that we can transcend these limitations merely by being either more militant or more diplomatic we are certain to be disappointed. If we think that we can escape these limits by retreating into isolation akin to that of our early history we are unrealistic about our interests at a time when the U. S. economy is intertwined with that of the rest of the world. If we are unduly fearful we are unfair to ourselves.

The limits we face are the realities of international politics. The frustrations we experience are normal to life in the anarchic international system. Even great powers do not always have their way. Even great powers are affected by the world. The United States today is a great power, presently stronger than any other single nation and likely to remain so into the 21st century. America has not fallen from a normal condition into some special purgatory. Instead the United States has moved from positions of special privilege into more normal circumstances. In order to protect our interests we must play the game of international politics as other nations must play it, with all the risks and costs and failures that are part of being a normal member of the community of nations. We are a frustrated society just now mostly because our historical experience has failed to prepare us for international life as it really is. We are learning. We need to learn more. Until we do we shall continue to feel more uncomfortable than situations warrant.

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I begin with a moral drawn not from national news coming out of the Middle East but from confrontations among Middle Eastern factions here on our campus which leave most bystanders confused. The moral is that as we fail to communicate we fail to comprehend; and as we fail to comprehend we are bound to be left puzzled about events in an important part of the world that have a direct and immediate bearing on our own lives.

J. B. Kelly wrote as follows in a recent issue of New Republic magazine:

We are fated, as the old Chinese saying has it, to live in interesting times, and never more so than in the last 18 months, which have been witness to one of the most resounding collapses of foreign policy to have occurred in modern history. Almost the whole of the strategy pursued by the Western powers in the Middle East since the end of World War II lies about us in ruins, leaving our vital economic and political interests in the region virtually defenseless -- and this at a time when they are more seriously menaced than ever before. The Iranian-Iraqi war is only the most recent symptom of this dismal collapse.

With all respect to Mr. Kelly, who is perhaps the doyen of Middle Eastern experts, I am not sure whether he is correct in his analysis or whether there is in fact a "dismal collapse" and "disastrous failure" of Western policy in the Middle East. But I do suggest as a necessary first step in understanding events in this troubled and troubling part of the world, that we take a look at five determining factors or formative influences on the region.

Pan-Arabism:

The search for Arab Unity, the age-old dream of a single Arab Nation, a sense of solidarity that is enjoyed by Arab peoples, in a great arc that stretches across the whole of North Africa through the southern portion of what is conventionally referred to as the Near East and on to the Iranian border.

Radical Nationalism:

Islam and the Islamic faith, as a cultural dynamic and its relationship to the West. The countervailing tendency toward fragmentation, separation, and internal division.

Islam:

As a cultural dynamic in relation to the West.

Oil:

The volatile catalyst in the explosive mix of events.

The Palestinian Question:

A festering sore whose impact on Arab politics is consistently underestimated in the West, and goes largely unappreciated.

Arab politicians like to claim that the "Arab Nation" stretches from the Atlantic to the gates of Persia, 160 million or 180 million strong, not 22 separate and independent countries; and that Arabs everywhere constitute a single cultural and spiritual union. Argues Tariq Aziz, foreign minister for Iraq: they are "people of a community united by language, religion, legend, history, and past achievement."

It is clear that unity, political, cultural, and religious, has been the ideal, the obsession, and indeed the aching dream of Arabs for generations, stretching back in an unbroken chain to the reign of Al-Mutasim in ninth century Baghdad.

Says Libyan leader Col. Muammar Khaddafi, "Arab unity is the inevitable fate of the Arab Nation, and the solution to all its problems."

This first fact of a sense of solidarity, however imperfectly realized, is a conditioning factor in Arab politics. More to the point, it is a powerful determinant of Arab perceptions of the outside world. It is perhaps responsible for a good deal of xenophobia, distrust of the foreigner, and sense of kinship and identity within Arab culture. It gives rise to an in-group feeling arrayed against what are perceived to be implacable, hostile forces occupying the outside world in general and the Western world in particular.

As we are all painfully aware, the Arab record on unity is one of failures and not successes. It has been rightly said of the Middle East that what we find there is a welter of perishable alliances and far more durable antagonisms. Regional conflicts are endemic. Even today sectional rivalries are alive and well. Despite the age-old obsession with unity, Arabs persist in nurturing almost paranoid fears of one another. Even today, Morocco and Algeria are locked in confrontation. Border clashes between Libya and Egypt could resume at any time. North and South Yemen remain as divided as ever. In fact, the only tangible past effort at political union, which could at best be called a qualified success, was the establishment of the United Arab Republic as a union of Egypt and Syria under Abdel Nasser. It endured only from 1959 to 1961. Other attempts at union have floundered. That between Libya and Algeria proved short lived as did the attempt of Libya to unite with Tunisia. Syria and Iraq at one point, incredible though it may seem in retrospect, forged what was termed at the time "an unbreakable union," a union that lasted less than a year. These former allies are now at odds with one another and armed conflict could break out at any time.

The last chapter in this dismal record of failure is the attempt at marriage of Libya with Syria. Few outside observers see much chance of success.

Part of the problem is that practically every major Arab world leader seeks to acquire power by which to direct Arab destinies and ultimately to control the oil resources of the Arabian peninsula and the Persian Gulf. The most notable figure in this history of efforts at territorial aggrandizement and political influence was of course Abdel Nasser of Egypt. Anwar Sadat initially nurtured hopes of inheriting the mantle of influence that Nasser and the Nasserites once enjoyed. But today there are many other rival contenders on the scene: Libya's Col. Khaddafi, Syria's President Assad, in a limited way Jordan's King Hussein and Saudi Arabia's King Khalid.

The web of political and military ties emerging around the Iranian-Iraqi war is complex and paradox-ridden even by Middle Eastern standards. The basic line-up of Iraq allied with Saudi Arabia and Jordan, with Iran allied with Syria and Libya -- a set of alliances that cuts across virtually every political, ideological, and sectarian bond in the region -- once again makes the old slogan of Arab unity ring hollow.

The web of alliances is prompted by a variety of considerations. We cannot truly interpret events reported in the news without understanding something of the motives and considerations of realpolitik that enter into these alliances. The House of Saud in Arabia harbors a profound fear of Ayatollah Khomeini's anti-monarchist, Islamic, revolution and thus he sides with Iraq's President Saddam Hussein in hopes that Iraq will provide the vital counterforce to whatever territorial and political aspirations the Ayatollah may nurture. For his part, President Hussein clearly wants to succeed the Shah, now toppled from his Peacock Throne, as the principal power in the Gulf. So he seeks to ingratiate himself with the conservative Gulf states who might then accept Iraqi hegemony in the event of a decisive Iraqi victory in the war with Iran.

More confusing still is the fact that Syria's President Assad, who ironically enough heads a government dominated by a faction present in Iraq, allies himself with Iraq's enemy Iran. And Assad allies with Libya in order to gain access to Soviet arms in case Syria has to fight Iraq. He also believes his dissident elements, notably the Shi'ite minority, to be backed by Jordan, Saudi Arabia, and Iraq.

Jordan's King Hussein fears Khomeini's revolution in terms of an internal threat posed by the Shi'ites but he also wants to gain influence with the Saudis, so he aligns himself with their ally Iraq. A related goal of Hussein is to have a voice in the establishment of a Palestinian state, when the time comes, without

directly challenging Arafat. So we have the additional paradox of a monarchical ruler allying himself with Iraq, a government very different in character from his. Hussein hopes to build enough influence with small Persian Gulf states to be able to have a say in any final agreements that might be reached between the PLO and Israel.

Down in tiny Kuwait the Crown Prince and Prime Minister Sheik Saad al Salah share the Saudis' concerns over a Shi'ite minority, and hence the country tilts toward Iraq. The irony here is that Kuwait has long been involved in a border dispute with Iraq.

The United Arab Emirates, Dubai in particular, must remain neutral because of a large Persian minority -- like a fifth column. Other Persian Gulf states such as Qatar back Iraq as a probable winner.

The ultimate issue in the Iraqi-Iranian war is which regime will emerge with military and political preeminence in the Persian Gulf during the 1980s.

Ironically, neither the Soviet Union nor the United States stands to gain significantly from the war's outcome. At this time, no major power exercises clear control over events in the Persian Gulf. From the mid 19th century to about 1971, Great Britain guaranteed the security of the autonomous states and dependent territories that encircle the Persian Gulf. About 1971 Britain withdrew its forces from east of the Suez and refused to be any longer a guarantor of the security of that region. At the time the United States was bogged down in Vietnam and for various other reasons was reluctant to pick up the British mantle and elected to support the Shah of Iran as a surrogate, a guarantor of Western security and interests including protection of the vital oil transit routes through the Strait of Hormuz.

As is now well known, U. S. policy backfired when the Shah's rapid fire program of development alienated the traditionalists and drove a wedge between them and a kind of technocratic elite who shared the Shah's ambition for creating in Iran a major power, a new West Germany of the Middle East. The U. S. policy backfired because dissident revolutionary elements embracing every possible coloration from Islamic fundamentalism to Marxism forged links and created a revolutionary coalition that succeeded in toppling the Shah from the Peacock Throne.

Meanwhile, apparently with the covert, implicit encouragement of the Nixon administration in general and Secretary of State Henry Kissinger in particular, the Shah moved to become a kind of OPEC price "hawk." One object was to finance the ambitious program of modernization on which he and his nation had embarked. The successful revolution against the Shah created a major power vacuum in the Middle East, a vacuum that Iraq's President Hussein now seeks to fill by eliminating the last vestiges of Iranian military supremacy. His effort began with an attempted blitzkrieg against Iran's oil rich Khuzestan province. The Iraqis seized the border waterway and three islands; but at this moment it appears that Hussein may have miscalculated, perhaps fatally. Iraq's oil industry has been damaged severely, and the Iraqi threat appears to have been the catalyst to re-unite Iran internally. Without the Iraqi war Iran might have disintegrated from within. That is no longer likely, at least not soon.

Meanwhile, the Soviet Union would dearly love to gain control over the revolution in Iran. It would like to get a foothold in Iran's northern provinces and it looks to the future when it will need access to Iranian oil. But the Soviet Union does not want to antagonize Iraq, with whom it still has a defense treaty. Yet if it were to give big logistic aid to Iraq it would compromise its own sympathizers within the Iranian revolution. So in a sense the USSR has to sit on the sidelines. What the USSR wants ultimately is an outlet to the Indian Ocean. It may be most likely to get it through treaties establishing a military presence in Iraq. If it cannot get it there it will seek to get it through Iran.

The United States likewise professes a policy of neutrality. So we too sit on the sidelines for now. Our position is highly disadvantageous. We enjoy few links of any kind with Iraq. Of course the U. S. presence in that part of the world is opposed vigorously by Islamic militants in Iran. Yet an Iraqi victory could threaten Kuwait, Saudi Arabia, and the other Arab states of the Gulf. It is conceivable, in view of the long distance from the United States, that those states in the event of an Iraqi victory would be drawn into an alliance with Iraq; and that such a confederation would blackmail the West with oil in order to gain support for

the Palestinian cause to which Iraq is firmly committed.

Now Islam as a third major force. Until recently it has been fashionable to deride the idea of any deeply rooted animosity against the West on the part of Arabs, or Moslems in general. It has not been fashionable to accept the idea that actions by Islamic governments were inspired by hostility to Christendom. Yet the enmity felt by the Moslem-Arab world for the Judaic-Christian West is real enough. If anyone doubts that, he should read the latest fulminations by the various Iranian Ayatollahs and take note of the passionate response evoked among the masses in Iran and by Shi-ite minorities elsewhere throughout the Arab world.

The Western presence in the Middle East has been one of long standing. It began long before the modern era. The role that the West played more often than not was that of an adversary of Islam. The memory of the Crusades dies hard, and historical memory is alive and well in the Middle East. And so the West, which is usually equated in the Arab mind with Christendom, with imperialism, with capitalism, with materialism, with debauchery, with secularism, remains a familiar and tangible enemy, a convenient scapegoat, an adversary which has never ceased, at least in popular mythology, to oppress and exploit the Arab peoples. The feelings of resentment felt against the West are tangible.

Conventional wisdom has held that the incompatibility of mosque and Marx, of Islam and communism, would serve to insure that the Arab states would never ally themselves voluntarily with the Soviets against the Western powers. The record of the past few years should by now have put that myth to rest. Algeria, Libya, Syria, Iraq, North Yemen, South Yemen, Egypt, Kuwait, and the Sudan -- all at one time or another have entered into compacts of one kind or another with the Soviet Union. Both Syria and Iraq are now linked to the Soviet Union by defense treaties.

The operating rule in the Middle Eastern part of the world is, "The enemy of my enemy is my friend." This helps account for a lot of the defensive alliances.

Fourthly, oil. I quote J. B. Kelly once again:

Arabs see the oil weapon as a gift sent by God to redress the balance between Christendom and Islam. It enables them to act as though the might and grandeur of the Umayyad and Abbasid caliphates had been restored, to lay the Christian West under tribute to the Moslem East, and to fulfill the destiny which God in his infinite wisdom has ordained for those to whom he has chosen to reveal the one true faith.

This may strike us as extravagant fancy; but fancy or reality, it has a real appeal in the Arab world.

Present oil production in the Middle East, without Iran or Iraq, amounts to about 13.6 million barrels per day. This is a shortfall of 3.8 million barrels caused by loss of Iranian and Iraqi oil. About 1.5 million barrels will be made up by increased output from other Gulf states. The new level may be at capacity or even above a safe output. The shortfall will still be 2.3 million barrels. The United States and the other 19 members of the International Energy Agency hold about a 150-day reserve. That is a slim margin, especially if the 1980-81 winter proves to be severe.

I will not review the history of OPEC; but in terms of the context of the Iranian-Iraqi war it is worth noting that three major OPEC policies projected to be realized by now are in disarray. One was to go off the dollar standard and substitute a weighted basket of currencies. At the outbreak of the war Arab nations were buying heavily into the yen, pound sterling, and other currencies. This shift must wait. Also in disarray is the idea of a common supply program -- a production target for each OPEC member. And the prospect of a common price policy does not seem realizable now.

The great fear is for bilateralization. That is, when the Iranian-Iraqi war ends both countries may feel a need to enter into bilateral deals for financing reconstruction -- with France, and with other Western powers. The whole market structure for oil would change, accentuating the element of instability in the region.

In these remarks one element is missing: the Palestinian question. This is really the wild card in the deck. Most Gulf states enjoy large "guest worker" populations -- Palestinians. There are an estimated 400,000 of them. For example, in Saudi Arabia 75 percent of the foreign labor force is Palestinian. It is estimated

that 80 percent of the population of the United Arab Emirates is foreign, and a high percentage of the foreigners is directly allied with the Palestinian cause. The meaning to be drawn is that no Arab leader can afford to ignore the Palestinian issue. To the extent that the United States or other Western powers tilt to Israel or appear to fail to take into account what is regarded as the just needs of the Palestinian people and the establishment of a secular Palestinian state -- to that extent the Palestinian question serves as a convenient rallying ground -- as a focus for some concerted effort. It is a dangerous equation which the Soviet Union has been quick to exploit. It has been subsidizing and providing arms to terrorists, polarizing East-West relations. And it is a problem that will not admit of any easy solution in years to come.

These remarks, although appearing complex, only skim the surface. The Middle East remains fascinating, puzzling, difficult, and in some respects dangerous.

THE WORLD DIMENSION TO U. S. AGRICULTURAL TRADE

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The export market for U. S. agricultural commodities can be characterized as a growth industry. Fiscal 1980 export volume is estimated by USDA to have been about 162 million metric tons valued at \$40 billion. This compares with 137 million metric tons shipped in 1978-79 valued at \$32.2 billion.

Several factors are associated with the strength in U. S. export demand. Schuh concludes that the U. S. dollar devaluation played a major role. Other persons claim a basic change in the livestock production policy of the Soviet Union and Eastern Europe was a major factor. Based on our research at the University of Missouri, we concur that these were important factors. However, we also agree with Grennes and Johnson that governmental policies in exporting countries also were important. Apparently the price insulation policies of major exporters were a very significant factor contributing to an increase in the U. S. share of world trade, especially for wheat and coarse grains.

Combined with these interrelated factors is the apparently strong demand for meat products in developed countries, as seen in Western Europe, Japan, and Canada.

Policies in importing and exporting countries affect U. S. markets. The European Economic Community, for example, places relatively high variable levies on imported coarse grains and wheat. This is also the case in Japan. Canada controls wheat exports via a wheat marketing board. Farmers are assigned a production quota and receive final payment for grain after export sales are concluded. In this manner farmers receive price signals that are lagged somewhat longer than in the U. S. market. In conjunction with this strategy, Canada has experienced transportation constraints that have reduced export capability.

Soybeans and their products, on the other hand, are traded in a comparatively free market environment. For this reason we agree with Schuh that the international monetary market has been a particularly significant factor in determining the level of world trade and therefore U. S. exports of beans and bean products.

We conclude that the following factors have been the most significant inducements for U. S. trade in grains: (1) U. S. policy that encouraged exports to centrally planned economies beginning in the early seventies; (2) a shift in consumer demand toward meat products in developed countries; (3) decisions in centrally planned economies to increase meat supplies to consumers; (4) supply limitations by major U. S. competitors via price signals to producers, together with transportation constraints; (5) devaluation of the dollar relative to currencies in developed countries; (6) the ability to respond to higher prices in bringing additional area into production; and (7) the current U. S. farm program based on a managed buffer stock policy.

The purpose of this paper is to examine the fundamental economic forces underlying this rapid expansion in exports. This will be done by examining, via trend analysis, the gaps between consumption and production for major trading regions; shifts in world utilization and in levels of supplies from competing countries; impacts world economic variables have on the U. S. sector, employing an econometric model; and the most likely future directions the U. S. industry will take.

World Trends in Coarse Grains, Wheat, Soybeans

As they comprise the major portion of U. S. exports, this section is limited to the three major export commodities, corn (and other coarse grains), wheat, and soybeans.

Corn exports, after remaining in the 600-million-bushel range during the late 1960s, increased dramatically to 1,258 million bushels in 1972. In the past 10 years the volume has doubled again to around 2.5 billion bushels. Associated with these changes is the amount of U. S. cropland reflected in corn exports. The harvested acreages are about 7 million in 1969, 13 million in 1972, 22 million in 1979. Corn

exports now are about 40 percent of U. S. corn production and equivalent to the same percent of acreage.

Exports of wheat and of soybeans and soybean products have increased substantially during the same period. Wheat exports were 610 million bushels in 1971, representing 18 million harvested acres and 55 percent of U. S. production. The 1979-80 export volume is estimated by the USDA to have been 1,375 million bushels representing 40 million harvested acres and 64 percent of U. S. production.

Soybean exports in 1971 were 416 million bushels, the harvest of 15 million acres and 35 percent of production. Exports of beans for the 1979-80 crop year are estimated at a record 875 million bushels, from 27 million harvested acres. They were 38 percent of U. S. production. Exports of meal and beans combined in 1979-80 were 32.5 million metric tons, equal to about 1,200 million bushels of beans -- equalling approximately 37 million acres of land and 53 percent of production.

The magnitude of this export market in 1979-80 is reflected in total land area attributable to grain and soybean exports. Of the 260 million acres in those crops approximately 40 percent was directly related to the level of exports; that is, about 4 acres out of every 10 planted were utilized to support this level of exports.

Figures 1 through 5 give an overview of the world coarse grain industry. Production and consumption for each major region are shown plus trend equations based on data for the period 1960 through 1978.

Figure 1 reflects the total world coarse grain complex with total consumption projected at 742 million metric tons in 1980 and corresponding production at 723 million metric tons. The trend rate of growth in world consumption is 14.8 mmt. or 583 million bushels per year.

The Soviet Union, figure 2, and Western Europe, figure 3, account for a significant portion of world growth in demand. The trend gap, consumption above production, for these two regions combined as of 1980 is 36 million metric tons (1,418 million bushels). The gap is growing at the rate of 31 million bushels in the Soviet Union and 15 million bushels in Western Europe. Figure 4 represents the differential in growth for all other regions, which include Japan, Canada, and less developed countries. As in the previous case the gap between consumption and production is growing, in this case at a rate of 43 million bushels per year with a current trend gap of about 790 million bushels.

Figure 5 represents coarse grain trends as a total for all regions outside the United States. It helps to explain the growing dependence by foreign markets on U. S. coarse grains. The consumption-production gap has widened about 90 million bushels per year. The current trend-level dependence is almost 2.2 billion bushels.

As indicated by figure 6 the United States has been able to sustain a production capacity that accommodated these fairly rapid rates of growth in the world market. This has primarily been accomplished by utilizing the equivalent of an additional 1 million acres of coarse grain area each year.

Figure 11 indicates that almost 40 percent of U. S. corn production is now exported. It also shows the rapid expansion of corn exports since 1970, a growth rate of 200 million bushels. The longer trend beginning in 1950 was only 63 million bushels increase per year.

Figures 12 through 17 sketch the world situation for wheat. As indicated by figure 12, world consumption of wheat is growing at a rate of 9.52 mmt. per year (350 million bushels). The consumption and production levels for the world in 1980 are estimated by the USDA to be respectively 438 mmt. and 444 mmt.

The USSR, figure 13, became a net importer in the late 1960s and has continued so since. The trend gap between consumption and internal production as of 1980 is about 6 mmt. (220 million bushels) and is growing at an annual rate of 23 million bushels.

