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Managing Risk in a Dynamic World Economy

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U.S. agriculture has undergone dramatic change in the 1990s. New trade policies under NAFTA and GATT opened markets previously closed to some U.S. producers, but created additional import competition for others. The 1996 farm bill removed the government safety net for some crops, leading to more downside price risk. Economic and political turmoil occurred in the former USSR. China emerged as a major force in world trade, but some other Asian powerhouses faltered. Biotechnology offered early promise of new products and production methods. Industry structure changed, with major growth in vertical integration, coordination, and the formation of strategic alliances. These changes have major impacts on producers and have presented new opportunities for some and new challenges for others.

Agriculture in the United States is becoming increasingly trade oriented and more sensitive to events and actions which occur beyond our own borders. Congress recently approved two important trade agreements, the North American Free Trade Agreement (NAFTA) and the Uruguay Round Agreements (URA) negotiated under the auspices of the General Agreement on Tariffs and Trade (GATT).

This leaflet, along with the others in this series, provides an overview of the globalization of U.S. agriculture, with special emphasis on implications for risk management. To be successful in a rapidly changing global environment, farmers will need a clear understanding of risk and how to manage it.

Sources of Risk

At least four major sources of risk are important to U.S. agriculture. Each contains a crucial linkage to the world economy, leading to greater risk for the U.S. farmer.

1. **Weather and Natural Disasters.** Normal fluctuations in global weather patterns affect world production of farm products, which in turn affects the prices of these products. Livestock producers are affected directly through weather impacts on forage crops and indirectly through changes in feed ingredient availability and cost. Abnormal natural phenomena, such as El Nino, can also trigger natural disasters leading to unusual crop shortfalls, drought, and flood, all in an incredibly short period of time.

2. **Technology.** Technology is embodied in farm operating inputs, such as seeds and pest control, and capital assets, such as machinery and buildings. Performance of new innovations is uncertain but, once established, may render current farm practices and assets obsolete. Early adopters of new technology take more risks because it may not work or be profitable, but they earn greater rewards when it does. The laggards have more information available because of the activities of the early adopters, but the major benefits may have vanished.

Risk Management Education



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3. **Attitudes and Preferences.** The attitudes and preferences of consumers, both in the United States and in other countries, directly affect the demand for farm products. Indirectly, these attitudes influence government policies and regulations.
4. **Institutions and Policies.** Institutional and policy factors encompass a wide array of government policies and regulations, the legal framework of society and business, and industry structure and performance. Government policies are pervasive and include farm, trade, macroeconomic, and environmental policies. Many of these policies have trade impacts. These linkages are often complex, but the policies affect competitiveness by causing changes in exchange rates, domestic policies, and production costs. Health and safety policies and regulations affect production processes and costs. International institutions, such as the World Trade Organization (WTO) increasingly affect trade rules. Global financial institutions, such as the International Monetary Fund (IMF), have become important sources of stability in the world economy and world trade, thereby reducing some risks.

Exchange Rate Risk

World trade absorbs an increasing share of global production but perhaps more significant has been the change in world financial markets. International investors can transfer billions of dollars from one country to another instantly with the touch of a computer keyboard or by FAX. Financial flows into and out of the U.S. are estimated at \$16 trillion—dwarfing the \$1.4 trillion value of U.S. goods and services trade. International financial flows, not trade in goods and services, have become the major driving force determining currency values. Exchange rate fluctuations affect the prices of goods traded in the international market place and, therefore, the competitiveness of U.S. and southern farm products.

In the mid-1990s, about one fifth of world wheat production moved into world trade but exports absorbed about half the U.S. crop. Exports account for 20 percent of U.S. coarse grain production, and 25-30 percent of oilseed production. About one-third of world cotton production moves into world trade compared to 40-45 percent of the U.S. crop. Meats are not generally thought of as export commodities, but about 12 percent of U.S. poultry production and about 6 percent of U.S. beef move into export markets. Meat exports have been growing and

are expected to continue to grow with the implementation of the URA.

Agriculture and World Trade

With declining government support to U.S. agriculture, greater access to international markets is crucial to the future growth and prosperity of the agricultural economy of the United States. U.S. agriculture has much to gain from expanded trade since many countries already have low duty access to the U.S. market, while U.S. access to foreign markets may be limited by high tariffs or quotas.

The value of U.S. agricultural exports consistently exceeds the cost of imports. It has been estimated that a one dollar increase in exports generates a second dollar's worth of related economic activity and that one new job is created for each additional \$50,000 of exports. In 1996, the U.S. exported \$60.4 billion of agricultural products compared to \$33.6 billion of imports (Table 1).

Table 1. U.S. Agricultural Exports and Imports, 1996

Item	Value (\$ million)
Exports:	
Crop Products	49,191
Animal Products	11,254
Total Exports	60,445
Imports:	
Competitive products	25,436
Noncompetitive products	8,207
Total Imports	33,643
Agricultural Trade Balance	26,802

Source: "Foreign Agricultural Trade of the United States: Calendar Year 1996 Supplement", Economic Research Service, U.S. Department of Agriculture, June 1997.

The agricultural trade surplus was valued at nearly \$28 billion. Crops and crop products accounted for most of the exports—about \$49 billion—with livestock products accounting for the remaining \$11 billion. Most of the imports were classified as competitive, i.e., they competed with similar products produced in the U.S. Only \$8 billion of imports were products not produced in the U.S., such as coffee, bananas, cocoa, and spices.