Western Europe, figure 14, has converted from a net importer of wheat to a net exporter, a balance that has prevailed since the early 1970s. Currently these trends suggest that Western Europe now produces about 5 mmt. (184 million bushels) in excess

FIG. 1 WORLD COARSE GRAINS

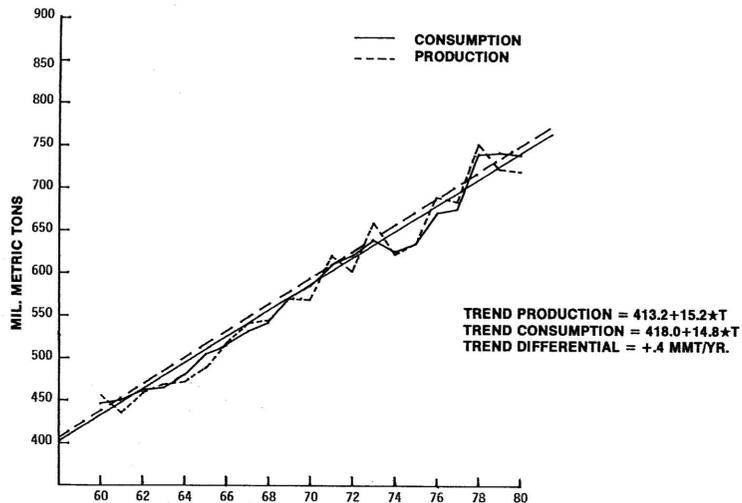


FIG. 2 USSR COARSE GRAINS

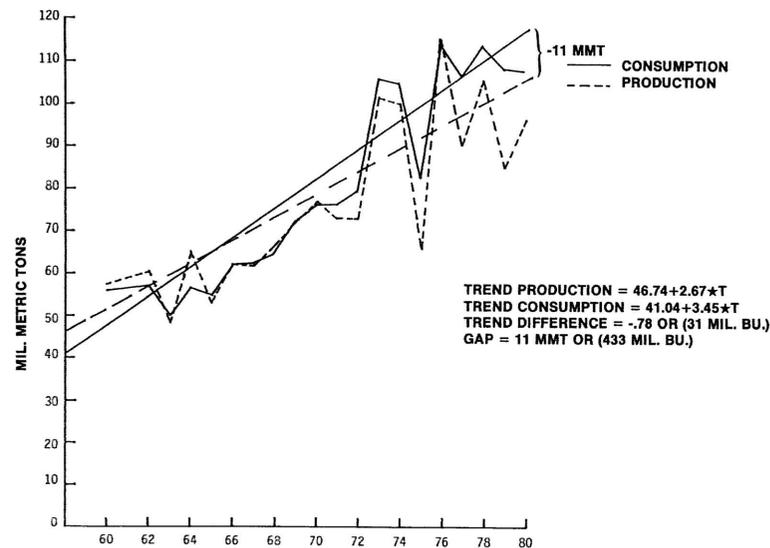


FIG. 3 WESTERN EUROPE COARSE GRAINS

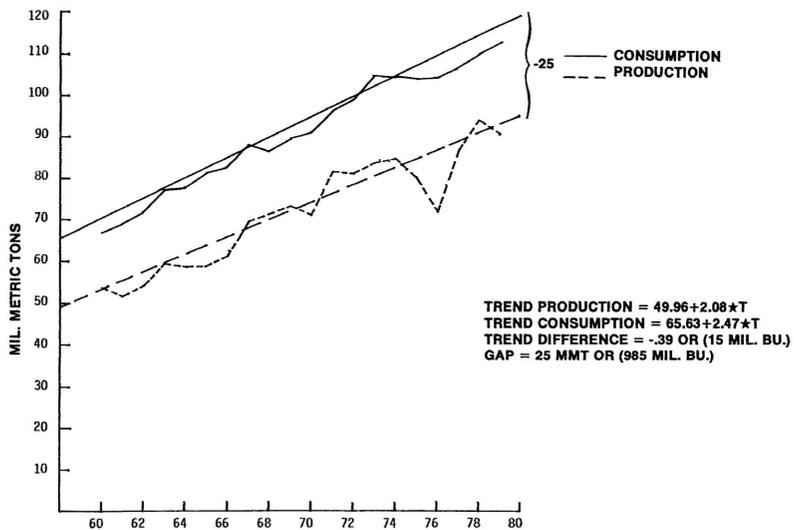


FIG. 4 OTHER AREAS-COARSE GRAINS

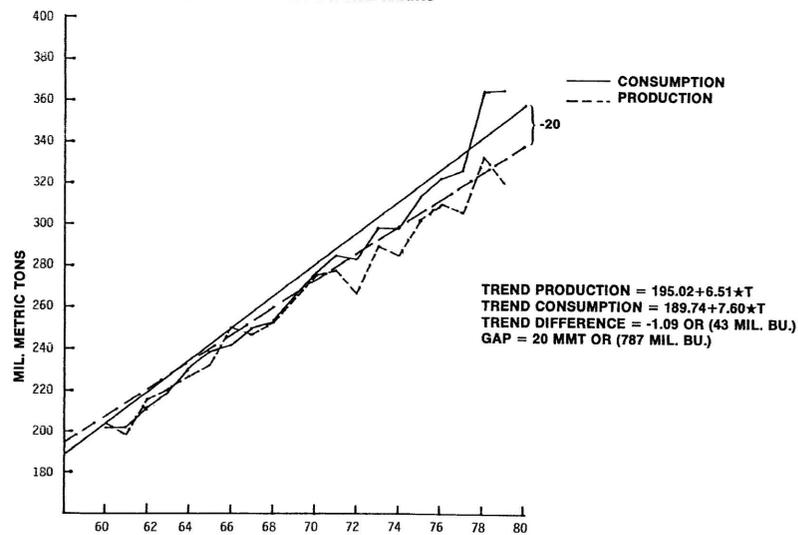


FIG. 5 FOREIGN COARSE GRAINS - NON U.S.

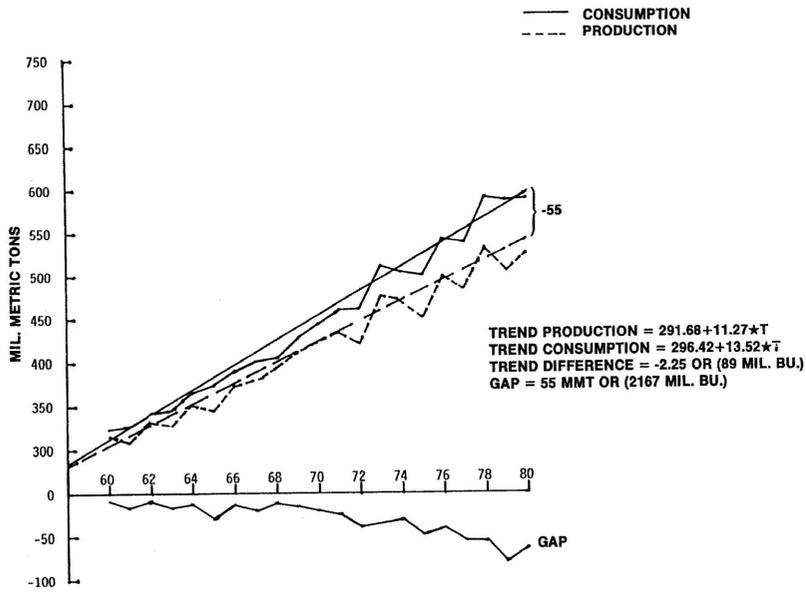


FIG. 6 UNITED STATES COARSE GRAINS

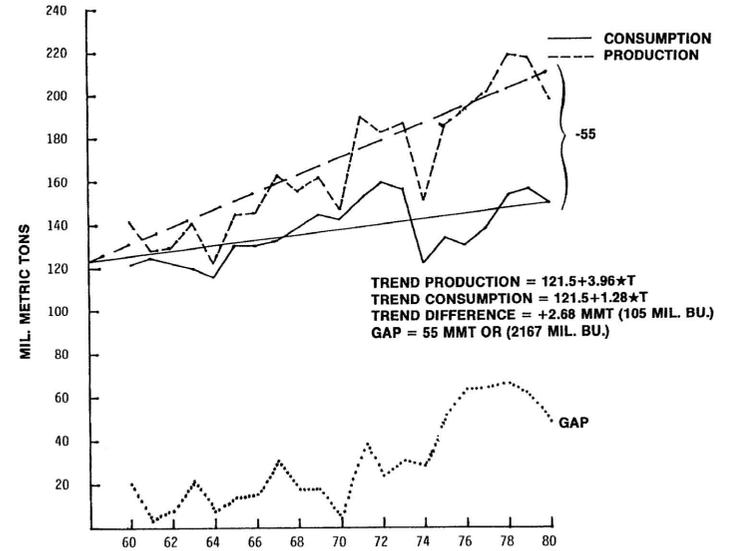


FIG. 7 U.S. CORN EXPORTS BY DESTINATION (1000 METRIC TONS)

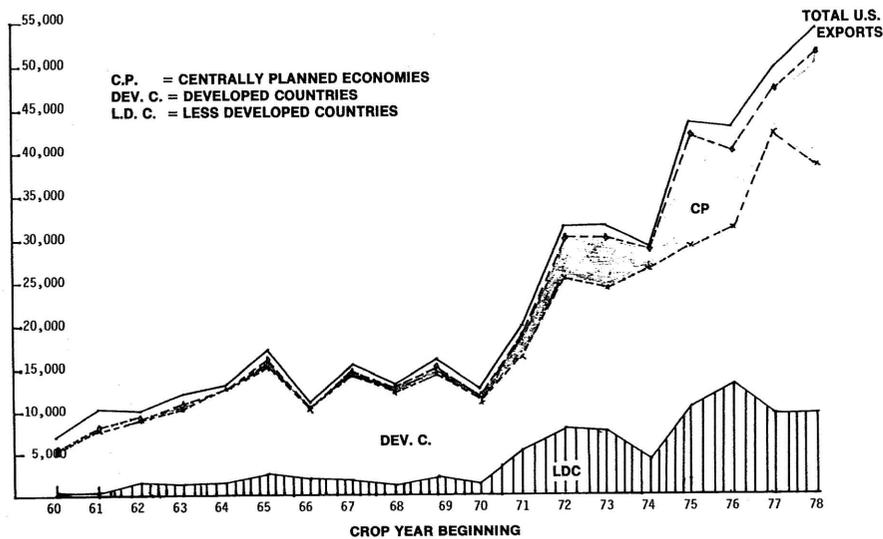


FIG. 8 NET COARSE GRAIN IMPORTS (1000 MET TONS)

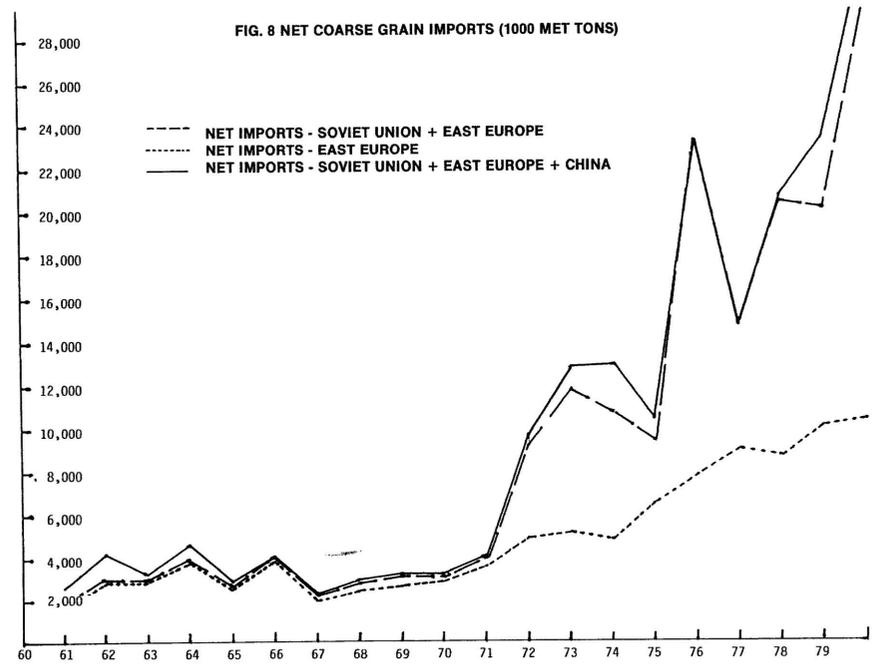


FIG. 9 CORN, JULY/JUNE YEAR (1000 MET. TONS)

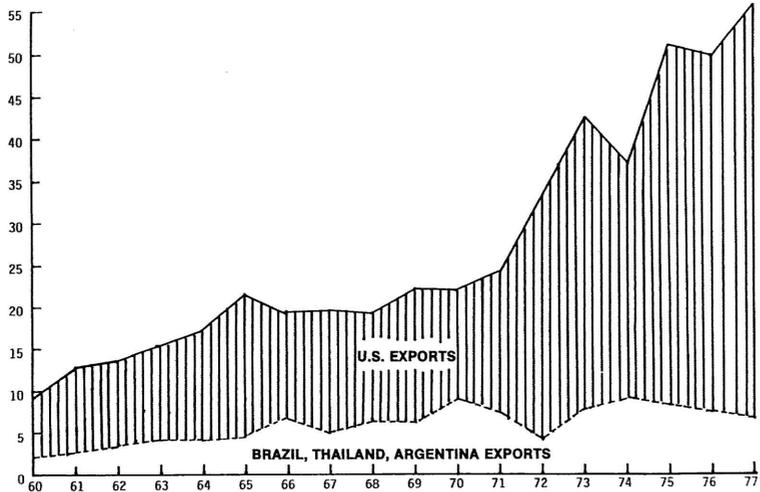


FIG. 10 CORN, HECTARES HARVESTED (MILLIONS)

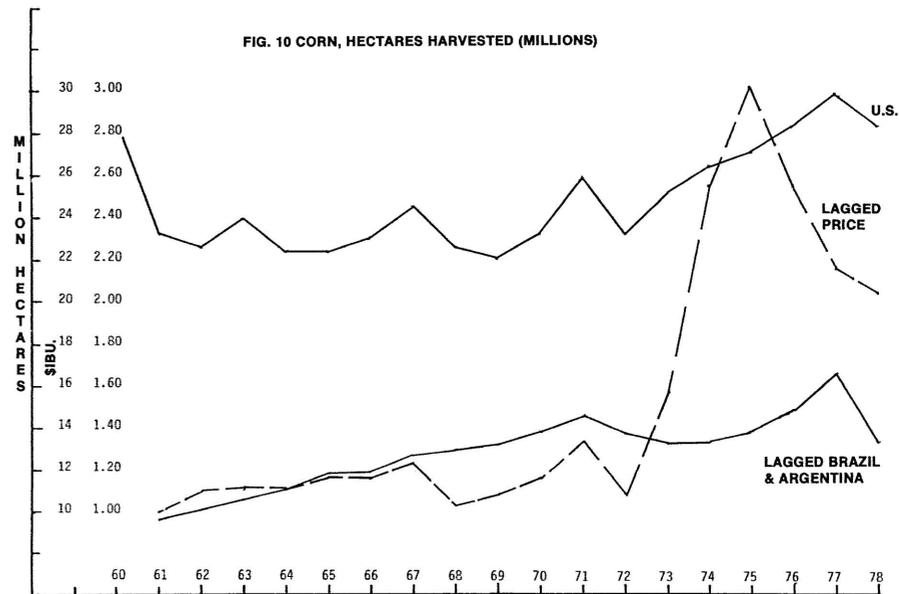


FIG. 11 CORN EXPORTS - U.S.

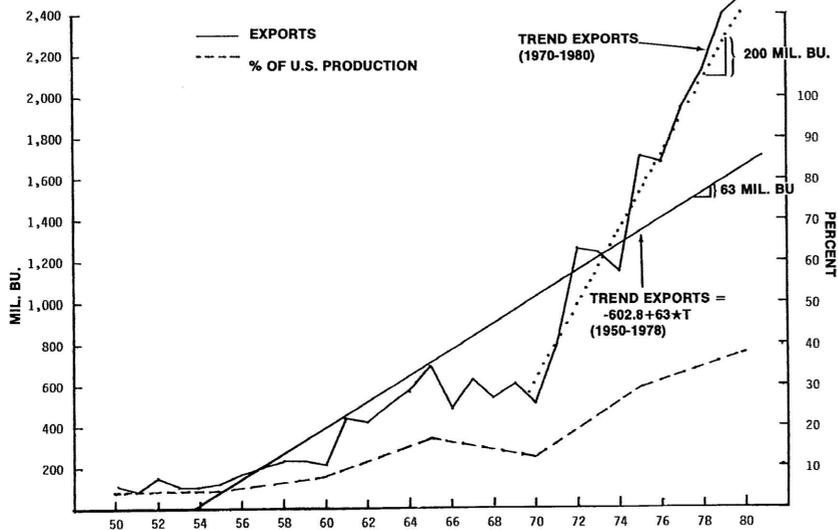


FIG. 12 WORLD WHEAT

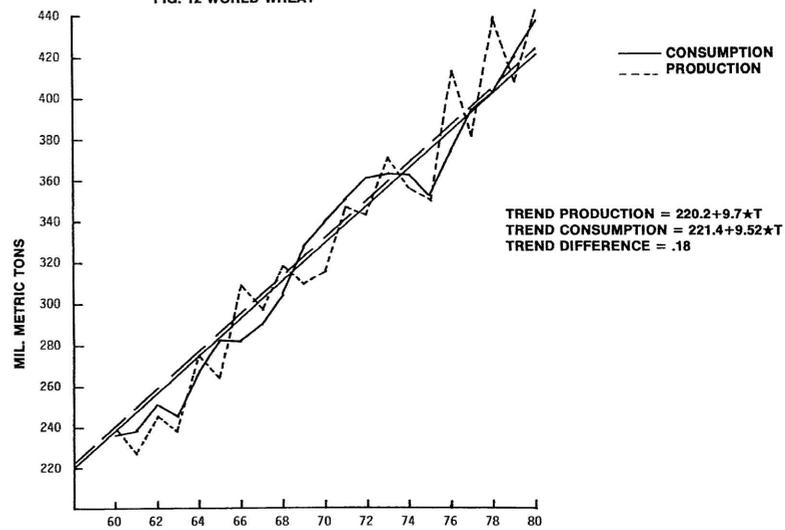


FIG. 13 USSR WHEAT

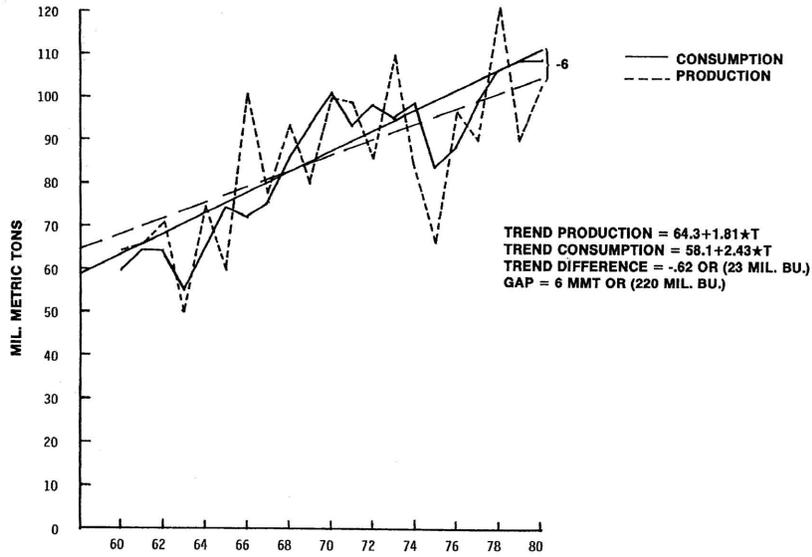


FIG. 14 WESTERN EUROPE WHEAT

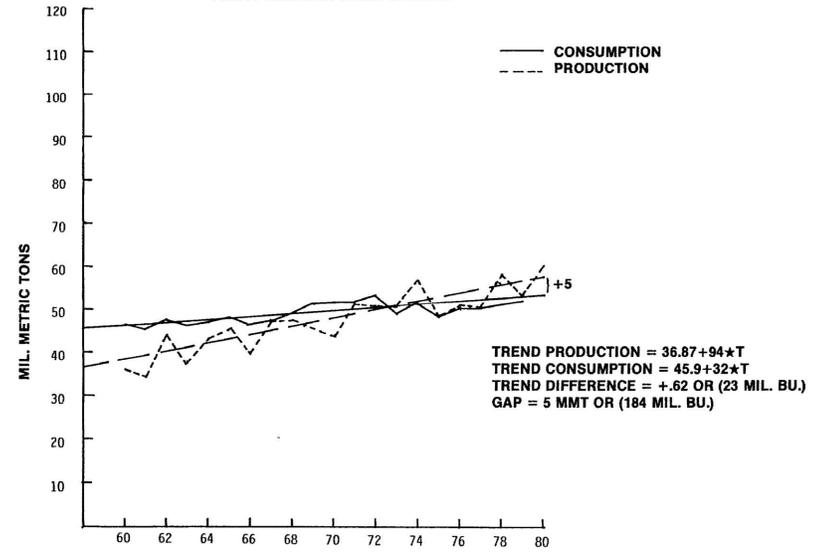


FIG. 15 OTHER AREAS WHEAT

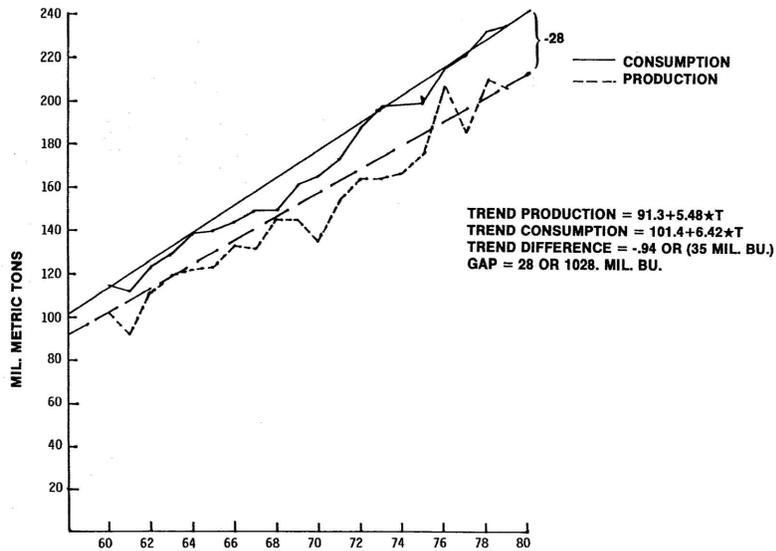


FIG. 16 FOREIGN WHEAT (NON-U.S.)

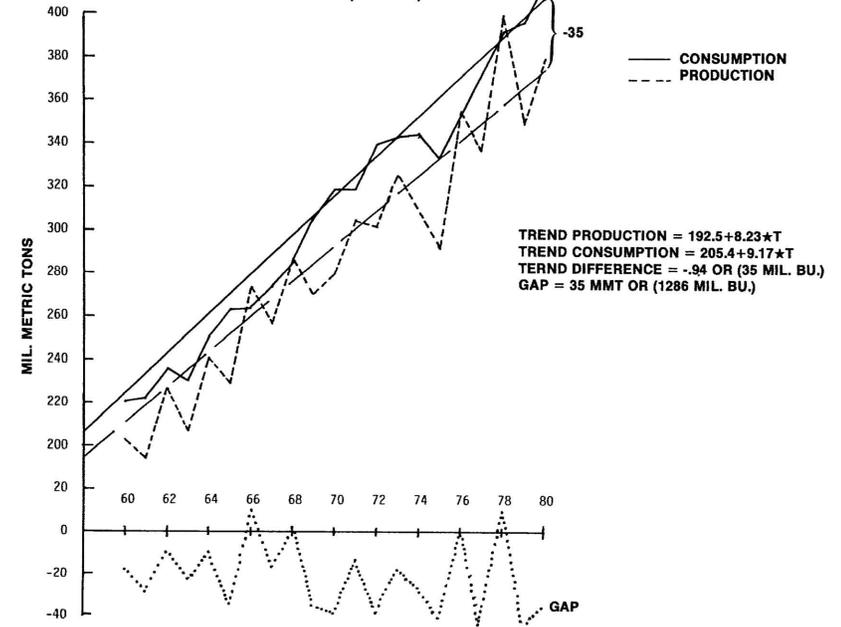


FIG. 17 UNITED STATES WHEAT

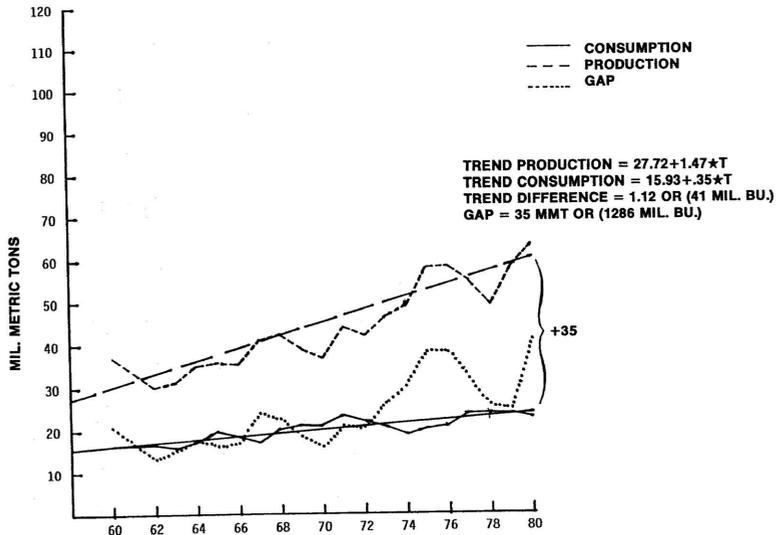


FIG. 18 U.S. WHEAT EXPORTS BY DESTINATION

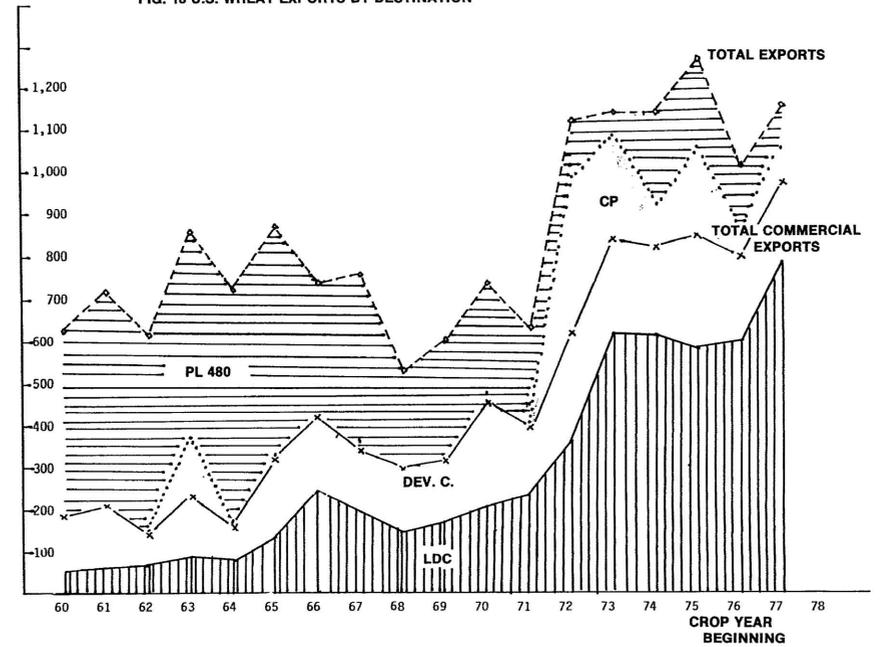


FIG. 19 NET WHEAT IMPORTS

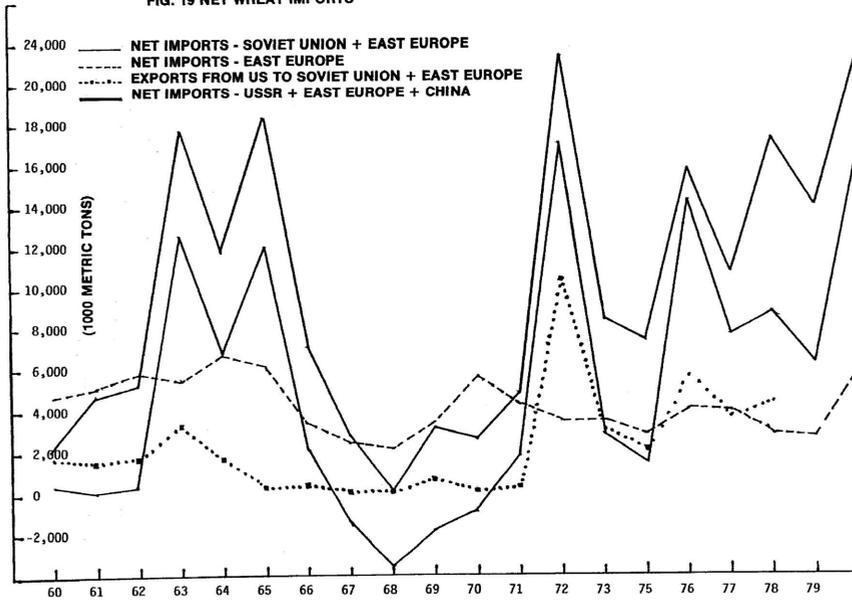
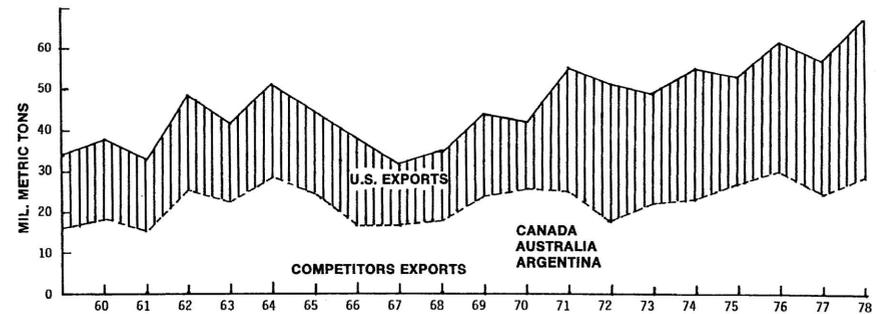


FIG. 20 WHEAT EXPORTS JULY/JUNE YEAR



of consumption and that the margin is increasing at a rate of 23 million bushels per year. This exactly offsets the deficit rate by the Soviets; however, as of 1980 the Soviet deficit (trend value) is a little greater than the Western Europe surplus.

Other areas in the world, (less developed countries, Japan and Canada) are also net importers of wheat (figure 15). The deficit is growing at a rate of 35 million bushels per year with a substantial 1980 gap between consumption and production of 28 mmt. (1,028 million bushels).

Figure 16 represents all areas outside the U. S. The trends indicate that production in the rest of the world is not keeping pace with consumption. The gap of 35 mmt. (1,286 million bushels) as trend value for 1980, signifying dependence on U. S. production, widens about 35 million bushels per year.

Figure 17 reflects the U. S. position. U. S. agriculture has contributed slightly in excess of 1 million additional acres of wheat each year.

Figure 22 indicates that U. S. wheat exports have increased 31 million bushels per year as a long run trend. However, this rate has almost doubled since 1968, moving up to 50 million bushels per year. Using actual yields for the 1979-80 crop of 32.5 bushels per harvested acre, this growth implies an additional 1.5 million acres per year to cover the expansion in wheat exports -- a little more than the long run trend.

Figures 23 through 26 reflect the growth in the U. S. soybean export market. As indicated in figure 23, the U. S. difference between production and consumption has been growing at a rate of 30 million bushels per year. This is roughly equivalent to 1 million additional acres of land each year to meet growing export market requirements. The long term trend, however, has accelerated since 1968, growing recently at a rate of 40 million bushels each year or about $1\frac{1}{4}$ million acres of soybean land.

In summary, these rates of growth in exports of the three commodities require 3 million more acres of cropland each year. If these rates continue U. S. agriculture could face land constraints by the mid 1980s.

World Utilization and Competing Supplies, Grains and Soybeans

For coarse grains and soybeans and soybean products the primary strength in export demand has come from developed countries. Figures 7 and 26 illustrate. Corn exports to these regions have tripled since 1970, moving from 10 mmt. then to 29.3 mmt. in 1978. In 1978 developed countries took 54 percent of total corn exports, a reduction from 80 percent in 1970. Less developed countries increased their share from 1.4 mmt. to 9.6 mmt. during the period, a growth rate of 0.9 mmt. per year. Developed countries stepped up their takings 2.1 mmt. per year.

Additional strength in exports since the early 1970s came from the centrally planned economies (figures 7 and 8), principally the Soviet Union and Eastern Europe. Those buyers took 0.72 mmt. of U. S. corn in 1970 and 13.5 mmt. in 1978, a growth rate of 1.4 mmt. per year.

In 1975 the U. S. exported 15.1 mmt. of soybeans. Developed countries accounted for 72 percent of these exports. Of the approximately 14 mmt. shipped in 1978 these countries represented about 66 percent of total exports.

The mix of destinations of wheat exports has changed dramatically since the mid 1960s (figure 18). Of U. S. wheat exports of 725 million bushels in 1964 approximately 77 percent were PL-480 shipments. Commercial exports comprised 103 million bushels to developed countries and 60 million to less developed countries. This pattern continued until 1972 when the U. S. policy shifted towards less aid commitments and centrally planned economies were allowed to trade for U. S. wheat.

This latter policy shift is also reflected in figure 19. Centrally planned economies have been significant but highly variable traders in the world market. In 1963 and 1964 net wheat imports by these regions reached 18 mmt. but these in-

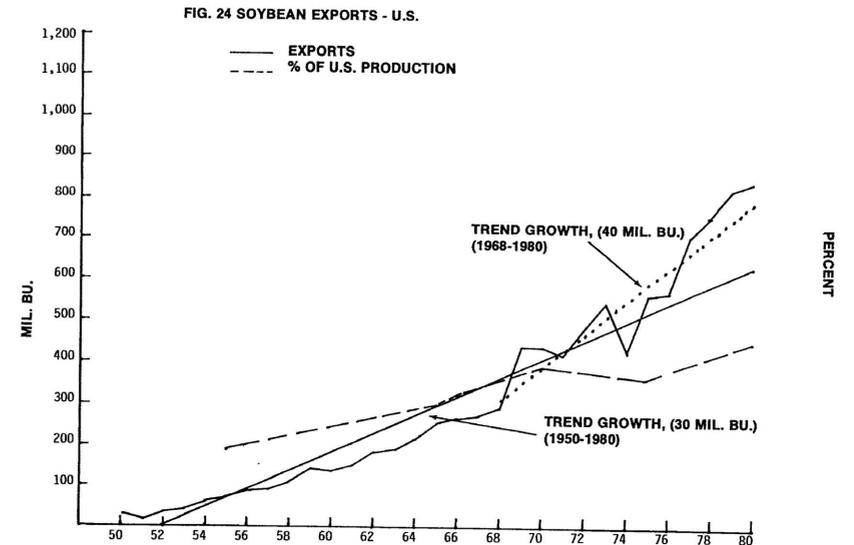
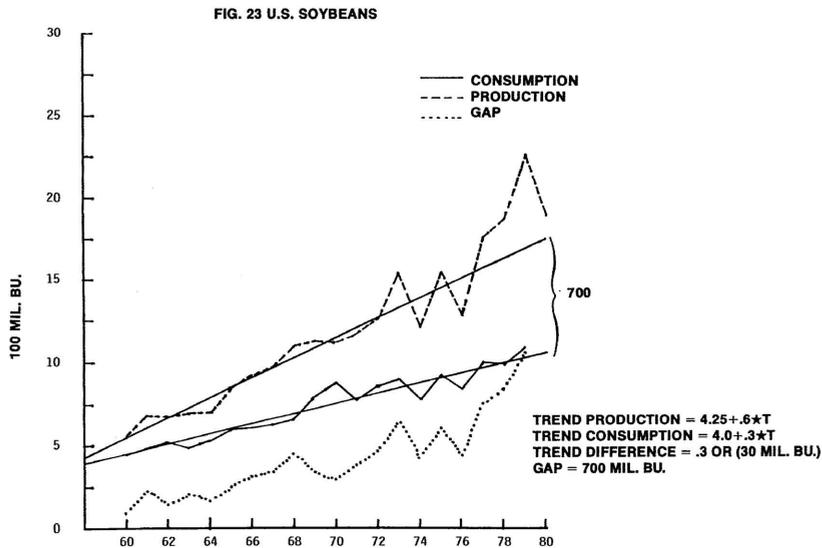
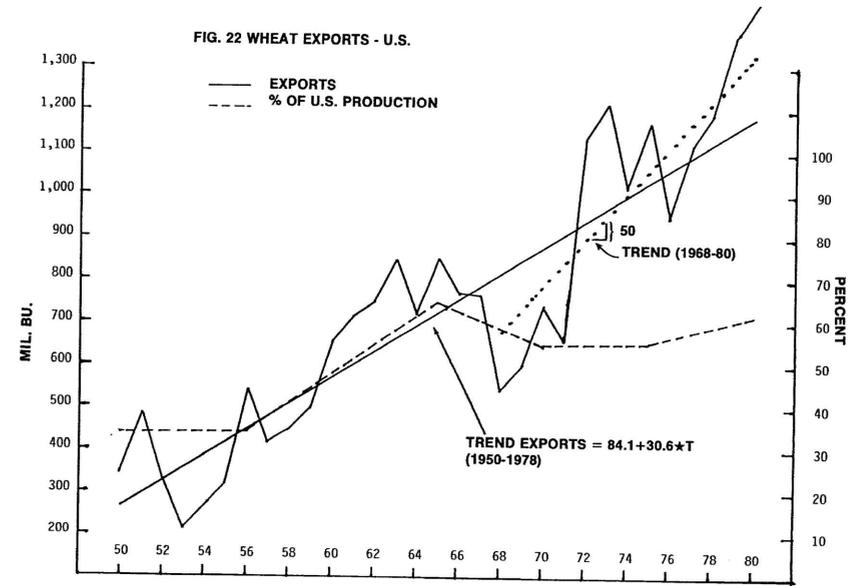
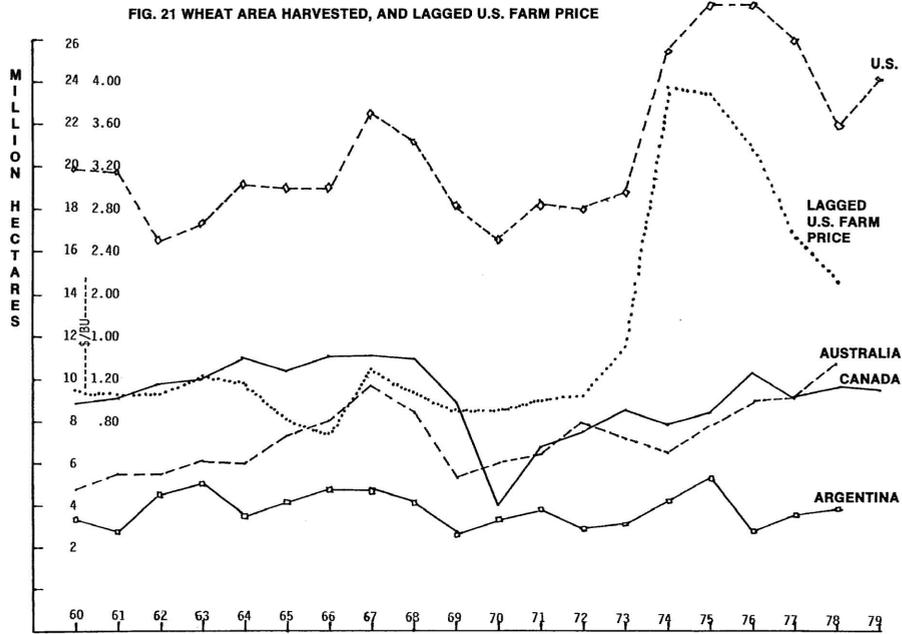
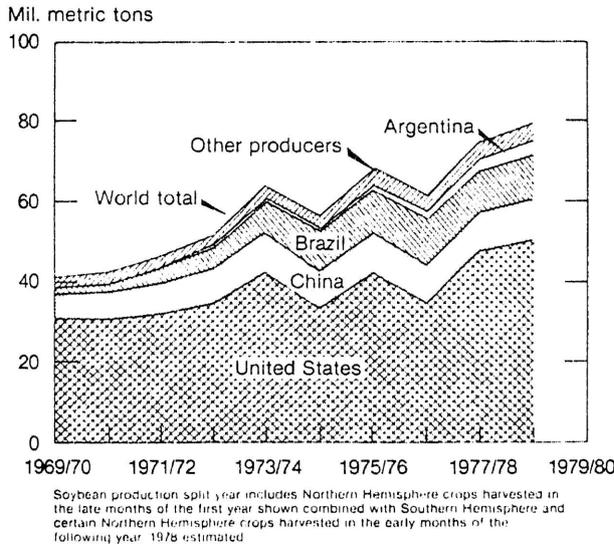


Fig. 25

Where the World's Soybeans are Grown



Fats and Oils Produced from U.S. and Imported Materials

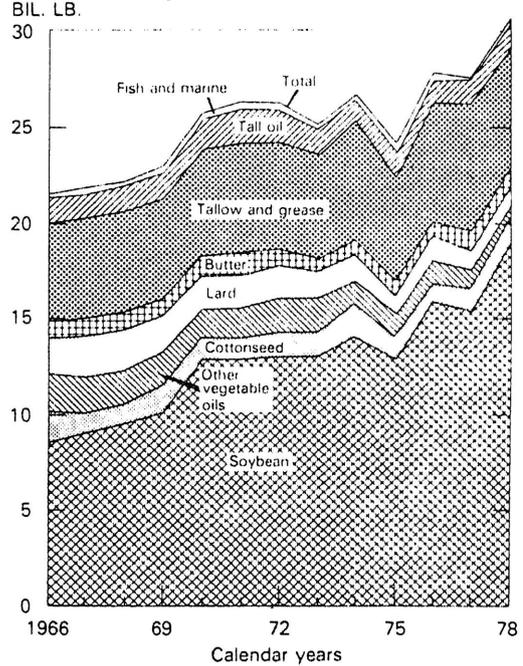
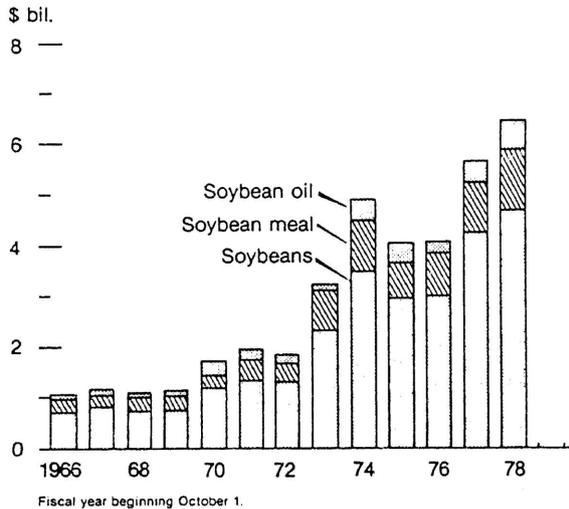
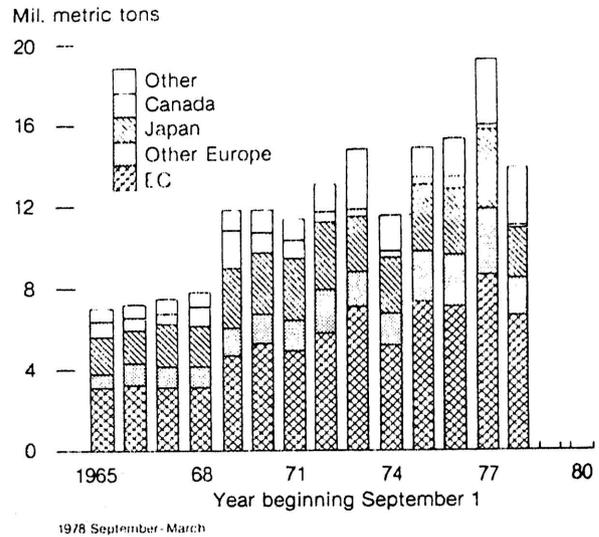


Fig. 26

Value of U.S. Exports of Soybeans And Products



What Countries Take U.S. Soybean Exports



U.S. Exports of Soybeans and Products¹

	1975/76	1976/77	1977/78	1978/79
	<i>Million dollars</i>			
Total	4,052.0	5,637.6	6,410.9	4,486.9
Soybeans	3,038.3	4,306.6	4,749.0	3,376.5
Soybean meal	806.1	917.9	1,121.1	764.1
Soybean oil	207.6	413.1	540.8	346.3

¹ October-September, except 1978/79, which is October-March.