A large acreage in the South is devoted to nationally important export crops—corn, soybeans, wheat and sorghum—and the competitiveness of U.S. exports in world markets affects all producers.

Cotton, tobacco, citrus, rice and peanuts are regionally important crops that are affected by trade and international competition. Cotton must compete with imported textiles in the domestic market and with foreign producers for export markets. Brazil is a major supplier of frozen orange juice concentrate, in direct competition with domestic producers. U.S. exports of poultry meat and pork are growing and these are regionally important livestock products.

The major customers for U.S. farm products are Japan, Canada and Mexico, which together accounted for \$23 billion of the \$60 billion export total for 1996. Taken together, the nations of the European Union are another important market, with exports of almost \$10 billion in 1996. Growth prospects are uncertain as a result of EU agricultural and trade policies.

The developed or industrialized countries buy more than half of U.S. exports. However, the developing economies (DEs) represent an important market and many people believe that this is where future export growth will occur. For many DEs increased farm productivity may be the key to higher incomes and the ability to buy more U.S. imports.

The DEs also are major suppliers of U.S. imports, accounting for more than half of the total. Some of these imports are tropical products not produced in the U.S., but many are products that do compete directly with U.S. goods. However, trade is a two-way street and customers for U.S. exports must be able to earn U.S. dollars by selling their products—both agricultural and industrial—in world markets. Protectionist domestic policies that deny access to U.S. markets may also deny foreign countries the opportunity to earn the foreign exchange necessary to buy U.S. products.

The South's Stake in World Trade

United States' agriculture is becoming more trade oriented and more sensitive to trade issues. For southern agriculture this is nothing new; agriculture in the South has its roots in world trade. During colonial days, southern farmers and plantation owners, unlike their counterparts in the North, relied largely on agricultural export markets for their livelihood. Consequently, during the early days of the Republic, most southern political leaders advocated free trade. The North, more oriented toward manufacturing, pushed for protectionism to shield its industrial base from foreign competition.

These conflicts had an impact on U.S. trade policies. During the last 200 years, the United

States has vacillated between protectionism and the pursuit of free and open world markets. Such conflicts contributed to the Civil War and have persisted into the 20th century. In "Red Hills and Cotton: An Upcountry Memory", Ben Robertson vividly depicts the impact of government action at the outset of the depression era on world markets and on southern farmers:

"In our valley our Uncle Tom made speeches about the Hawley-Smoot tariff—it would ruin us. All over the world, governments were retaliating against this tariff. Governments, at any cost, were attempting to free themselves of America and its system of tariffs. In India, in Turkestan, in the Egyptian Sudan, in the Kenya Colony, in Brazil, in Queensland, in Peru, farmers were growing more cotton and still more cotton. Whether we liked it or not, we could not depend solely on cotton much longer. We would have to diversify our agriculture to grow our own grain, raise our own hay, keep dairy cows."

The health of southern agriculture is heavily dependent on regional specialty crops; commodities the region has an innate advantage in producing because of climatic conditions. Among the most important of these crops are cotton, tobacco, rice, peanuts, citrus and other fruits, certain vegetables, and sugar cane. For virtually all of these commodities, major trade problems and issues have arisen. For some regional specialties new competitors have arisen, sometimes right on our doorstep in the Caribbean, Latin America and Canada. In some instances this competition has eroded export markets and in others there has been deep penetration in domestic markets.

For example, orange juice concentrate from Brazil displaced sales of Florida and Texas producers. More recently, Florida tomato producers have railed against cheaper imports from Mexico. U.S. sugar producers have been protected from foreign competition by import quotas. Cotton and rice exports fell sharply in the early 1980s, a situation that was reversed by the introduction of marketing loans as a new policy tool of the 1985 Farm Bill. The 1996 Farm Bill abandoned most income supports for program crops and this will allow market forces to set prices, including domestic and international supply and demand. Farmers' production decisions will be made in response to these market signals.

A second reason for the South's high stake in world agricultural trade is that the South is a marginal production area for most of the major nationally important farm commodities such as

wheat, corn, soybeans. Production costs are generally higher in the South. Therefore, when prices for these commodities have been relatively high, the South has rapidly expanded acreage and production, as was the case for soybeans in the 1960s and wheat in the 1970s. But when prices are low and profit margins are squeezed, as has been the case in recent years, the biggest downward adjustments also occur in the South. For example, from 1982 to 1992 the U.S. soybean acreage declined about 9 million acres or 13 percent. Virtually all of this adjustment occurred in the South where the acreage declined by more than 50 percent.

Because of the South's unique position as a producer of regional specialty crops and a high-cost producer of most of the major, nationally grown commodities, southern agriculture is especially sensitive to the impact of world events. In the past, there have been painful adjustments by the producers of many crops. The South stands to benefit from the recent expansion in beef, pork and poultry exports because of its national ranking in the production of meat these products.

The Challenge

The size and complexity of agricultural trade issues is unsettling. Many would like to return to the days of the 1950s and 1960s when the United States was less affected by world economic and political events. This is highly unlikely.

The world will continue to shrink as interdependence among the peoples of the world continues to grow. Major new trade agreements, NAFTA and the URA, have been negotiated and are being implemented. New policies affecting the relationship of U.S. and southern agriculture will be developed in the future. There will be trade-offs, winners and losers, and painful adjustments for some. Effectively managing risk to maintain profitable operations in dynamic world economy will be critically important for businesses of all types, including U.S. farms and ranches.

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