Totals computed from unrounded numbers.

U.S. Exports of Soybeans by Destination

	1975	1976	1977	1978 ¹
	<i>Million metric tons</i>			
Total exports	15.1	15.4	19.1	13.9
Europe:				
EC	7.2	7.0	8.6	6.6
Other	2.4	2.5	3.3	1.8
Japan	3.2	3.2	3.6	2.4
Canada	.4	.5	.3	.2
Other	1.9	2.2	3.3	2.9

¹ September-March.

Fig. 27

U.S. Exports as Share of World Trade

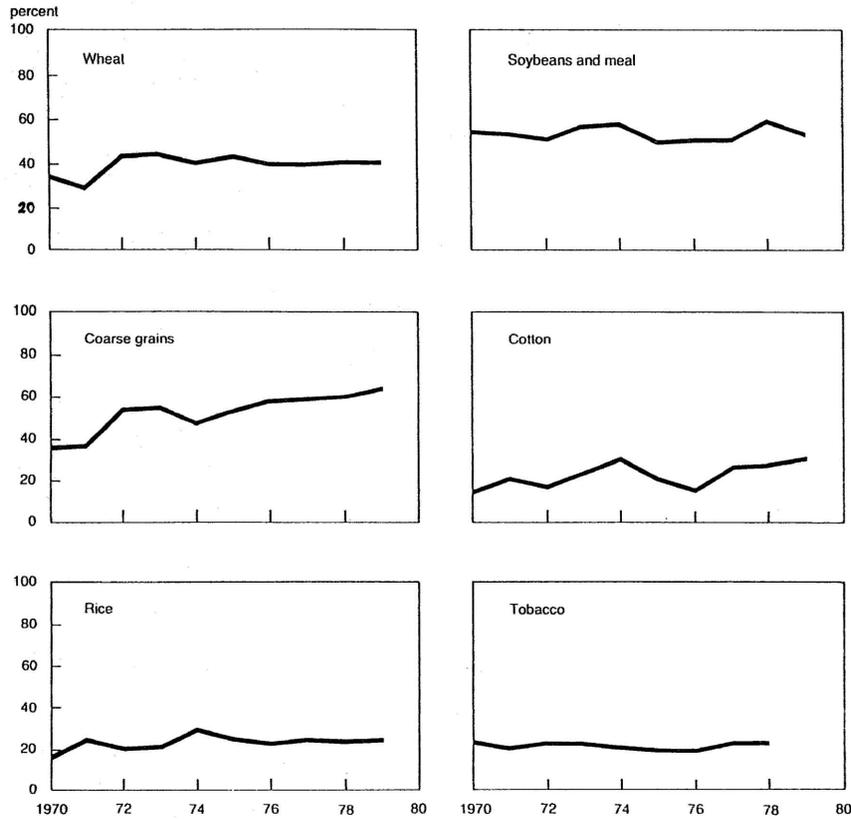
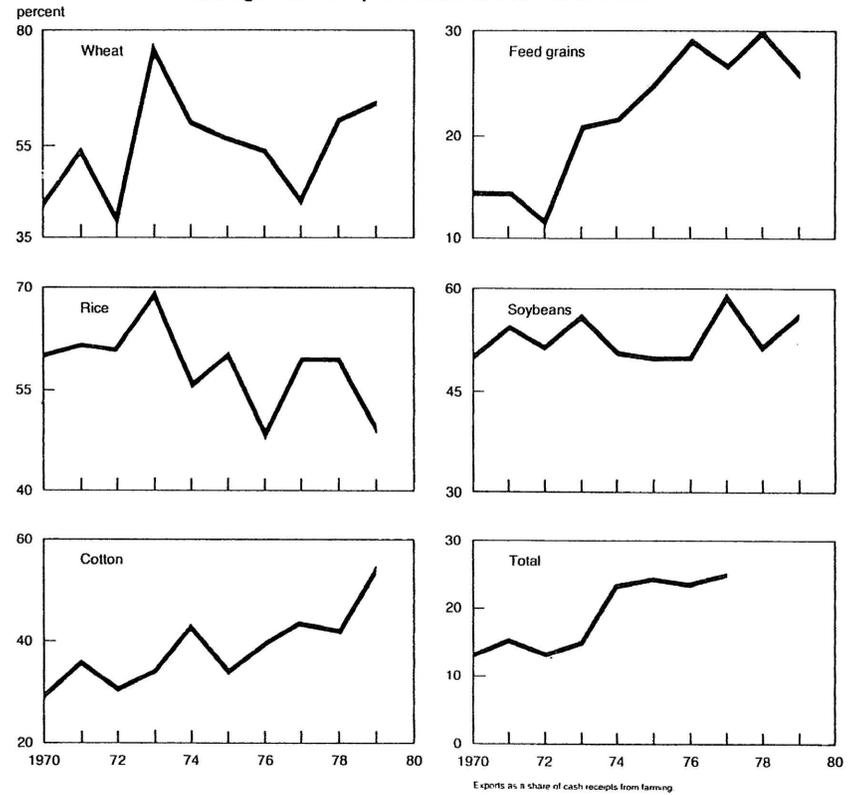


Fig. 28

U.S. Agricultural Exports as a Share of U.S. Production



cluded very little from the United States. In 1972 these countries had a net import of almost 24 mmt. of which the U. S. supplied approximately 15 mmt., more than one-half.

Wheat buying by centrally planned economies continues upward with China becoming more significant recently. U. S. exports to these regions have recently fluctuated around 4 mmt. of wheat per year. Minimum trade agreements with the Soviet Union and China will likely sustain a sizable share of this market.

The United States has remained a viable competitor during recent rapid expansion in world trade for grains and soybeans. The U. S. share of the world wheat market increased from 45 percent in the early 1970s to around 56-59 percent later in the decade (figure 20). U. S. production increased during those years. Major wheat exporters increased their harvested area from an average of 38.1 million hectares in 1970-71 to 1972-73, to 48.8 million in 1973-74 to 1975-76 (figure 21). The United States accounted for almost 64 percent of the increase.

These data imply either that (1) producers in other major exporting countries did not perceive a significant increase in prices or (2) unlike the U. S., other major countries did not have additional capacity available.

Adverse weather may occasionally have played a role as the data reflect harvested rather than planted area. At the very least, the data indicate a very slow and relatively small response in production by major exporters other than the United States. Canada, for example, did not reach a level of production equal to that of the mid-sixties until 1976-77.

The United States may have an equal or greater comparative advantage relative to the rest of the world in coarse grains than in wheat (figures 9 and 10). The three major competing regions, Brazil, Thailand, and Argentina trended upward in corn exports from around 2.4 mmt. in 1960 to 7 mmt. in 1977. During the same period U. S. exports increased from 6.3 to 49 mmt. The current U. S. share of world trade is in excess of 60 percent. This share was about 38 percent in 1970 (figure 27).

As in the case of wheat major competitors have not kept up with the pace of world demand in coarse grains. Thus the United States through its ability to bring additional land into production plus increasing yield per acre, has captured a steadily larger percentage of world trade each year.

Soybeans are grown primarily in the United States, Brazil, Argentina, and China. The U. S. percentage averaged about 60 percent in the later 1970s (figure 25). Unlike corn and wheat, where the U. S. share has increased over time in soybeans our South American competitors have been able to keep pace. Brazil and Argentina have held a fairly constant percentage of total world trade. But all regions have experienced stronger demand. From year to year, however, the U. S. soybean market has felt the impact of production variations in those countries.

Economic and Other Variables Associated with Export Demand for U. S. Grains and Soybeans

An econometric model of the U. S. grains industry developed by the agricultural economics department at the University of Missouri-Columbia has been utilized to examine impacts of factors affecting world trade. The model is designed to reflect the total structure of the grain and soybean industry. Equations reflect the U. S. production industry via crop acreage, domestic utilization of feed, food, commercial stock, government purchases, farmer-held reserves, policy exports to centrally planned economies, and commercial exports.

The model has been solved for variables that represent these factors. A summary of these impacts follows.

Table 1 reflects the price impact of corn, wheat, and soybeans relative to quantities of these grains shipped to centrally planned economies -- the Soviet Union, Peoples Republic of China, and Eastern Europe. The decision by the U. S. Government to enter these markets resulted in expansion of trade after 1970 as indicated by figures 7 and 18.

But the level of this expanding trade has been scarcely predictable from year to year. In 1974, for example, the U. S. shipped less than 100 million bushels of corn to these regions. In 1975 and 1978 more than 500 million bushels of corn flowed into these markets.

According to the impact measures given in Table 1, approximately 17 cents of the 1974 season average price of corn could be associated with those exports. In 1975 and 1978 approximately 85 cents of the season average price is estimated to be related to markets in centrally planned economies.

Shifts from year to year also have a spillover impact. Since grains and soybeans are competitive in the world market, even with each other, shifts in corn prices result in changes in wheat and soybean prices. Thus while the expansion in trade has contributed to the overall strength in U. S. prices, the underlying fact is that additional volatility has been introduced into the U. S. market place.

Minimum trade agreements in conjunction with a managed stock program in the United States are aimed at reducing some of the rather strong shocks.

Table 1

Price Impact of U. S. Grain and Soybean Exports
to Centrally Planned Economies, and of Wheat
Exports under PL-480

Item	Increase in U. S. price per bushel		
	Corn	Soybeans	Wheat
Exports to centrally planned economies (100 mil. bu.)			
Corn	\$.17	\$.14	\$.07
Wheat	--	--	.40
Soybeans	.22	.81	.09
PL-480 Exports (100 mil. bu.)			
Wheat	--	--	.15

Table 2

U. S. Price Impact of Livestock Production and of Grain
and Soybean Supplies and Export in Foreign Countries;
and of Selected Monetary Variables

	Increase in U. S. price per bushel		
	Corn	Soybeans	Wheat
Livestock production (1,000 mt.)			
Hogs, EC6	.30	.56	.08
Hogs, Japan and U. K.	.20	.37	.24
Poultry, EC6	.86	1.65	.22
Poultry, Japan and U. K.	.55	1.01	.45
Crops			
Wheat supply, all foreign countries (10 mmt.)	--	--	-.23
Corn exports, all foreign countries (1,000 mt.)	-.07	-.05	-.03
Corn supply, EC9 (1,000 mt.)	-.06	-.05	-.03
Soybean exports, Brazil (1,000 mt.)	-.08	-.30	-.04
Soybean meal exports, Brazil (1,000 mt.)	-.09	-.18	-.04
Monetary variables			
EC threshold price (10 UOA/mt.)	.03	.17	.01
Dollar devaluation (\$/SDR, 10%)	.09	.42	.04

Table 1 also implies that wheat shipped under PL-480 agreement has less overall price impact than wheat shipped to centrally planned economies -- approximately 15 cents per 100 million bushels in the former case and 40 cents per 100 million bushels in the latter. A decision by the U. S. Government to curtail PL-480 shipments of wheat in 1971, figure 18, resulted in expansion of commercial trade with its higher market price impact. This implies that for each 100 million bushels delivered under the PL-480 program, commercial exports would decline such that net exports were substantially less than the original 100 million bushels. Therefore this change in policy would imply higher domestic price impacts as the PL-480 share of exports decline. This has been the case since 1971.

Table 2 reflects measured price impacts associated with foreign economic and policy variables. As implied by these price measures, the growth in the livestock industry in key foreign countries has contributed to the strength in the U. S. prices of grains and of soybean and soybean products, all of which helped to support this expanding industry.

Hog production has expanded in the European community (EC-6) by about 1.4 million metric tons (mmt.) since 1971. Each additional 1.0 mmt. is estimated to increase corn prices by 30 cents per bushel, soybeans by 56 cents, and wheat by 8 cents. Poultry production has a stronger price impact relative to volume; it has expanded 0.69 mmt. since 1970.

Foreign countries have increased their production of grains and soybeans, all of which are competitive with U. S. supplies. However, as indicated by figure 27, the United States has steadily expanded its share of trade in coarse grains and has maintained a firm percentage of the wheat and soybean market.

Devaluation of the dollar relative to trading partners has also helped to expand exports and therefore contributed strength in grain and soybean prices. The approximate 20 percent dollar devaluation is estimated to have added an additional 82 cents strength in bean prices, 18 cents in corn, and 8 cents in wheat since 1971. The relatively higher impact on soybeans is associated with the free market nature of world trade for soybeans and soybean products. Wheat and coarse grains enter markets that are constrained by levies and grain marketing boards which normally imply an above-world-market price.

Implications for the Future

Although the present atmosphere is optimistic, the overall picture is not entirely rosy. Continued strength in export demand will require an additional 20-24 million acres of land by 1990, barring any breakthrough in crop yields. Additional land reserve is estimated to be about 30 million acres; thus this scenario implies that the United States may begin to approach land constraints by the mid to late eighties.

This increased pressure on demand will result in higher prices for grains. Fertilizer, however, as well as capital equipment and other inputs will continue to rise in price and elevate costs of production. Marginal land will be more expensive to bring into production and it will be less productive. Therefore higher prices for grain crops will be less yielding of added output in the future. Higher prices for crops would of course be necessary to sustain farmers' income, which may not improve appreciably.

Any substantial expansion in acreage would raise problems of soil conservation. Also, if a new boom in exports were to press on supplies of farm products for domestic consumption, policy issues, especially in the area of embargoes, would be difficult to resolve.

A short-term remedy to the Soviet grain embargo was to increase production of ethanol for motor fuel that could require an additional 50 million bushels of coarse grains (the harvest of about 500 thousand acres) each year. This may prove to be the most critical decision made by the administration in handling the embargo.

Exports and ethanol use could mean higher prices for feed grains, primary inputs into the livestock industry. The residual impact will be reflected in a slower expansion of livestock supplies with corresponding implications for domestic food prices.

An alternative scenario is related to the steady increase in energy prices and the corresponding strain on economies of the world to keep pace, especially underdeveloped countries. Shifts in this direction are unclear and rather difficult to predict. However, economic decisions will be concerned with short term versus longer term capital and other productive investment. If countries run into enough trouble U. S. exports will not continue on the paths implied in the above analysis, but will be somewhat smaller. In this event the United States could return to the position of carrying the larger proportion of world stocks, and functioning as the residual supplier on the world markets; and prices could be at or near U. S. loan rates. Some of this lower price impact could be offset by imposing set-asides of U. S. acreage so as to bring the total industry into balance. This is a greater possibility for wheat than for the coarse grains and soybeans and soybean products, as world pressure of demand is likely to be less for wheat than for the other products.

THE INTERNATIONAL MONETARY SYSTEM IN RETROSPECT

Don Schilling
Professor of Economics

The stories economists tell seldom have a moral. I feel it my duty to fill that deficiency: I offer a moral first. You may choose to believe it or not as you please, but I will build my story around it.

Moral: "When you get what you think you want, it is seldom good for you."

Everyone who has taken a course in international economics knows about the gold standard and how it works. A nation on that standard declares a price for gold in terms of its currency and stands ready to buy or sell "unlimited" quantities of gold at that price. The result is an implied "mint par" exchange rate between any two gold standard currencies. Also, there is always a means by which to obtain or dispose of a "foreign" currency through gold at a fixed price. The mint par is banded above and below by gold arbitrage points at a distance determined by shipping and insurance costs on gold. The instant an exchange rate touches one of these points, gold arbitragers who have been lurking at the edge of the market like jackals at the edge of a lion pride's supper leap into action. They buy the foreign currency in whichever market (foreign exchange or through gold) is cheaper and sell it in the other (dearer) market for a guaranteed profit. The movement of gold simultaneously shrinks the (gold backed) currency of the gold losing (deficit) country and expands that of the gold gaining (surplus) country, causing the former's price level to fall and the latter's to rise. All of this was pointed out by David Hume in a truly beautiful essay in 1752. The international equilibrium once disturbed is thus restored automatically and with beautiful simplicity.

Insofar as this system ever existed, it was snuffed out along with several million lives by World War I. Many years later, when W. A. Brown, Bloomfield, and Morgenstern systematically sifted the data on the workings of the gold standard, they found that in actuality, gold rarely moved. The remarkable exchange rate stability of the major currencies for the half century preceding 1914 was largely due to two factors: (1) shrewd manipulation of interest rates and credit availability by the Bank of England, and (2) a constellation of conditions in the developed and developing countries which now appears to have been a unique moment in history, one unlikely to be repeated.

The 21 years between World Wars I and II saw various attempts, ultimately futile, to reconstruct and reestablish the gold standard. After World War II, however, a fixed rate system was reestablished as a part of the Bretton Woods Treaty of 1944 which also birthed the International Monetary Fund and the World Bank. The IMF system, as it is often called, was one in which the world's currencies were linked only indirectly to gold through the U. S. dollar.

Twenty years intervened between 1948, when currency reforms in Europe allowed exchange markets for current transactions to be restored, and 1968, when establishment of a "two tier" gold market made the demise of fixed exchange rates inevitable. In hindsight, those 20 years were also somewhat of a "golden age." Exchange rate changes were relatively infrequent and world trade grew more than 8 percent per year, while the world's poor countries developed much faster than they have since 1973. On the other hand, the initial dollar shortage of 1948 turned into a dollar glut by the 1960s. Dissatisfaction with the Bretton Woods System became increasingly vocal among professional economists. Some academic economists particularly objected to the explicitly manipulative role of national governments that was built into the system.

A small but growing minority of academic economists led by Milton Friedman began a campaign to return to a more "automatic" system that would be less manipulative than the Bretton Woods one, both domestically and internationally. Recognizing that the necessary conditions for a gold standard no longer existed, Friedman plumped for a floating exchange rate system in which exchange rates would be

determined by the interplay of market supply and demand free of governmental manipulation. The following Friedman statements in a 1967 publication outline the effects of floating exchange rates as he and others envisioned them.

As this example suggests, a system of floating exchange rates completely eliminates the B. of P. balance of payments problem -- just as in a free market there cannot be a surplus or a shortage in the sense of eager sellers unable to find buyers or eager buyers unable to find sellers. The price may fluctuate but there cannot be a deficit or a surplus threatening an exchange crisis. Floating exchange rates would put an end to the grave problems requiring repeated meetings of secretaries of the Treasury and governors of central banks to try to draw up sweeping reforms (p. 15).

Under a system of floating exchange rates, the liquidity problem disappears. There is no need for official foreign exchange reserves. Private individuals will provide the reserves needed -- just as they do in commodities that trade in a free market. If a given movement in exchange rates seems temporary, it will be in the self-interest of private holders of exchange to dampen the move by speculation and they can be counted on to do so (p. 16).

The major objection raised against floating rates is one already mentioned -- that it would remove the "discipline" which fixed rates are said to impose on domestic economic policy, that it would open the door to irresponsible inflationary monetary policy. This objection . . . has negligible merit for the United States (p. 21).¹

The flexible exchange rate world was envisioned as one in which day to day stability would be maintained by private speculation, where as a consequence governments would rarely need large amounts of liquid reserves. There would be few if any inflationary consequences for the United States and by implication for the rest of the developed world. The revolution began in 1971 as the dollar was cut loose from gold. After a brief interregnum, by early 1973 the transition to a floating currency world in which we live today was completed.

I now review a number of the major characteristics of today's floating rates, some of which were anticipated more or less correctly and some incorrectly, but others of which have come as a surprise.

The first quotation from Friedman has largely been borne out by experience. Private buyers and sellers of foreign exchange have essentially made the market and there have been no crises in the sense of surplus or shortage of any currency. What was unforeseen, however, was that the short run variation in foreign exchange rates would be so large. The month to month variability in the exchange rate for the pound, French franc, and deutschmark against the dollar has lain approximately halfway between the lesser variation in wholesale price indices and the greater variation in stock market indices.²

Thus instead of smooth waves, the interaction of commercial traders, portfolio adjustments, and speculation seems to have produced a pattern of sudden shifts and jumps in exchange rates.

A "liquidity problem" arose in the 1960s as the growth of international trade as carried out on an essentially constant ultimate base of gold led to increased use of the U. S. dollar as a component of international reserves. This in turn led to attenuation of the potential convertibility of the dollar into gold. From this came the SDR (Special Drawing Rights) and many "plans" for liquidity which would not contain the seeds of its own destruction. As Friedman points out, the need for liquidity should be greatly reduced in a floating system as it is no longer necessary to defend fixed exchange rates. However, the evidence from the past for today's (admittedly dirty) floating rates is that reserve usage as

¹ J. A. Frenkel and Michael L. Mussa, "The Efficiency of Foreign Exchange Markets and Measures of Turbulence", A.E.R., Vol. 70, #2 (May 1980) pp. 374-81.

² M. Friedman & R. Roosa, The Balance of Payments: Free versus Fixed Exchange Rates, American Enterprise Institute, Washington D. C. 1967.

distinct from reserve holdings³ has not significantly declined and indeed may have increased.⁴ Since floating, total reserves have increased greatly, and usage has not decreased noticeably -- an unanticipated result.

The question of whether some valuable "discipline" has disappeared now that nations no longer need make their domestic policies conform to a fixed exchange rate is not really susceptible to an unarguable answer. Nonetheless, it is clear that the rate of inflation both in the United States and elsewhere during the 1970s has been greatly in excess of that experienced during the years when exchange rates were essentially fixed. Although the oil price rise has contributed, the historical record suggests that floating rates have eroded discipline over price levels. It would at least be hard to argue otherwise.

At one time political leaders importuned by ever present lobbyists carrying the Oliver Twist message of "More" could reply that budgets dare not be unbalanced nor was it safe to lose gold via a balance-of-payments shortfall. Then economists whispered the Keynesian message that during recession it is wrong to balance the budget, denying the first defense; then flexible exchange rates later obviated the second. The results in terms of deficits created by unrestrained growth of transfer payments and the concomitant growth of money supply is obvious to anyone who has lived through the last nine years.

Continental Europeans welcomed almost with glee the breaking of the link between gold and the dollar. They believed they would see a quick end to the overblown importance of the dollar, a result of the artificial terms of the Bretton Woods Treaty making the dollar the only currency directly convertible to gold and hence the reserve currency. To Europeans' discomfiture, the dollar has scarcely diminished in importance as its holding in world reserves grew steadily during the 1970s and the Eurodollar market burgeoned.

The reason for this outcome is explained in courses in Money and Banking, where we learn that the most basic function of money lies in the domestic economy. Money is a "medium of exchange" enabling avoidance of double coincidence of wants. Or, as I tell my classes, "Money is a turnpike providing an efficient and well-developed indirect route between two goods which is less costly than the direct route, just as going from Jefferson City to Kansas City via turnpikes 63 and 70 is usually preferred to the direct route over the two-lane highway 50. The market between any good and money is institutionally rich and well developed, while the direct (barter) market between any two goods is thin and seldom used.

Exactly the same process holds internationally. When Paraguay and Thailand wish to make a deal -- the Thais want to purchase Paraguayan beef -- they must denominate and finance the transaction in some currency. Neither, however, will deal in the other's currency because the Thai Baht is almost useless to Paraguayans. A Baht-Guarani foreign exchange market simply does not exist any more than a direct exchange market between beer and lipstick exists in the U.S. So what happens? The transaction between Thailand and Paraguay would almost surely be billed in dollars, financed in dollars and paid in dollars because the Baht-dollar market and Guarani-dollar market are well developed and dollar financing is available in the United States or in London through the Eurodollar market at highly competitive rates and lowest possible transactions cost. The U. S. dollar is the vehicle currency; it denominates from 30 percent to 50 percent of the world's trade even though the United States itself is directly involved as an importer or exporter in less than 15 percent of the world's trade.

Because the dollar market is the turnpike market, it is also the market of choice for any foreign government seeking to stabilize or manipulate the value of its currency by buying or selling against the dollar. As a result, the dollar has become the world's intervention currency.

Because the dollar is the vehicle and intervention currency, it is also a very convenient currency in which nations can hold at least part of their reserves.

³ David Hume, "Of the Balance of Trade," Essays, Moral, Political, and Literary (1752), Essay V, Part II, reprinted in International Trade Theory; Hume to Ohlin, ed. William R. Allen (New York: Random House, 1965), p. 35.

⁴ J. Williamson, "Exchange-Rate Flexibility and Reserve Use," The Scandinavian Journal of Economics, Vol. 78, (1976), #2, pp. 327-39.

Hence, the dollar is still the dominant reserve currency. Approximately half of the world's \$400 billion in international reserves is held in U. S. dollars with most of the rest being held in gold. Thus floating exchange rates have not ended nor have they greatly attenuated the central role of the dollar.

The fact that the present international monetary system is dollar-centered means that there is no direct way to measure the foreign exchange value of the U.S. dollar. Its value can only be approximated by use of index numbers which combine the exchange rates of a number of individual currencies into a single index. Weights are some measure of international trade. The uncertainties thus introduced may be illustrated by noting that if a very broad index of 107 countries is used to measure the change in the value of the U. S. dollar since March 1973, it is seen as almost constant; but if a narrow index of 14 major countries is used, it has fallen in value by about 14 percent. More credence is generally given to the narrower index, as the broad index includes a lot of exchange-controlled minor currencies of countries suffering chronic inflation. In reality the dollar has fallen and is falling in international purchasing power relative to other currencies; but because the currencies too are inflating, the dollar's purchasing power relative to them is falling more slowly than its purchasing power over goods at home and abroad.

Where are we now with regard to theoretical understanding of how the flexible exchange rate system really works? Our current picture of the flexible foreign exchange market is that it is a stock-flow equilibrium process. This results from the fact that for the dollar and other major currencies, the quantity of liquid short-term assets greatly exceeds a day's or a week's or even a month's trade in goods and services. Thus over any short period, the dominant forces affecting the foreign currency value of the dollar are those which determine the expected real return to foreigners from holding it; i.e., short-term interest rates and expected change in exchange rate.

Assume initially that the dollar is in equilibrium with regard to the demand and supply of both goods and services and with regard to financial claims too. It is not tending to rise or to fall against other currencies. Now let U. S. interest rates rise. At an unchanged exchange rate, the goods and services account would still be in equilibrium, but the higher yielding short term dollar assets would now be an extra good deal and the dollar would be bid up until its expected depreciation just offset the extra interest yield. Similarly, if U. S. interest rates should fall, the dollar would fall until its expected appreciation just equalled its interest yield deficiency.

To trace a sequence briefly, if from the assumed initial equilibrium point the expectations were for a surge in domestic inflation, the purchasing power of the dollar for goods and services would be expected to fall, bringing a similar drop in the expected future foreign exchange value of the dollar. As a result holders of dollars would shift to foreign currency until the decline in the present price of the dollar should equal the inflation-induced fall in its future value. The outcome would be wide movement in exchange rates as "news" carrying these implications hit the market.

These changes in relative yields and temporary changes in expected inflation rates have effects on exchange rates which are limited by the fixed stock of liquid funds that can move. However, the effects of changes in the balance of exports and imports are not inherently temporary; they will tend to induce trends in foreign exchanges.

Modeling of this situation involves stock flow analysis with at least some dynamic components in the model. That is to say, there are as yet no simple diagrammatic or verbal models which can be used to present and illustrate the situation. Furthermore, although the structure I've just outlined is generally accepted among international macroeconomists, there are many, many variations on the general theme that give widely varying predictions.

This is actually all the fault of the econometricians as they keep whimpering some garble about how 21 quarters of highly serially correlated data are simply not enough to estimate a simultaneous equation, stock-flow system with dynamic elements, and they absolutely refuse to reject any hypothesis at all no matter how fanciful. This, of course, makes international macroeconomics a veritable playground for the "I'll publish my laundry list if I can get it accepted" set.

Now we can see why some of Friedman's predictions fall short of prescience. The balance of payments problem dies but promptly returns reincarnated as an exchange rate variability problem. Hence, U. S. Treasury officials still get government-paid trips to places like Geneva, Rio de Janeiro, Jamaica, and other conference sites. Liquidity in the sense of a shortage of international reserves has disappeared just as Friedman predicted, but it has transmigrated into a surplus of inconvertible paper dollars worldwide, which foreign governments hold with varying degrees of reluctance. As to "discipline," we clearly have had a highly inflationary economy and if one looks at the money supply growth in the United States during the 1970s we see acceleration. Insofar as the fixed rates did exert any "discipline" in early times, it is clearly gone now.

"When you get exactly what you want, it's seldom good for you." Of course the present "dirty float" is not quite what economists of the 1950s and the 1960s had in mind when they recommended exchange rate flexibility. But even though we know that the real world always makes hash out of elegantly visualized models, we perhaps should have done better.

It is easy to be dissatisfied with today's international monetary system. It is messy, poorly delineated, not fully understood, and seemingly of little value in protecting against inflation. Yet we should remember that the two "golden" ages discussed previously were separated by 20 very messy years including the great depression and that the earlier gold standard era was preceded by the monetary disturbances accompanying the French Revolution and Napoleonic wars. Our present system is flexible, resilient, adaptable; and it has not noticeably hampered growth of world trade. We don't have to love it, but perhaps we had better learn to like it because nothing better is presently in the offing.

POLITICAL ECONOMY OF THE WORLD GRAIN TRADE

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Introduction

How many of us have heard statements such as the following?

"bread is the staff of life"

"a bushel for a barrel"

"we shall not feed the armies of aggressors"

"the farm vote is the margin that will determine the outcome"

"a poor man's bread is his life"

"regimes rise and fall on the price of a loaf of bread"

I could go on and cite more such phrases, but these are sufficient to suggest that many commentators have placed grain in a broad political-economic context. Virtually every national government makes statements about agricultural policy and most also do so about food policy. Is it any wonder then that international commerce among nations in grain is often considered in much broader terms than pure economic transactions of a commodity or a set of commodities?

I will look at the world grain trade in a broader political-economic context. I want to view it as a trade which involves many actors -- some large and powerful, some small, some public, for example, government; and some private, for example, multi-national grain firms; and some with short term economic objectives, others with longer and global political objectives. Our understanding of that trade will be enhanced if we have a notion of the character of these broader environmental conditions that influence trade.

In order I present summary statistics about the world grain economy; a neo-classical conception of international markets and structural characteristics of the world grain economy; an opposite "government induced residuals" model; a few policy issues leading to a government role; ideas for reorganization; and a note on crucial U. S. policy in international grain markets.

I confess to being an economist and at best an amateur political scientist and historian, caveats that I hope will be borne in mind.

Nature of the Grain Trade

Quickly reviewed, first, the volume of world trade in grain in 1979-80 was 195 million metric tons, the equivalent of one U. S. corn crop or three and a half U. S. wheat crops. Secondly, its value at export points was in excess of \$35 billion. Thirdly, following a trend toward concentration five or six major countries now provide most of all grain exports, and the importance of the United States is increasing. Fourth, in the wheat trade the LDCs (less developed countries) have emerged as the dominant importers. Fifth, in the 1970s the centrally planned economies entered the wheat and feed grains markets as major importers. Sixth, the USSR has switched from being an exporter to a net importer but her forays into the market are erratic, with significant destabilizing results. Seventh, the European Community has become a net exporter of wheat but a steady importer of coarse grains. Eighth, the most rapid and sustained increases in the demand for wheat and feed grains in the world market are coming from OPEC countries and from middle income LDCs such as South Korea and Taiwan. Ninth, the total grain trade is increasing with the volume of coarse grains going up faster than that of wheat. And tenth, the proportion of world wheat production entering international trade has remained constant at between 15 and 20 percent of production but the proportion for coarse grains has doubled in the last 20 years from 6 percent to over 13 percent of production.

These summary statistics help to identify who the potentially important actors in the market may be. But we need to go farther if we are to understand what causes trade, how prices are set, and who handles the grain and influences outcomes.

In order to set the stage for the following discussion I present opposing models of how grain trade may be viewed. The first is how an economist steeped in neoclassical international trade theory might describe an international market. He would view it as (1) millions of producers in a hundred plus countries producing commodities based on natural resource endowments and comparative advantage; (2) billions of consumers worldwide whose purchases are influenced by their incomes and tastes; and (3) hundreds of thousands of small profit-maximizing merchants and handlers whose exchanges over space and time in markets determine prices and allocate supplies among competing demanders. This is the image of a freely working international market where the basic forces of supply and demand interact to form prices, within a benign structure of marketing institutions and of minimal government policies to set the rules of the game.

The second extreme model of the world grain trade runs as follows. According to it, grain production in all countries is seen as responding to price and other incentives which are heavily influenced, directly or indirectly, by government policy. Governments in addition set trade restrictions such as quotas, tariffs, and export subsidies to insulate domestic markets from changes in international markets. Therefore, the international market in grains is the interaction of sets of policy-induced residuals from national markets, and the principal objective is to export domestic instability. Interposed on these domestically induced residuals are large scale multi-national trading firms that function as intermediaries between actors, by maximizing profits based on volume and price instability. This set of interactions between national governments, state traders, and large trading firms produces price outcomes based on power and political objectives rather than traditional economic factors.

The reality of the grain market is different. Here are a few structural characteristics of the world grain trade. First, 95 percent of international wheat transactions involve state traders on at least one side of the transaction (as exporter or importer). About one-third of the wheat trade is state trading on both sides, directly by governments or through some government agency with monopoly powers such as the Canadian Wheat Board. Secondly, over 40 percent of world feed grain trade involves state traders on at least one side of the transaction. Thirdly, although firm statistics are hard to come by, it is generally accepted that five multi-national grain firms account for about 80 to 90 percent of U. S. grain exports and for more than three-quarters of the world grain trade. Two firms, by their own admission, account for 50 percent of U. S. and world trade. Fourth, these same five firms are involved in virtually all state trading activities at

least as fobbers, that is, as firms that handle the logistical functions after price-quantity bargains are struck by state trading agencies. Fifth, five countries, the United States, Canada, Australia, Argentina, and France, account for over 85 percent of world wheat exports. Canada, the United States, and Australia alone account for 70 percent. The United States alone has 40 percent. Sixth, six countries export 80 percent of all coarse grains going into world trade, and the United States contributes more than 50 percent. Seventh, every country involved in the grain trade supports domestic agriculture through price supports and accompanying trade restrictions. In fact, most isolate domestic prices completely or partially from world prices. Recent work by Professor Bredahl of UMC documents this through the notion of transmission elasticities. Eighth, it therefore follows that grain trade policy is a significant political variable in the domestic policy concerns of virtually all participants in the market. Often involved are attempts, in effect, to export domestic instability in price and production. The USSR is a classic example of this. The Soviets seek to prevent events in the international market from disrupting their domestic policy objectives. They consider grain trading as a part of diplomatic or international relations, and not just a matter of commercial trade. Here in the United States we need only to note the U. S. embargo against the USSR in retaliation for Afghanistan, and our need to expand agricultural exports to satisfy our voracious appetite for oil.

These structural variables do not necessarily prove that the world grain market is not highly competitive and freely working. But these features of the grain trade raise questions in my mind as to the influence of government policy and the potential market power of private traders. Hence the two approaches to analyzing the world grain trade offered above.

Which of these two conceptions of international markets is correct? Neither is entirely correct because each over simplifies an extremely complex set of trading relationships. Clearly the free trade model omits all distortions arising from the exercise of market power and from political events such as trade embargoes. On the other hand, the second model of "government induced residuals" does not take into account basic considerations such as resource endowments (especially the capacity to produce grain efficiently), the level of technology, market structure, the level of income, size and make-up of populations, and, most importantly, relative prices.

Probably the true situation involves elements of both models. Comparative advantage, technology, production efficiency, and resource endowments do set broad boundaries as to who is best able to produce and sell grain. Similarly, the overpowering variables of population growth, tastes, income, and prices go a long way toward explaining the demand for grain and for bread and meat produced from it. Obviously, for trade over long distances both private traders and governments are involved.

But it is equally true that governments in pursuit of (1) domestic price and income objectives; (2) trade policies to protect domestic industries; (3) tariff revenue earnings; and (4) global or regional political objectives, do create distortions in any otherwise freely working market. These government distortions are of two types: those which change the structure of the market (the most frequently cited example is the Common Agricultural Policy of the European Community), and those which distort prices within a given structure (as examples, embargoes, tariffs, quotas, export subsidies, and quantitative restrictions to trade). Private traders that are large enough to exercise market power also can distort structure and prices.

The Political Economy of World Grain Trade

It should now be established that the reality of the world grain trade is one where governments and private actors intervene to distort a freely working international market. At this point many commentators become prescriptive and yearn for, yea preach for, a return to the glories of free trade. But is such an approach realistic when we have more than 50 years of continuous market intervention behind us? Would analysts not be better off to try to construct realistic analytical models? In this section I try to give some illustrations of why governments do what they do. Their interventions may be politically rational even though they do violence to economists' simplistic notions. It seems clear that the older ap-

proach of political economy is a more valid approach to understanding the grain trade.

I comment separately on domestic politics and global politics.

First, domestic political intervention. Policy influencing the grain trade can involve direct support of farm prices and farmers' incomes; policies to maintain low food prices; and general economic policies which use management of trade relationships to accomplish national economic and political objectives. Let me treat each in turn.

1. Farm Price and Income Support. Most developed countries have long tried to manage supply to reduce the instability of farm prices and increase farm income. In doing so governments have enacted trade policies which prevent external (world market) fluctuations from disrupting domestic objectives. Domestic policy of this kind is inherently protectionist. For importing countries the task is quite simple. European countries for over a century have used trade policies, primarily tariffs, as the basic instruments of domestic farm policy. Quotas, variable levies, and other quantitative restrictions give more absolute protection than tariffs.

Exporting countries find the task more complicated. Supply management and/or export dumping are necessary companions to domestic price supports. Various schemes are employed. The United States has used overseas surplus disposal by PL-480, export subsidies, two price systems, direct payments to farmers, and management of the land input. Canada, Australia, and sometimes Argentina and Brazil have turned to state trading agencies, multiple exchange rates, and bilateral pricing agreements. Of course, import restrictions are added to protect the higher internal prices.

These increasingly complicated regimes of domestic support with accompanying trade restrictions are adopted because farmers are perceived as important politically and deserving of economic support. I would argue that the overwhelming evidence is that despite diminishing numbers of true farmers, little political action to alter these basic commitments is likely for the foreseeable future, as the recent U.S. election verifies. But as the international market becomes more important relative to the domestic one, these programs become more expensive as well as complicated. Even so, the international market is still treated as a residual, in that international ramifications get attention only after domestic parameters are set. For at least the near term, domestic price support programs seem to be a political reality in world trade.

2. Domestic Food Costs. The interests of urban consumers are generally the opposite of farmers'; they want low prices. Governments attempt, for obvious survival reasons, to be kind to consumers. Thus, the inevitable and insoluble conflict between food and farm price policy is joined.

Here one must divide countries into three camps for analysis: (1) exporters, (2) high income importers, and (3) the rest of the world including the centrally planned economies and the developing countries (the LDCs). Each approaches the problem differently. Developed country exporters of grain have typically attempted to support farm income by modest domestic supply management but even more via income transfers to farmers while keeping domestic prices reasonably low. High income importers have used tariffs and other trade restrictions to maintain farm and food prices at levels relatively higher than in exporting countries.

So long as personal income grew at a faster rate than inflation in general and food prices in particular, consumers were not too disruptive. In the 1970s economic slowdown coupled with commodity price inflation threw the delicate balance between food and farm prices into disarray. Farm policies were thrust into the national political and economic arena. I will return to this point later.

The rest of the world -- centrally planned and LDCs -- have dealt with the food-farm price dilemma in a remarkably similar way. In general, the lower the level of per capita income, the higher the proportion of that income is spent on food. Thus, food prices are critical as major wage goods, as factors in real income growth, and as elements in the survival of government. We can recall food riots and strikes in Bangkok in 1976, Cairo in 1978, and Poland in 1956, 1970, 1976, and 1980, following efforts by governments to increase food prices. Therefore, retail food prices must be kept low and basically constant. As long as cheap and/or subsidized imports (such as PL-480) are available, both the LDCs and the centrally

planned economies could use the international market as an increasingly important alternative to domestic production. In those countries domestic production incentives via increased farm prices could be deferred at substantial savings to the national budgets. In the 1970s when international commodity prices rose fast, those strategies ran into trouble, principally because of foreign exchange shortages. Most countries responded by trying to expand domestic production via increased farm prices, while subsidizing food prices. The result was staggering increases in budgetary costs. It appears, for example, that both Poland and Egypt spend more on food subsidies than on the nation's defense. Management of commodity trade was found necessary, as food was imported by direct purchase by government or by state trading agencies. As these countries now dominate the world wheat market, national policy greatly influences import demand.

3. National Economic and Political Objectives. When all goes well -- with domestic prices reasonably stable and in line with world prices and real income growing -- agricultural policy can be viewed as benign. If any of those variables acts up, agricultural policy becomes national rather than sectoral. For most of the 1970s two or even all three were aggravated. Higher grain prices translated to higher bread and meat prices in spite of subsidies, which themselves became costly during inflation. The situation was politically distasteful to most politicians.

In addition, OPEC caused problems for balance of payments for all oil importers (most of the world). Exporters of grain then sought to expand exports to pay for oil imports. Importers of both grain and oil sought to economize on buying of grain in order to pay for oil but ran into extreme political protest when they attempted to raise food prices. The result was either a growing budget deficit or a foreign exchange deficit, both sources of economic or political instability.

This is not to say that the grain trade is a central causative agent in these broader national issues. Rather my message is that if (1) grain exports and imports are residuals of domestic food and agricultural policy and (2) if these policies during periods of stagflation and international price instability are escalated to national policy issues, then the pure economics of grain commodity trade pales in the face of powerful domestic objectives. The common outcome is to attempt to stabilize internally by exporting instability into the international grain market.

If one now adds national diplomatic efforts such as U. S. attempts to barter grain for oil in 1975, the 1980 grain embargo, increasing numbers of bilateral agreements made for political as well as economic reasons, and food shipments made for defense and alliance objectives (e.g., to Egypt and Israel), one begins to get a flavor of the character of policies influencing the grain trade as a result of domestic political intervention.

Secondly I take up global politics. For present purposes I refer to interactions among nations whose sovereign interests are enhanced by cooperation or conflict with one or more other nations. Few if any issues are treated as global to the extent that nations subordinate domestic objectives to them. This is not a cynical view but my amateur attempt at realism.

A few global issues relating to the grain trade are diplomatic retaliations (U. S. grain embargo against the Soviet Union), reinforcement of political alliances (PL-480), economic retaliation (a proposed grain OPEC), recapturing of economic and political stability (world food security and the UNCTAD proposals).

1. Diplomatic Retaliation. Using grain embargoes for diplomatic retaliation is more attractive in proportion to the dependence of the target country. Clearly the USSR appeared to have become increasingly dependent on the world grain market in the 1970s. Thus an embargo in retaliation for Afghanistan seemed plausible to President Carter. Unlike most "weapon" proposals involving food it would not cause the poor and hungry, but the political regime, to suffer. It failed in large measure because other exporters were less diligent in cooperating and because the complexity of the international grain trade makes enforcement virtually impossible. Perhaps this is one piece of evidence that using grain as a diplomatic weapon is a questionable approach. Our sanctions against Iran seem to have suffered the same fate.

2. Reinforcing Political Alliances. Patterns of PL-480 shipments are probably partially explainable by whom we perceive as friends and whom we do not. Food aid has many desirable characteristics. It has a humanitarian element and in some

cases, e.g., India in 1965-66, it may have prevented mass starvation. It also has the potential of developing markets, e.g., Japan. And it can be one arrow in the diplomatic quiver to reward newly friendly nations such as, for example, Egypt. It is clear that these objectives have been intertwined with policies for surplus disposal. It is hard to unravel precisely how this element of global politics bore on the grain trade, but there were some effects, at least in the 1960s.

3. Economic Retaliation. The cry "a bushel for a barrel" is clearly couched in terms of economic retaliation against, in this instance, OPEC. The surface attraction is clear. Most countries other than OPEC are oil importers. A time-honored potential response to monopoly is countervailing power. Yet even if grain exporters could get their act together to enforce a grain cartel against OPEC, its impact would be limited because most OPEC countries are sparsely settled and, therefore, the monopoly revenue to be gained is limited. Furthermore, foreign exchange is not in short supply in OPEC countries; they are not highly vulnerable.

A more frequently used tool of economic retaliation in the grain trade is to use price cutting or special terms to punish competitors or steal customers. I do not have space to document these actions in detail but clearly they have taken place and they will continue to do so.

4. Capturing International Monopoly Profits. The notion of a grain export cartel is seductive. Most developed country exporters support farm prices above world levels, thereby inducing increased production which puts downward pressure on world grain prices. Most developed importers such as Japan and the EC use quotas and variable levies to raise domestic prices above world levels, collecting substantial import taxes in the process. Why shouldn't exporters capture those benefits by raising their prices to importers' internal levels? My colleague Andy Schmitz and I have looked into the implications of a grain export cartel. We conclude that there is no universally compelling theoretical reason why a cartel could not work. The free rider problem can be offset by a properly formed cartel. Past experience of cartels is mixed but many have succeeded in substantially enhancing export earnings. OPEC is one such example. Our empirical analysis suggests that the gains to exporters could be substantial. The crucial issues appear to be operational -- namely, can exporting nations agree to cooperate and not cheat and can institutions be created which would allow one to work? Here the issue of the role of private traders in the logistics of the trade becomes crucial. The grain cartel remains an intrinsically interesting scenario.

5. Dampening Potential Economic and Political Instability. The issues here are obvious. Increasing disparities between rich and poor nations are potentially destabilizing to the world order. Hunger and starvation exist simultaneously with surpluses and overeating. Thus we have a continuing dialogue on a World Food Security program and proposals to transfer income from developed countries to developing countries via commodity agreements as proposed by UNCTAD. These are laudable objectives but to date we have seen little progress on either front. Perhaps the reason is that economic development assistance is difficult and if too successful runs counter to the interests of donor countries.

These discussions of global politics have been couched in terms of governmental international relations. However, to be complete in our discussion of the global politics of grain we must at least mention the privately owned multi-national grain firms which are so centrally entwined in that trade. Dan Morgan in his fascinating book Merchants of Grain has characterized these five firms, owned by seven families, as shadowy entities, operating outside of any national or international authority, who control the world's food supply. While that may be too strong a conclusion, it nevertheless remains true that the private houses play a pivotal role in the grain trade. It is further true that we don't know very much about them. On one extreme they characterize themselves as pure merchants, interested in facilitating an efficient trade in return for modest profits. Others have been less kind in their imputations of power and gross motives. How they interact with governments pursuing national objectives is a fascinating and little understood arrangement. Any true "model" of the political economy of the world grain trade must include them.

Some Remaining Issues

One further issue/^{is}to recognize past attempts to organize the international wheat market via multilateral commodity agreements. The many international wheat agreements beginning after WWII were attempts by exporters and importers to set price bands for a degree of stabilization. They appeared to work when the market was stable and when the dominant exporters -- the U. S. and Canada -- found it in their interest to provide an umbrella over the world market. When either of these conditions was violated, they broke down. I suspect that would be the fate of any future arrangement.

A second remaining issue is the role of U. S. policy in world grain markets. The dominance of the United States in both the world wheat and feed grain markets means that U. S. grain policy, as well as general economic and diplomatic policy, greatly influences world markets. Even though the United States claims not to exercise the tremendous potential market power she has, she nevertheless sets bounds on the market. I would argue, for example, that the loan rate sets an absolute floor under world grain prices. I would further argue that the call price in the farmer held reserve sets a ceiling on prices as long as reserves exist. Further decisions with respect to target prices and acreage restrictions have direct impacts on world markets. As long as the United States operates a private trading system within a policy environment which does not differentiate domestic from international prices, this will remain the case. All too often I fear U. S. policy makers set domestic policy for domestic reasons without fully understanding the profound impacts they have on world markets.

Concluding Comments

I have argued that to view the world grain trade in purely economic, commodity-oriented terms is simplistic. To couch one's analysis of the market strictly in political terms is equally simplistic. The true "model," if there be one, recognizes both dimensions. But I hope I have demonstrated the complexity of the trade, interwoven with domestic and international economic and political objectives and with large trading firms. Model building is difficult. At the same time it is fascinating. I hope I have shared some of my fascination and have conveyed some useful notions which will allow us to better understand the political economy of the world grain trade.

WORLD AND U. S. AGRICULTURAL OUTLOOK

J. Dawson Ahalt

Chairman, World Food & Agricultural Outlook & Situation Board
United States Department of Agriculture

The world supply situation for grains, oilseeds, and cotton is significantly tighter now than a year ago. In fact, prospects tightened further during the fall.

We are facing an abrupt turnaround from the 1976-79 period of relatively ample world supplies of those commodities to the tightest supply situation in the past five years.

Clearly, higher prices for crops, livestock, and retail food are in prospect for 1981. The overall impact of this altered world agricultural situation will depend on a number of critical variables in the coming year: rates of economic growth and their implications for inflation and consumer demand, the scale of adjustments by U. S. and other livestock producers to tight feedstuff supplies, the nature of policy changes by the new Administration, and, perhaps more than any other factor, the weather.

Grains

World grain production in 1980 was estimated as of early October at 1.45 billion metric tons of wheat, coarse grains and rough rice. This represents some

recovery from the 1979 harvest but is considerably below the 1978 record. Moreover, indications that the 1980 Soviet grain crop was under 200 million tons coupled with continued dry weather in Australia and Argentina mean that the final outturn (1980-81) will be even lower. Global consumption of grains in 1980-81 will probably be the second highest ever, exceeding production by a wide margin. We expect, then, the largest stock drawdown since 1972. The global carryover of grain was estimated in October to drop from the 192.5 million tons brought into the year to 155.2 million by the end of the 1980-81 season. The ratio of stocks to consumption -- a critical factor in price determination -- is falling below 11 percent for the first time since 1974-75. This will be well below the fairly comfortable ratio of 15.3 percent the world enjoyed two years ago.

It is worth noting that, even with its own sharp drawdown, the United States' projected 1980-81 stocks/use ratio for all grains is estimated at 17 percent, still well above the 1973-74 ratio of 12½ percent. In the rest of the world, the stocks/use is projected at 8 percent for 1980-81 compared with 11 percent in 1973-74. Thus conditions are much tighter outside the United States than here at home.

Although the present world grain situation means higher prices, it does not suggest widespread food shortages. In fact, the situation is not nearly so tight for food grains as for feed grains. The world wheat harvest in 1980-81 is shaping up to be the second largest ever and should facilitate expected record consumption levels with a stock drawdown of less than 7 million tons. We also expect records for both production and use of rice globally this year, with no appreciable reduction in stocks. The stocks/use ratio for wheat may decline from 18 to 16 percent, and the rice ratio will hold steady at around 9½ percent.

Record U. S. wheat production in 1980 will support gains in domestic use and record exports with no decline in stocks. Moreover, indications are that winter wheat plantings in the fall of 1980 were expanded to a new record acreage. With average or better weather the 1981 harvest will be large. U. S. rice production also was record large in 1980, but big gains in domestic use and exports will draw stocks down somewhat.

Because of sharply reduced 1980 feed grain crops here and elsewhere, the United States and some other countries will have to curtail livestock production. World feed grain production was down about 1½ percent from 1979, but consumption is expected to move to a record high some 30 million tons above the 716-million-ton harvest. The drawdown in global feed grain stocks, from 89 million ton 59 million, will be the largest on record and will reduce the stocks/use ratio from 12 percent to less than 8 percent.

The United States accounted for most of the drop in world feed grain production in 1980 and will probably feel the most effect from it. The drought cut U. S. feed grain output nearly 20 percent to about 193 million tons. The United States began the 1980-81 season with its largest feed grain stocks in 16 years, but will end the year with its smallest since 1966-67 as the carryover falls from 54 million tons to 24 million. The farmer-owned reserve of feed grains, which stood at 17.5 million tons coming into the year, will probably be gone by the end of 1980-81.

One effect of the drop in U. S. feed grain stocks will be to bring the U. S. share of global stocks more in line with its share of world production. The stock share should slide from 60 percent to about 40 percent, with the production share at around 27 percent.

Domestic feed use is likely to drop about 9 million tons in 1980-81, to 126 million, but that level would still be well above the 1974-77 average of 113 million tons.

We are still projecting that the United States will register its sixth straight record volume of feed grain exports in 1980-81, perhaps 73 million tons.

Oilseeds

Even more than in the grain situation, a major drop in production in the United States is the key factor in the 1980-81 world oilseed outlook. The drought-reduced U. S. soybean harvest accounts for virtually all of a 13½ percent drop in world soybean production.

As in the grain situation, large world and U. S. stocks of soybeans at the outset of 1980-81 will support some moderate further gains in consumption. U. S. stocks, which account for most of the world's, will be drawn down to half their record 1979-80 carryout of 9.8 million tons. The U. S. soybean stock/use ratio will also be halved, to 8½ percent, as consumption and exports both decline slightly. This compares with a low point in 1972-73 of less than 5 percent.

Cotton

World cotton production in 1980-81 is estimated at 63.5 million bales, down about 3 percent. As in the case of soybeans, the principal reduction was in the United States, where output fell 10 percent. Consumption is expected to decline only marginally, however, although world trade is projected to drop because of lower U. S. exports. Global ending stocks are projected to fall about 2½ million bales, to the lowest level in 20 years.

In the United States, stocks will fall only about 200,000 bales as a sharp cutback in exports and some reduction in domestic mill use will partly compensate for the poor crop.

Trade

U. S. agricultural exports hit their tenth straight record in fiscal 1980, surpassing \$40 billion. Despite the disappointing harvests here this year, we expect exports to expand further in 1981; they could run well into the mid-\$40-billion range.

Fiscal 1980 also saw some important shifts in U. S. agricultural export patterns. Although the suspension of sales to the Soviets that began last January has limited our shipments to that country, we have made some big gains in the Chinese and Mexican markets. Exports continued to expand to the rapid-growth developing countries of East Asia, North Africa, and the Mideast. U. S. exporters also significantly increased sales to some of their traditionally major markets -- Western and Eastern Europe, and Japan.

The expansion in the Chinese and Mexican markets this year is particularly worth noting. China has been a relatively erratic buyer and Mexico small but growing. Both have the potential of growing considerably -- China because of its enormous population, a fifth of the world's, and Mexico because of its expanding oil wealth. Both countries appear to be committed to improving the diets of their people and are looking to imports to assist them on this goal until they can expand their own agricultural production.

The fluctuations in China's imports from the United States over the past several years -- ranging, for example from no wheat in 1977-78 to a projected 6.5 million tons in 1980-81 -- will be ironed out over the next four years by the bilateral agreement signed in October. The agreement will put minimum Chinese grain purchases through 1984-85 at 6-9 million tons annually.

The United States also entered a bilateral arrangement with Mexico in 1980, though the period covered was only one year. The United States may supply Mexico with as much as 10 million tons of agricultural commodities by the end of calendar 1980, 2½ times the volume Mexico purchased from the United States in 1979.

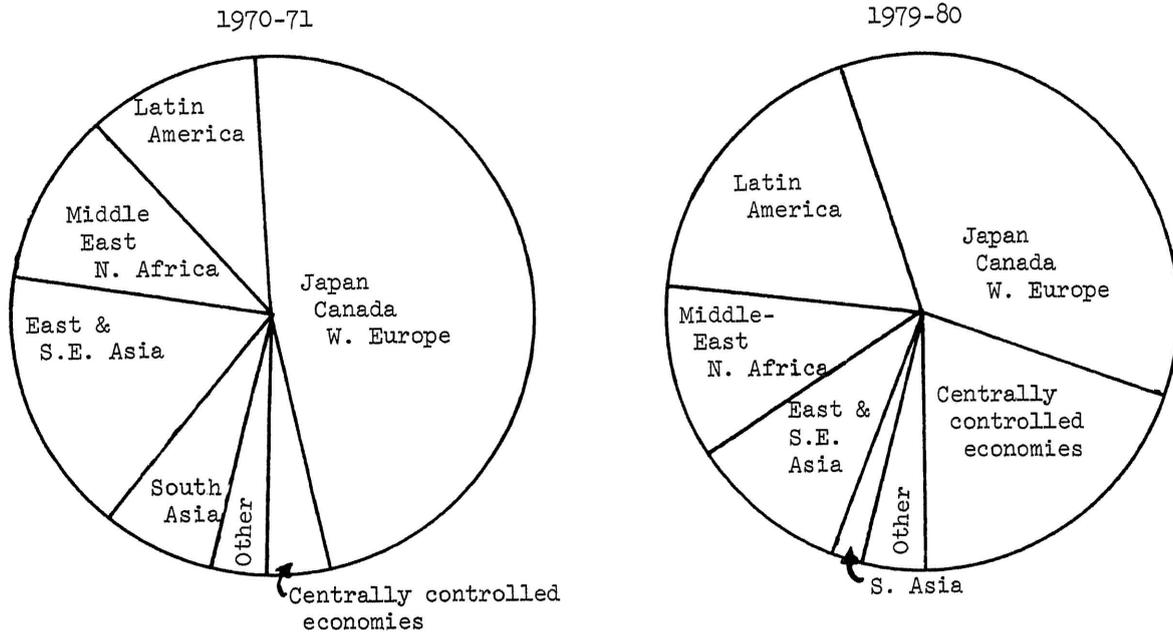
The role of bilateral arrangements in U. S. agricultural trade should not, however, be overemphasized. The actual trading on our side remains in the hands of private U. S. exporters. Trade with the three agreement countries -- USSR, China, and Mexico -- accounted for about one eighth of the value of 1980 U. S. agricultural exports. Agreements, particularly in the case of the USSR and China, do help remove some of the uncertainties involved in dealing with nations with large state trading systems.

The chart sketches the change in make-up of export markets for U. S. grain the last nine years. Computed from export values, the chart shows the decline in share of traditional markets of Japan, Canada, and Western Europe from 48 percent in 1970-71 to 36 percent in 1979-80. The centrally controlled economies of Eastern Europe, the USSR, and Peoples Republic of China took only four percent in the earlier year but 21 percent in 1979-80. Latin America, with Mexico in the lead, has been a growing market in both absolute and relative terms. Notable, though, is the drop in proportion of sales to South Asia, particularly India.

The longer term outlook for U. S. agricultural trade is good. Rising population and income throughout the world, along with a desire to upgrade diets with more meat, milk, and eggs, assures the U. S. of growing demand for its agricultural goods, especially feedstuffs.

Over the past 20 years, grain production outside the United States increased an average of 21 million tons per year. Consumption during that same period rose 25 million tons annually. The gap between foreign production and consumption of grains stood at an average 96 million tons for 1977-79 and U. S. grain exports averaged 85 million tons for those three years. With the foreign production-consumption gap growing at a pace of 4 million tons per year, the predominance of the U. S. role in global agricultural trade seems assured. However, continued problems with many nations' restrictive trade policies, coupled with fluctuations in economic growth, pose a series of challenges for agriculture in the years ahead.

DESTINATIONS OF U. S. GRAIN EXPORTS



THE FUTURE IN WORLD TRADE:
PROBABLE, POSSIBLE, AND UNPREDICTABLE

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American agriculture has entered the international dimension. After these decades of looking inward we have rediscovered our comparative advantage and are looking to the export market. Partly by chance and partly by design, the United States has become the key nation in a developing pattern of global food interdependence.

I propose to lift up and consider briefly some of the policy issues that relate to our new role, to consider alternative courses that might be followed, and to venture some judgments as to what path we might take. The time dimension I am considering is the decade of the 1980s.

Basic to any outlook are the assumptions made. These are my assumptions:

Weather will be average, both in central tendency and departures therefrom.

Productivity in agriculture (that is, output per unit of input) will continue to advance at much the same rate as it has during the three previous decades.

We will refrain from deep acreage cuts.

On the whole we will price our export products competitively, as we have been doing in recent years.

We will generally follow the path to which we are now committed as to the conversion of grain into liquid fuel, so as to make notable but not massive cuts in our supply of exportable grain, thus using for alcohol perhaps 3 or 4 percent of our grain supply by 1985.

The great powers will succeed in avoiding major confrontation.

Access to oil supplies in the Persian Gulf area will continue to be available.

To the degree that these assumptions prove to be in error this analysis is flawed. That is, it will be so unless I am saved by the analyst's friend, compensating error.

The policy issues I lift up are seven in number.

1. Under what kind of institutional framework will agricultural trade be conducted? Specifically, the questions are these: will the great bulk of the trade be conducted by private entrepreneurial firms operating in a competitive market system, as in the past? Or will we put the Commodity Credit Corporation into the export business, as Congressman Weaver proposed? Will we join with the Canadians to set up a grain cartel as OPEC has done with oil? Will there be more international commodity agreements? Will there be more bilateral deals? Will there be a system of internationally held grain reserves? Will food aid increasingly be provided through the World Food Program of the FAO?

The best answers to these questions are not obtained either from the zealots for internationalism nor from those who look with misgiving on any international label. The most useful answers are given by those who examine our experience.

Experience shows that international cooperation in some areas has been useful: monitoring the weather, crop reporting, agreements on grades and standards, and exchange of information on national policies with respect to the major crops. The International Cotton Advisory Committee and the International Wheat Council reflect this successful experience.

Other kinds of activity that may appear to be suited for multilateral control apparently are not yet truly ready. Efforts to set up an international grain reserve have failed three separate times in the past 40 years. International commodity agreements have had a spotty experience. Of the multitude proposed and the scores launched only five are now in existence and these have proved rather ineffective in regulating world markets. On the other hand, in dealing with the monopsonistic traders of the Communist world, bilateral agreements, with the American side of the transaction mostly in the hands of the private trade, have been useful.

Up to now no nation that I know of has been willing to surrender its sovereignty over its own agricultural policy to any international body. Certainly the United States and Europe have not.

From this review of experience certain principles emerge. Unilaterally we develop our domestic commodity programs, showing some awareness of their international significance. Bilaterally we work out trade agreements with certain countries, based on unique circumstances. Multilaterally we deal with tariffs and other issues that involve minimal impairment of our national sovereignty. Some undertakings, such as food aid and agricultural development, we administer simultaneously on a bilateral and a multilateral basis. We have not established a North American grain cartel. We have thought there are better ways of coping with the OPEC combine than emulating it.

The evidence is that multilateral undertakings whose major attribute is mutual gain are likely to be accepted. Those whose dominant feature is transfer of control over real assets or the major subordination of market forces to centralized decision-making are marginal. Those that require outright and visible sacrifice of national sovereignty are likely to be rejected.

These principles, I think, will continue to apply. The international sector is not well adapted to ideologues.

An enormous amount of time and energy will be expended in the years ahead in discussing proposed changes in the institutional arrangements under which international trade in agricultural products is conducted. I believe that most of the needed institutions, private and public, are in place and that most of the trade will be conducted within them.

2. Will farm products be used as a tool of diplomacy? The specific questions here are: Will we embargo exports in an effort to persuade other nations to see things our way? Will we use food aid as a means of lubricating our diplomatic initiatives? Will we cut off agricultural trade with the Communist nations to show our disapproval of their internal policies or their international adventures?

Here again a review of the past is informative. The most recent experience concerns the 1980 grain embargo imposed on the Soviet Union. It may have been considered a political necessity, but it caused economic heartburn. Certainly it did not get the Soviet Union to withdraw from Afghanistan. And it was launched under conditions that were most conducive to success, when the USSR had harvested one bad crop and was about to plant another. The Soviets' ability to get grain from alternative suppliers and via transshipment blunted the weapon.

Experience with using food to support diplomatic purposes is mixed. Food aid was used successfully by Secretary Kissinger in 1974 in support of our efforts to promote Arab-Israeli disengagement in the Middle East. During 1965-68 we sought to use food aid in persuading India to support our policies in Southeast Asia but were not successful.

During the past several decades we have vacillated on agricultural trade with Communist nations. At various times we have vigorously rejected such trade, undertaken it apologetically, interrupted it reluctantly, and pursued it selectively. While there is little evidence that these policy changes have visibly altered the decisions of the Communist countries, our various lunges have yielded some political advantages within the United States. Therein we probably have the explanation as to why they were made.

To say that food would not be used as a diplomatic tool in the coming decade would be to forego the gains, however small, that could be achieved thereby. And it would deny to our public servants an initiative they have found politically useful. But to think that "food power" is comparable to "oil power" is an error. To suggest that the international influence we have lost in recent years could be recaptured by withholding or supplying American food is to overestimate the strength of a feeble weapon. We will probably continue sporadic use of this tool in the years ahead, the consequences being more political than economic and more internal than external.

3. Will embargoes be imposed in order to hold down the price of food in the United States? This was the purpose of the embargoes imposed during the price surge of the 1970s.

A possible scenario is this: inflation is in the bloodstream and is likely to continue. Agricultural productivity will level off somewhat in the decade ahead. Nominal prices thus will rise rapidly and real prices will creep up. Consumer concern about the food bill will therefore escalate. Non-farmers, who now outnumber farmers 36 to 1, will demand action to hold down the grocery bill. A visible way of attempting this would be to curtail exports, slugging the domestic market with greater supplies.

What credibility should be given to this scenario? Talk about a diminished rate of growth in agricultural productivity is speculation, not a fact. Other elements in this scenario are more soundly based. Unfortunately, this scenario must be accorded sufficient respect that it cannot be dismissed.

For 40 years food price policy was one dimensional; the purpose was to keep prices from falling below some specified level, but to apply no restraint on the upper end of the range. A reasonable judgment is that food price policy is becoming symmetrical. That is, there are likely to be efforts to reduce the amplitude of price fluctuations by checking the extremes at the upper as well as the lower ends. The grain reserve is likely to be operated with these objectives. Turning the export market off and on is likely to be proposed as a technique for stabilizing prices internally. The Europeans do this.

Farmer objections to this policy are clear. It would inject the government deeply into what has been private activity. The threat of embargo would hang over the market like a cloud, depressing prices. Long term export market building would be inhibited; our customers would feel they could not count on us as a supplier.

Nationally, we would be foregoing needed foreign exchange. In the international field we would be injuring nations, many of them poor, who have become dependent upon us for food. It would be a denial of our leadership role in global food interdependence.

This could be a real worry during the decade ahead.

4. Will there be a trend toward protectionism? In 1930 the Congress passed an act raising tariffs to an extremely high level. The action had serious adverse consequences. Beginning in 1934 there have been six rounds of multilateral tariff reductions. Before these negotiations, tariff revenues equalled 18 percent of the value of imports. By 1977 tariff revenues equalled only five percent of the value of imports, about one-fourth as much as forty-three years earlier. This astounding reduction in tariff barriers was very successful. It was accompanied by a four-fold increase in the real volume of world trade in agricultural products and by a phenomenal rise in the standards of living of virtually all trading nations.

But now we seem to have come to the end of trade liberalization. The last round of trade negotiations achieved very little in the way of reducing trade barriers; the most that can be said for it is that it kept the initiative from passing to the protectionists.

Protectionism is now on the rise. The labor unions, fearing for their jobs, seek to keep out foreign goods. Dairymen, growers of sugar beets and cane, cattlemen, soybean growers, and producers of specialty crops try to check imports. The worsening trade balance gives credibility to those who seek to keep out foreign goods. The energy problem demonstrates how vulnerable nations can be if they are deeply dependent on foreign sources for strategic supplies.

The argument is made that food is somewhat unique among the articles traded internationally and that a certain degree of self-sufficiency is important. Twice during the memory of living persons Europe was nearly brought to her knees by reliance on imported food. Japan had a similar experience during World War II.

Is food production in other countries uniquely in need of protection? Are American exports of food to be curtailed for this reason? Will American farmers who feel threatened by foreign competition succeed in obtaining protection, thus setting off retaliatory restrictions on our exports? A long-held hope of the farm interests is that foreign markets for American farm products can be opened by providing access to the American market for additional foreign manufactured goods. With the rise of protectionism, how real is this hope?

The best available answers to these questions are not reassuring to those interested in expanding the export market for farm products. Unfortunately the protectionist mood, which is world-wide, comes at a time when American agriculture is poised to utilize its comparative advantage by increasing farm exports.

There will be battles over these matters during the 1980s. Unremitting efforts to check protectionist tendencies will be necessary in the decade ahead. It will take all the ingenuity of which we are capable to hold the liberal trade gains achieved since 1934.

5. What will be the role of international food aid in the decade ahead? How big an item will international food aid be? This will undoubtedly be an issue. There is, I think, a way of approximating an answer to that question. During the years when we were supporting prices of farm products above the competitive level, we priced our export crops out of the world market. They piled up in government hands. To move them, we resorted to concessional terms. We gave them away. We sold them for foreign currency, and we sold them for dollars on the basis of long-term subsidized credit. In 1956, 38 percent of our exports went out under Public Law 480 or other concessional programs. These exports were rationalized in various ways: as surplus disposal, food aid, market building, fighting communism, and the like. Undeniably these concessional exports boosted overseas movement of American farm products above what they would otherwise have been, given the price policies of that time.

When we allowed our prices to be competitive the need for concessional programs diminished. By 1976, the proportion of our exports moving under concessional programs had fallen to five percent, one-seventh as much as 20 years earlier.

The fact that we continued concessional programs at all during the high prices and the reduced supplies of the mid-seventies is evidence that there is a genuine element of food aid in our agricultural exports. Very likely the size of the program during that period is a measure of that authentic purpose.

There will be strong arguments about international food aid during the coming decade. Supporting it will be many church people, considerable numbers of warm-hearted citizens, the internationalists, many farmer-producers of the commodities concerned, and the government people who administer the programs. Opposition will come from those who mistrust the various forms of internationalism, who dislike the expanding role of government, who are concerned with cost, and who think we could sell most of these products if we didn't give them away.

Confrontations of this kind have been going on for a long time. The advocates have succeeded in keeping the concessional programs alive, even through a time of shortage. The opponents have succeeded in keeping the program from growing.

It is only recently that government assumed responsibility for the food needs of our own citizens and public acceptance of this principle is far from complete. The extension of the principle beyond our own borders is a major step, unlikely to win full or early support. The food aid advocates have won a beachhead and the opponents have prevented a breakout.

The radius of human concern has lengthened over time. It is reasonable to expect the volume of international food aid to increase somewhat in the years ahead. But if we price our products competitively this will continue to be a small proportion of our total exports.

6. What will be our policies with respect to the New International Economic Order? A convenient grouping of the world's more than 160 countries puts the developed nations of the Western world in one bloc and the communist countries of the Eastern world in another. The remaining countries -- "the South," the "Less Developed Countries" -- now number 114 and have 1.75 billion people. They are not clearly either among the constitutionally democratic or the authoritarian nations. They are the Third World, mostly new, mostly agricultural, and mostly poor.

The Third World nations attribute some share of their problems to the established economic order, which reflects the dominance of the developed nations. They allege that the developed countries exploit those that are less developed and accomplish this in part through trade. The Third World/^{countries} therefore proposes a New International Economic Order, the purpose of which is to redistribute wealth. The main components of this proposed new order are: assured markets for them in the developed countries; price increases (and protection against price declines) for their export commodities, to be achieved by the use of indexation and buffer stocks; protection against sharp price increases for commodities they import; a fund, underwritten by the developed nations, to provide the financial backing necessary for the stabilization plan; and large-scale grants for economic development, unrestricted as to use, provided by the developed nations.

The Third World has neither the economic nor the military power to put these proposals into effect. But politically, in the international organizations, with one country-one vote, the Third World can be effective. In 1973 nations contributing less than 5 percent of the United Nations' budget and having only 10 percent of the world's population nevertheless had the necessary two-thirds vote to apportion the budget in any way they liked. The desire of the United States to be on as good terms as possible with these countries, plus their voting strength in the United Nations, require that their proposals be given consideration rather than dismissed out of hand. Additionally and importantly, the Organization of Petroleum Exporting Countries (OPEC) has taken diplomatic and political leadership on behalf of the developing countries. American dependence on oil imports is so great as to require a certain respect for this leadership and hence more attentiveness to demands of the New International Economic Order than would otherwise be the case.

Agricultural products are a fairly important part of the international trade of the Third World, both import and export. Deference to Third World proposals would influence our international trade in farm products during the decade ahead. On the one hand, to the degree that their proposals might increase Third World

nations' rate of economic growth, our agricultural exports would be increased. On the other hand, concessions to them might result in increased imports into the United States of beef, sugar, oilseeds, and specialty products. Their enhanced ability to produce tobacco, rice, and cotton might cut into our exports of these products.

7. How will we view international agricultural development? During the past century the United States has built up the best body of agricultural knowledge and experience possessed by any country. This is an asset that we have, which our rivals lack, and which our friends need. And the need is great. In the developing countries of the world, increasing population puts heavy pressure on agriculture.

For thirty years we have had a publicly supported program of modest dimensions to assist the development of agriculture in other nations. Supporting this effort have been humanitarian groups, the internationally-minded, government people who run the program, and those who note that many of the nations we have helped are now among our good commercial customers. Opposing it have been certain farm people who fear that we might be putting potential rivals into the agricultural export business, depriving ourselves of export opportunities. Also opposed are those who object to the cost of the program, and those who feel that our responsibility for agricultural development stops at our own borders.

The net result of this controversy has been something of a standoff. Tax-supported international agricultural development programs have been virtually stagnant for some time. They have declined relatively if not absolutely. The status of these programs will be an issue during the 1980s. The issue is similar to that concerning food aid. To what degree does responsibility transcend national borders? Wherein lies our enlightened self-interest? What is the trade-off between the short-run and the long-run? How and to what degree should the special interest be subordinated to the general interest?

Time probably is on the side of a broadened rather than a narrow feeling of responsibility. We may come to believe that international agricultural development is not a zero-sum game in which someone's gain involves a loss to someone else. We may learn that it is a positive-sum game, from which can come long-run gains for all. Whether the 1980s will produce this perception cannot now be judged.

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The thought quickly leaps to the mind of a farm oriented person: let us take hold of these issues and resolve them in the interests of farm people. Let us use our power base, the farm organizations, the agricultural committees of the Congress, and the Secretary of Agriculture, to get this done.

It is not that simple. Politics is arithmetic. Let me lay out the new math of agricultural trade policy. Farmers now number 2.8 percent of the population. That is, this is the figure if you go by the census definition and count as a farmer everyone who sells \$1000 worth of farm products.

When we set up the Department of Agriculture more than 100 years ago, farm people totaled 59 percent of the population. Generously counted the number is now less than 3 percent and declining.

A Secretary of Agriculture with a constituency of that size can't dictate policy to the Secretary of State or the Secretary of the Treasury. It is even difficult for him to get the ear of the President.

The perception of this drastic change has not yet come through to most farm people. The inclination is to think of the power structure as it was, and to think in terms of strategies that formerly worked.

What farm people and their leaders must do in the decade ahead is to discover where lies their legitimate interest and to pursue that interest with strategy suited to their status as a political minority. That involves making friends, finding common ground, engaging in tradeoffs, de-escalating issues that are likely to lose and concentrating on issues that are important and might be won. Knee-jerk opposition to nonfarm initiatives will not suffice. It dissipates energy and impairs our good will. For a minority, confrontation politics usually results in glorious defeat, which, however glorious, is still defeat.

In the judgment I am offering, the issues on which to concentrate are to keep the export market as open as possible, to fight protectionism at home and abroad, and to resist the use of embargoes that would depress the domestic price of food.

WHAT WE HAVE LEARNED

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Charged as I am with the responsibility of summarizing this seminar, I am tempted to begin by slightly rearranging the words in the title of this talk. If, for example, the title were changed to "What Have We Learned?" an accurate answer would be "a great deal." I say this notwithstanding the fact that what each of us learned has been highly individualistic.

An old line about economists has it that whenever two economists are in a room, there are three opinions about the issue under discussion. At least a half-dozen economists took part in this seminar, as speakers or listeners. In summarizing I have my hands full. Nevertheless, I will try.

A Few General Comments

The theme for this seminar proved excellent and the roster of speakers outstanding. Missourians present should have been proud of speakers who are members of UMC faculty. But on- and off-campus speakers were blended well.

The title of the seminar, "International Affairs and U. S. Agriculture," implies that its planners wanted it to be something more than another agricultural trade conference. It was that. To cite a few examples, the addresses by Tillema, Lucas, Schilling, and Paarlberg take us well beyond a mere recitation of trade statistics. The focus of the seminar was to help all of us better understand why we're where we are and, more importantly, where we may be headed in the future. Agricultural trade of the United States may be placed in historical, political, geographic, economic, and social contexts.

The audience obviously wanted to learn as much as possible about the topic, as indicated by enthusiastic questioning of speakers and associated discussion. But more learning is ahead of us. Moreover, we need to be not only good but fast learners, in order to get the word to others.

Individual Addresses

In selecting what I thought to be highlights of individual addresses, I run a risk of misinterpreting or taking out of context. Certainly a good base for understanding the current pattern of agricultural trade in the United States was presented in the addresses by Richard Bell and Dawson Ahalt. Mr. Bell and Mr. Ahalt pointed out three or four things that I think are significant. They, of course, mentioned the phenomenal growth of exports during the last decade. They noted that the current world grain, oilseed, and cotton stocks are quite tight, especially those of feed grains and cotton. A third factor was that for the short run (meaning the next several months), prices that are paid around the world will depend primarily on the weather.

Finally, if we are to look several years down the line, we could anticipate that the long-run prospects for trade look quite good. There are several reasons for that, too. One that has been identified is the constantly increasing population of the world. Also, in some of the resource rich nations citizens will receive higher incomes. There has been a general upgrading of diets in many parts of the world (including the centrally planned economies). Specifically, what we are talking about is more meat available to the average consumer.

Mr. Bell expressed a view that the Soviet embargo would be rescinded as promised by Governor Reagan in the campaign. He was less sure, however, about negotiating another agreement when the current one expires in October 1981. Several speakers in the seminar expressed the view that the embargo was not accomplishing a great deal at this time from a foreign policy viewpoint. I personally, however, wonder if we may still need the embargo from the standpoint of reduced availability of certain commodities, in particular the feed grains that the Soviets have been buying from this country.

There also was an opinion expressed by Mr. Bell in rather forceful terms that bilateral agreements in general are not desirable, and he specifically questioned the recent agreement with the Peoples Republic of China. He indicated that we will continue to have plenty of market opportunities without such agreements, and he specifically mentioned Nigeria and Mexico as good possibilities for increased trade expansion during the next two decades.

Mr. Ahalt, on the other hand, defended the agreement with the Chinese saying that because of the size of that country, their political system, and the fact that their buying of U. S. grain could cause great fluctuations in our markets, it was best to have an appropriate agreement.

During the discussion period after Mr. Bell's talk, a number of good questions were asked relative to topics we are going to hear about the next few years. Among them are:

1. What effect will increased grain exports have on the livestock sector? The idea, of course, is that increased exports can be expected to bring higher grain prices, which will make it more costly to feed our cattle, swine, and poultry.

2. What about the maintenance of our natural resource base, both the soil itself and nutrients to be added to the soil, especially fertilizer, as we go for increased exports? Some persons are saying that unless we are very careful with regard to conservation of our natural resource base we will have problems in a few years because of its depletion.

3. A question that at least implicitly came out in discussion relates to those unfortunate people around the world who from time to time through no fault of their own are going to need food aid from the United States. If as expected our commercial exports continue to grow, will we be able to respond in a humanitarian way to these needs? Some persons are beginning to wonder.

The second major address was given by Professor Herbert Tillema, entitled "America in a Changing World." I think everyone found it to be forceful and thought-provoking. It gave many of us some new perceptions of the world around us.

The basic thesis of Professor Tillema's talk was that the world is presenting us with ". . . problems which we don't want to face and alternatives which we don't want to choose." He rather eloquently supported that thesis with a number of good examples. He said our power base has been dispersed both politically and economically since World War II. Many more intergovernmental organizations such as OPEC are having an impact on world politics and, in fact, on the world order in this day and age. He cited the fact that seven countries now have nuclear power compared with only one -- the United States -- right after World War II.

Eight to nine percent of the gross national product of the United States now enters international trade. This is substantially more than the percentage just after the last world war. Because of this greater interdependence with other countries, we have lost some of our ability to shape our own future. We have to be more aware of what is going on in the world around us. Professor Tillema indicated, and I think this is a significant point, that as a society we probably do not understand the changes that have taken place during the last 30 to 35 years. We probably fail to understand our present place in the total world community and we almost certainly do not have a very good handle as a total society on where we are headed. Professor Tillema said that we are unable to decide whether we really want to return to our glory days when the rest of the world would fall to its knees at the mere mention of the United States, or whether we would rather let the rest of the world go its own way. He calls this a "public ambivalence" and said that this ambivalence is what leads to so much turnover in our elected officials as exemplified by this last election.

The concluding thought of Professor Tillema's address was that if we become unduly fearful or unduly optimistic about where we are, we are not being fair to ourselves. Even great powers do not always have their way. The United States has not fallen into purgatory. We have fallen from a position of special privilege which we enjoyed throughout a great portion of our history. We now encounter obstacles similar to other nations. There are some risks that we have to assume. There will be some costs in assuming these risks, and sometimes we are even going to encounter failure. We need to recognize each of these things.

The noon luncheon featured a very provocative talk by Christopher Lucas, Professor of Education, UMC, on the Near East. Professor Lucas pointed out a number of things that I thought were significant. He told us that there were really five events that were shaping that region of the world, generally called the Arab community, extending from the Atlantic Ocean to Persia (Iran). He mentioned specifically Pan-Arabism which is a feeling among the Arab countries of general disrespect for foreigners and especially for the Western world. But second, at the other end of the spectrum there is radical nationalism, which is a desire by individual countries in the region each to control its own destiny. Sometimes those feelings about each nation's own destiny contrast rather sharply with the overall goal of Arab unity. Another thing that makes the Middle East rather interesting is that the peoples are bound together by the Islamic faith although here again there is a difference in the intensity of that faith as exemplified in individual countries.

Many of the Middle East countries, of course, have large reserves of oil which have changed their economies remarkably in the last 10 years.

Finally, another issue that shapes the Middle Eastern area of the world is the Palestinian question. There have been shifting currents over a period of time but a Palestinian state is perhaps not any closer to reality now than a few years ago. Professor Lucas described in some detail a hodgepodge of alliances among individual countries particularly focused on the current war between Iran and Iraq. A bewildering array of alliances has been concocted, often with quickly changing pairings. Many ironies are involved in this concoction of alliances.

Thursday afternoon's portion of the seminar began with an address by Professor Abner Womack. He gave a good historical perspective of trade patterns of the United States. But if I had to point a single theme (I thought it a good one) it would be that we ought to look at world trading patterns with the United States included compared with what is happening in world trade with the United States excluded. Professor Womack has found in his work that up to this point the United States has been able to make up the increasing "gap" between world consumption and production of grains and soybeans. There are some variations in what is happening in individual commodity sectors, however.

Professor Rhodes introduced Professor Womack as an economic chiropractor because he is constantly massaging data. Among the Womack-massaged data perhaps the most interesting related to the dollars and cents impact on grain prices of more sales to the centrally planned economies. The data are worth looking up. Professor Womack showed some rather significant price impacts, mostly positive, from our increased sales to the centrally planned economies. He also showed the impact that various policy and economic decisions made in other countries had on our grain prices.

Professor Don Schilling addressed the topic, "International Financial-Monetary Balances." He promised few numbers and diagrams but he did not promise that we would understand all the nuances of a flexible exchange system the first time around. He noted first that the gold standard had provided a fixed exchange rate for our dollars for many years; and then there was the Bretton Woods system. Only within the last decade have we been under a system of flexible exchange rates.

The move to flexible exchange rates was the brain child of Milton Friedman, who has been perhaps the most prominent monetary economist of our era. It was argued that when flexible exchange rates were instituted in the United States the change would bring several improvements to international trade: (1) appreciable stability to exchange rates, (2) greater liquidity in exchanging dollars to other currencies and vice-versa, and (3) reduced influence of the dollar. Europeans were particularly interested in the last objective because it had been their desire for a long time to decrease the influence of the dollar in international transactions. But, briefly summarized, flexible exchange rates have not accomplished everything expected of them. We continue to have great leaps back and forth in the exchange rate between dollars and other currencies. Moreover, the liquidity problem has remained with us, and floating rates have not changed the significance of dollars in international transactions. They are probably as significant as they were before flotation.

As we become more involved in international transactions I think we are going to hear more about exchange rates. We simply cannot conduct trade without an efficiently operating international system for exchanging currencies.

Professor Alex McCalla concluded Thursday afternoon's program with an address, "The Political Economy of the World Grain Trade." It was a comprehensive and articulate statement of the many factors that are involved in understanding what is happening in the world grain trade today. Professor McCalla suggested that the grain trade has to be placed in a broad political context with many actors: some large, some small, some representing their government or a government agency, some representing a private merchandising firm, some with short-run political objectives, and so on. He like several speakers before and after him, outlined a number of trade statistics that helped to give focus to where we are today. For example, from 15 to 20 percent of world wheat production enters international trade in a typical year, a stable percentage. But the 12 to 13 percent of coarse grain that enters international trade is double the figure of 20 years ago, an indicator of desire for more livestock products in peoples' diets worldwide.

Professor McCalla says that there are really two opposite models that can be examined for understanding the world grain trade. One would be a neo-classical model of many small marketing firms, minimal government involvement, and a generally truly competitive environment. The other model would have rather heavy involvement by government as it would be responsible for handling large residuals of grain through either a reserve program or direct marketing. He says the reality of international trade at the present time is that governments and large private actors distort what would otherwise be free trade. These distortions occur for several reasons, most of them related to internal domestic situations. Three specific reasons are worthy of emphasizing: (1) many countries, the United States included, continue to want to protect their own agriculture; (2) there also is a desire in many countries to maintain low food prices domestically; and (3) a rather pervasive objective is to manage trade relations to attain national economic and political objectives. This third situation, viewed when applied country by country, almost assures that truly free trade among individual countries of the world will not occur any time in the near future.

Don Paarlberg discussed what I would call the international agricultural agenda for the next decade. He identified what he called seven policy issues. I would go a bit farther and call them policy challenges. All of us should begin thinking about these issues/challenges now -- not a few years from now, when it will be too late to do anything about them. The seven are:

1. What will be the institutional arrangement for our exports?
2. Will farm products continue to be a tool of international diplomacy?
3. Will embargoes be used to hold down the price of food in the United States?
4. Will there be a trend toward protectionism?
5. What about food aid?
6. What will be our policies regarding the New International Order, now led by some of the oil-rich, less developed countries?
7. How will we view international agricultural development?

Dr. Paarlberg pointed out that farmers are not going to be able to control these issues if they assume a confrontation strategy with consumers either in this country or overseas. He believes farmers ought to use their diminished strength for three purposes:

1. To keep markets as open as possible.
2. To fight protectionism -- in agriculture and outside agriculture, at home and abroad.
3. To resist using embargoes to reduce domestic food prices.

Finally, because they relate to a different subject than other papers I am not reviewing at length the remarks by Harold Breimyer who, of course, has been the lead person in these Perry seminars for the last eight years. I found a great deal of food for thought in what he said, such as his contention that the goal of education in whatever form it takes ought to be to stretch peoples' horizons. For his leadership of the Perry seminars we all extend our sincere thanks.

EDUCATION IN PUBLIC POLICY:
EIGHT YEARS OF THE UMC-PERRY FOUNDATION SEMINAR

Harold F. Breimyer
Perry Foundation Professor of Agricultural
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"But where shall wisdom be found? And where is the place of understanding?"

-- Job 28:12

"[Land Grant Universities] would soon [1862] be asked to justify their existence in the light of society's needs"

-- Edward Danforth Eddy, Jr.

"Philosophers should have something to say to their fellow citizens"

-- Sidney Hook

Of all the attributes of the American character few are of such long standing as faith in education. The story has been told often. We know about the Northwest Ordinance of 1787 with its provision for school lands, and the Morrill Act of 1862 setting up Land Grant colleges. In early Missouri local people sometimes were more concerned to build a local school than roads leading to it. Education in our tradition has been looked to for goals as far ranging as self-realization for the individual and preservation of democracy.

My topic calls for addressing education in public policy, with specific reference to the eight public seminars on agricultural marketing and policy jointly sponsored by the University of Missouri-Columbia and the Perry Foundation of Robstown, Texas. The series ends with this seminar. It is timely to take stock of what we have learned during a period equivalent to two terms of office of the U. S. Presidency.

I will comment briefly on University-Perry Foundation relationships, then take up broader issues in education in public policy. I will reveal some of my apprehensions about whether education is still as solidly endorsed as it once was. I particularly ask about receptivity to education in public affairs, which invariably steps on someone's toe, desecrates some sacred cow, or threatens an economic interest.

An Invitation Acted On

Almost a decade ago Thomas, Richard, and Michelle Perry came to our campus and explained to Dean Kiehl and others their interest in advancing public understanding of issues in agricultural marketing and policy. We at UMC, they whispered into our eager ears, conveyed an image more of denim overalls than of a stuffed shirt. We were reputed to be genuinely interested in improving the agriculture of America's Heartland.

A contract was negotiated whereby the salary of a Perry Foundation Professor of Agricultural Economics was to be supplemented modestly and an annual public seminar was to be held. The intended purpose of the seminar was

. . . to promote the development of information relative to the socio-economic forces that bear on the welfare of family operated farms and ranches, and upon the income to those operators; to disseminate that information widely among agricultural leaders of the nation; and to provide a forum for the exchange of information and discussion of current matters related thereto by leaders of organizations, institutions, and legislators concerned with these matters. The Seminar was to be scholarly in nature, in the academic tradition, with all aspects of a policy issue to be explored.

Seminars have covered topics ranging from the survivability of the family farm to the causes and cures of inflation.¹ They have been presented with a minimum of ballyhoo and also with a minimum budget. Speakers invited have not been public figures who charge high fees. They have been persons of less prominence but equal competence who have kept the seminars down-to-earth and solid with subject matter.

An early conversation about terms of a University-Perry Foundation relationship bears on the general issue of education in public policy. In talking with Richard and Michelle Perry I commented as diplomatically as I knew how, "You know that in carrying out a contract we at UMC will always be receptive to suggestions but otherwise the principle of academic freedom will apply." I then tried to be jocular: "In a sense you are putting up your money and taking your chances." They instantly confirmed this understanding. I testify that it has been adhered to scrupulously throughout these eight years.

Education's Promise and Peril

Education may be blessed but it seldom is benign. It is potentially as explosive as dynamite, as inciting as yellow journalism, as change-inducing as a dictator's decree. If confined to the privileged few, education erects class barriers; made available to all, it tears them down. In like vein, orthodox teaching may be politically "safe" but it stymies innovation. Only the different, the unorthodox, leads in new directions.

In its best role education does not preserve knowledge so much as it enlarges and revises it. In doing so it encounters resistance. Conventional wisdom never lacks for partisan defenders. A scientist who questions time to plant potatoes (the light of the moon -- or the dark?), the safety of a herbicide, or the proper level of price support for cotton runs risk of rebuff. Innovative research and education are possible only if their audience is sympathetically receptive. Without that understanding and support, meaningful research will disappear.

Agricultural scientists deservedly take pride in what they have contributed but I suggest that the greater credit goes to U. S. citizens who create the milieu in which they can work.

Personal Achievement and Social Ideology

In the annals of education surely nothing surpasses in poignancy the career of Helen Keller. Joseph Lash's account is beautiful.² Helen Keller in a sense accomplished more than most of us can ever hope to do. But the deeper meaning of the Helen Keller story is the dedicated human support that was necessary for so glorious an achievement. It was necessary that her teacher, Anne Sullivan Macy, as she herself put it, give up her life that Helen Keller might live.³ Polly Thompson was faithful⁴ for 36 years. And not fewer than a hundred individuals and a whole organization⁴ gave time and money and leadership so that Helen might learn. Helen Keller then served humanity through promoting the causes of the blind.

A second book I have read recently is History of Christianity,⁵ which is broader than its title and in fact a history of ideological conflict. It reminds how prone are human beings to make themselves victims of their folklore, fantasies, and fears. They persecute themselves by their ever changing ideologies, which invariably interweave the religious and secular. In recent centuries wars of ideology have outnumbered those of aggression; and persecution for beliefs has overshadowed all other inhumanities.

¹ Titles are "Central Issues in Agricultural Policy," "Income Tax Rules and Agriculture," "In Search of a U. S. Food Policy," "In Search of Better Marketing," "International Monetary and Trade Rules and Midwest Agriculture," "Can the Family Farm Survive?," "Inflation."

² Joseph P. Lash, Helen and Teacher, Delacorte Press/Seymour Lawrence, New York, 1980.

³ P. 626.

⁴ American Foundation for the Blind.

⁵ Paul Johnson, A History of Christianity, Atheneum, New York, 1976.

I offer these comments to give more credence to my central message that the place of education in society is determined mainly by the atmosphere of receptivity -- by the prevailing ideology. As though to give punch to this message, the record of the centuries is that educators who tried to buck the trend, even in the interest of conciliation, often were silenced. The History of Christianity account distresses as much as Helen Keller's story inspires.

I comment in this way for the further reason that I believe the Presidential campaign of 1980, although advertised as a contest of personalities, was in fact the most ideological one we have witnessed in our century. It remains to be seen whether our nation continues in the direction of sharper divisiveness, less ideological tolerance. If that should be the case, the role of education will narrow.

Criteria for Judging Agricultural Education

The record of history ought to convince that education is never secure, that it cannot be taken for granted. On the contrary, education is always in potential jeopardy. Against this backdrop the national dedication in the Northwest Ordinance, the Morrill Act, and the Hatch and Smith-Lever Acts for agricultural research and extension takes on drama. By the same token education in agriculture will always need both sponsors and defenders.⁶

Education in agriculture will also necessarily look to its institutions. Land Grant universities, agricultural experiment stations, and university extension services have been the wheelhorses. They are now being supplemented and to some extent supplanted. I will list the more important newcomers and offer a brief evaluation.

First, though, a note on criteria for judging educational performance. Possibly the first criterion that comes to mind is technical. How relevant, accurate, reliable is the content of what is taught? This question is always properly raised. The second criterion is honesty, better known as intellectual integrity. This takes on so much importance for the reasons I have just cited, namely, that education almost always is unsettling to someone. It is not always easy to be honest.

I may be especially sensitive to the issue of intellectual integrity because I work in public policy. However, I deny emphatically that only educators in my field find their courage and integrity tested. Years ago I worked in USDA next door to a former Dean of Agriculture at Michigan State University. He told me plaintively how he had been the victim of his courage in declaring that certain proprietary mineral mixtures had no magic properties in making hogs or calves grow. Here on our campus in 1979 I was proud of our agricultural engineers, chemists, and others who barnstormed the state of Missouri educating about farm-produced fuel. In the face of pleas to promise every Missouri farmer a backyard source, they detailed patiently the problems and costs involved. They denied that a coil of copper tubing and a kerosene lamp would protect against the whims of the sheiks of Araby.

Educators in public policy and the physical scientists in agriculture all risk non-acceptance. We share an equal obligation to be scientifically objective. But above all, every social and physical scientist in agriculture depends critically on the good will of citizens who defend education and educators, even though at times their private apple cart may be upset.

Today's Institutions: An Inventory

For about a century Land Grant universities and the U. S. Department of Agriculture together with their experiment stations and extension services had a virtual monopoly on agricultural education. They enjoy a monopoly no longer. They have several challengers.

Among strongest challengers are a host of private universities and research organizations. Together they are crowding out Land Grant schools, particularly in the research grant bazaar that federal funding has become.

⁶ I am using the term "agriculture" in its broadest sense to include home economics, perhaps forestry, and any other closely associated field of knowledge. The Morrill Act included engineering too, of course.

Another category is a hybrid; it fits in no slot. It is the contractual services that public universities make commercially available. There is institutional contracting, and there is also private consulting that university staff members carry on. Combined, these have become sizable. They raise some penetrating questions that I will touch on below.

Fourth on my list are the private foundations, of which the Perry Foundation is an example. Ford, Rockefeller, and Kellogg probably have best name-recognition.

My fifth and final entry is somewhat different and it is more significant in education on public policy than on more technical subjects. It is the melange of private interest groups that spend millions of dollars to influence public opinion. They buy access to radio, TV, newspapers, and magazines. Issue advertising wherein an oil company, for instance, will buy an entire page in a leading journal to tell its story has become a major source of revenue to the media and a doughty rival to those of us in public employ who are commissioned to be scholarly and intellectually honest.

A Personal Evaluation

Each of the institutions for education in agriculture is subject to critique.

Few observers would deny the good record of Land Grant universities and the U. S. Department of Agriculture. Theirs is a technological success story. As a policy economist I defend economic education too. American farmers are as well informed about public affairs as any group of the population.

Nevertheless, more questions have been raised in recent years than previously. Some critics say Land Grant schools, cushioned by monopoly status, have drifted into stuffiness. Categorical denial would be wrong but by and large I am slow to join in rebuke. In the Hard Tomatoes-Hard Times episode of a few years ago I neither accused nor over-defended. It did not hurt us to be shaken up a bit. I dodge the commercial agriculture issue; I neither allege nor ask College of Agriculture priority. First of all, the term itself is nebulous, really meaningless. But also we are in the public service and "public" has no natural boundary. Even though our time and talents are necessarily limited and we are not all things to all people, in another sense we stand ready to try to be something to just about everyone.

The private schools and research organizations that are crowding us Land Grant folk so hard cannot be stopped. Yet each advance by them does not signify failure by us. My principal concern is directed to the research-grant mechanism of which they are both the most skillful practitioners and prime beneficiaries. More and more of all agricultural research is funded by individual project grants. Somehow the research and educational needs of agriculture do not truly lend themselves to dissection into atomistic parts. Grantsmanship itself is becoming a dextrous art. I am puzzled and apprehensive. But this subject must await another seminar and a more accomplished critic.

Next on my inventory list is the private contracting that is now a substantial part of the Land Grant scene. It takes the form, as I noted, of institutional services and individual consulting. I hasten to add that these practices are kept within bounds better at the University of Missouri than at a number of other schools. Nevertheless, they are a serious threat to the principles that Land Grant schools have stood for. I have written more on this subject than any other agricultural economist. On one occasion I charged that a university that converts itself into a research contractor indistinguishable from a private organization "compromise/s/ the basic role of the Land Grant university. That role is to spread knowledge to make it a public good. Any selective dispensation for private advantage violates the institution's purpose, its reason for being."

Probably every major Land Grant university is feeling a pinch in public appropriations and therefore is more eager to attract private funding. One conclusion is certain: life becomes harder for research administrators who are faithful to the Land Grant mission. In a recent meeting Iowa State's CAST invoked discussion by

⁷ Harold F. Breimyer, "Public Sector Research and Education and the Agribusiness Complex: Unholy Alliance or Socially Beneficial Partnership?" American Journal of Agricultural Economics, Dec. 1973, pp. 993-6. Quotation p. 995.

virtue of the funding it receives from agricultural companies. It was suggested that commodity organizations would present less chance of conflict of interest. Check-off funds typically extend to research as well as promotion. The only judgment one can offer is that not the source of money but the circumspectness in relationship is what counts most. To repeat, research administration is more difficult with private than with public funding.

I have often wondered if the University of Missouri ought to set up a separate but parallel corporation to make research services contractually available. University scientists would have dual appointments. However, their division of loyalties would have to be monitored carefully.

On institutional funding of research I only admonish rectitude but on another practice my stand is for absolute prohibition. I refer to private consulting for pay by university personnel. In my judgment the Board of Curators and President Olson would be well advised to bring private consulting by university faculty members to a complete halt. The practice amounts, I have written, to dividing a scientist's "time and allegiance so as to multiply his income."⁸ It can be especially inappropriate in research or education where public policy is involved. It is not just that consulting income can subtly undermine the integrity of the individual. It is also that often not the wisdom of the scientist but the standing of his sponsoring university is what is being bought. It's a messy situation.

Few agricultural economists have sold their souls. None on this campus has done so. Yet the consulting practice can be vicious and a denial of the Land Grant tradition. A few years ago the Director of Extension for Indiana tried to enlist all Directors in the country in prohibiting in-state consulting by extension personnel. Not surprisingly but regretfully, he was not successful.

Among institutions engaged in agricultural research and education the newest and in some respects most exciting are the private foundations. I once suggested, with tongue in cheek, that they are the "issue of a union between private profit and income tax law. . . ."⁹ I hesitate to offer a sweeping judgment on their performance, partly because information is lacking but also because the situation is mixed. I have testified to the absolute integrity of relations between the UMC and the Perry Foundation. So far as I know, the record of Rockefeller, Ford, and similar groups is unsullied.

But there is a dark side to this moon. It is the growing role non-profit organizations play in disguised interest pleading. Recently a researcher approaching a well known "Institute" happened to encounter an official who was in candid mood. "You must understand," he explained, "that we only finance research that will support the positions we take on political issues." Another Institute with apparently limitless funds announces almost weekly some new study by a famous scholar verifying that Government is implicitly bad and private enterprise holy and flawless. Surely that is a questionable use of tax-refugee funds.

I will not take time to review the role of private businesses in research and education. Privately funded research for private purpose raises no public issue. But privately funded educational or propaganda activities including the rapidly growing issue advertising is the most formidable competition we in the academic sector face. I wonder whether the first amendment to the Constitution really permits the most blatant practices in dishonesty. Somehow I sense that the amendment was intended to protect opinions, creeds, and even fantasies, but not falsehoods. Does paying the dollar (or thousands of them) for access to media relieve of obligation to be truthful? How much absolution does the tiny "paid advertisement" label convey?

The Ideology of Agricultural Research and Extension

I turn now to the most sensitive and difficult aspect of my subject. As I noted above, as human beings work out their ways of living together they develop a

⁸ Harold F. Breimyer, "The Stern Test of Objectivity for the Useful Science of Agricultural Economics," Journal of Farm Economics, May 1967, pp. 339-50. Quotation p. 348.

⁹ P. 350 in 1967 article.

set of beliefs and codes that compose an ideology. The history of Christianity -- and even more of Islam! -- shows how gripping ideologies can be. Agricultural economists like to declare they are free of ideology as they only recite scientific data about price support or the effect of a grain embargo. Malarky! In agricultural matters both teachers and learners are subject to the prevailing ideology and unless they share a certain minimum of credal values they will talk past each other.

What beliefs and values underlie responsible education in public policy? Not long ago I was invited to write a bi-weekly column for the Delta Farm Press and affiliated farm papers. In my first column I philosophized on public attitudes toward economic policymaking, in pretty salty language. People disagree on economic policies not because of lack of data, I wrote, but because they "screen out distasteful information and respond to that which fits their biases, their pocketbooks." Human beings have "mental sieves," I added, "with mesh to fit their self interests." But there also is a problem of assessing just what our common values are. "If we put aside our personal concerns and try to be public spirited," I asked, "do we know what is truly good for the country? What are Americans' ideals? . . . Are we still Puritannical? Do we retain the work ethic? Are we basically, at heart, generous and democratic?"

Most of us in the field of public affairs assume that the majority of Americans hold to traditional values. But we might be wrong, I wrote. "A certain proportion of citizens are pretty selfish." Also, "A smattering are at heart aristocratic or plutocratic," believing themselves and a few friends "to be natively superior and to deserve all the benefits of class distinction they can get. . . ." ¹⁰

Lest this seem too harsh, what I really believe is that most of us have a little of both the sinner and saint in us. In many respects economists in public affairs are like preachers: we try to reach and bring forth the more benevolent of human actions. Conservation is a clear example. Farmers can add to 1981 income by disregarding conservation but they thereby deprive all humanity to follow. Likewise, unwisely chosen price supports can boost short-term income but will lead to problems in the future. Good educators, I believe, are more far-seeing.

A basic value in agriculture as we have known it is the worth of the family farm. It is based not so much on productivity as on the socio-cultural status of the farmer and his family and their place in the rural community. I will not plead the case here; but I contend that respect for the family farm as an institution is essential to every agronomist, animal scientist, and engineer who serves the family farmer, for the reason that without rapport with his clientele an educator fails. This is part of a value system.

The issue of the family farm gives occasion for my favorite illustration of conflict between individual self interest and long run common welfare. It involves tax concessions in farming. Under the heading of family farming's non-instinct for self-preservation I preach that the oh-so-attractive deductions individual farmers make are a wholesale invitation to high-tax-bracket nonfarmers to invade and take over. The latest instrument for doing so is use of pension funds with a tax angle. Naturally, I am opposed. But family farmers will not repulse those takeover threats successfully and permanently until they are willing to address the basic contradiction between the short run individual interest and the long run common good.

A Testament

In beginning my Delta Farm Press comments I quizzed myself: "What is my value system?" "Pretty traditional," I self-answered. "My generation really believed that the economic system must be reasonably fair and equitable." Moreover, "We also thought that productivity counted for more than financial manipulation." Nowadays it sometimes seems, I wrote, that "more money is to be made by 'farming' the farm programs, getting cheap credit from any available subsidized source, and most of all playing the tax-write-off game, than by producing efficiently."

"These tactics may be privately profitable, particularly in the short run," I noted. Then in the best Old Testament style I added, "The object in agriculture ought to be to reward farmers for socially-directed productivity and only that."

¹⁰ Delta Farm Press, June 6, 1980.

Persons who share this particular code will understand my writings about current issues in agricultural policy. Those of opposite persuasion will fail to understand.

Beliefs, creeds, moral values, ideology -- these are crucial in education in public affairs. But they bear on all education in agriculture.

Doubts and Forebodings

I admitted at the outset that I have apprehensions about the future of publicly sponsored education in agriculture. On this I claim no special insights. I believe nearly everyone senses a prevailing dispirit in our nation. The common expression is distrust in government. This bothers me first because in a democracy, distrust in government is a distrust in ourselves. I grew up during a period when government was not trusted and did not deserve to be trusted. It was the 1920s, when Secretary Fall gave away the Teapot Dome, Andrew Mellon as Secretary of the Treasury made sure big capital controlled small government, and the Capone gang enlivened the scene. The Babbitts of the time promised prosperity for all. A flimsy capital structure built up then was corrected in the Great Depression of the 1930s. (Then we corrected overexpectations by deflating prices and renegeing on debts. Now we are more civilized: we pay the debts with half-worthless dollars.)

The present state of mind bothers me secondly because not only the institution of government but many other institutions are in jeopardy. And they all are inter-related, even the institutions of education. Although I join everyone in deploring instances of misconduct by public officials, more than most I am alarmed by deteriorating private morality, which in many respects is causal. Private and public morality run parallel; and education, particularly public education, is a moral enterprise.

If economic slowdown is contributing to our malaise it is hard to be hopeful. Growing prosperity in years after World War II made them our Golden Age. Man's inhumanities eased, racial discrimination among them. Russia's Sputnik revived U. S. support of education. That Age is over. I cannot decide in my own mind whether its end is more attributable to epic events such as the Vietnam War and the oil embargo of 1973, or to the natural tendency of human beings to rend their own social fabric by moral decline. Of only one principle am I certain: that it is easier for citizens to be generous, public spirited, compassionate when things are going well than when they go badly.

Now that our economic outlook is less rosy it may require more conscious effort to make sure our traditional values, which are essentially generous, are preserved. I include the value of respect for education.

One word more on my concern about our capacity to govern ourselves. The knee-jerk-reflex response to our present distrust in government is to have less of it. If we were still a pastoral nation, or even one of small industry, this might be possible. In our present situation it is not possible. The only remedy for bad government is good government. There is no other.

All of which leads me to education once more. In a democracy education in public affairs is a part of the process of government. I dare to believe that the past eight years of UMC-Perry Foundation seminars on agricultural marketing and policy have made a positive if modest contribution.

I have testified to the splendid terms of relationship between the Perry Foundation and our University. But with all respect to Thomas, Richard, Michelle, and James Perry and Deans Kiehl, Smith, and Lennon, and without depreciating the contribution made by my colleagues and the 75 speakers of the eight years, these are not the foremost heroes. That toga goes to the men and women who attend, listen, accept some ideas, reject others, and debate. They have borne witness to the worth of education, not only that which goes with the grain, but that which goes against it.

Those people, by coming, listening, and responding, have voted their thanks to the University, the Perry family, and the Perry Foundation. I add mine. I am grateful for the opportunity to have been the Perry Foundation Professor of Agricultural Economics at the University of Missouri for eight good years.