Highlights of FAPRI 2000 World Agricultural Outlook

The Food and Agricultural Policy Research Institute (FAPRI) prepares baseline projections each year for the U.S. Agricultural sector and international commodity markets. Baseline projections largely depend on two external factors, macroeconomic assumptions and agricultural policy assumptions. The baseline assumes average weather patterns worldwide, continuation of existing domestic policies, and fulfillment of policy commitments under existing trade agreements. However, the projections do not include conjectures about the likely expansion of the European Union (EU) to include Central and Eastern European countries (CEECs), China’s accession into the World Trade Organization (WTO), or the outcome of the forthcoming round of WTO negotiations.

The 2000 baseline outlook predicts quick recovery in world import demand, with strong and stable growth during the latter half of the projection period. As global food demand progressively recovers, the United States is in an excellent position to capitalize on expanding trade, especially in meats and feed grains. As shown in Figure 1, the value of U.S. agricultural exports will increase more than 40 percent in next decade. Direct feed-grain exports, led by corn, are projected to increase by 16 million metric tons (mmt) by 2009. This growth is primarily derived from rising world meat production, which is projected to increase by approximately 17 percent to satisfy the additional global demand.

Similar to feed grains, U.S. oilseeds and oilseed product exports are expected to rise in the next decade, with soybeans accounting for more than 80 percent of the increase. However, the United States is projected to capture only 25 percent of the 8 mmt increase in soybean oil and meal import demand because of stiff competition from Argentina and Brazil. Unlike corn and soybeans, U.S. wheat exports face stiff competition, particularly in the second half of the projection period from the EU.

In the livestock sector, the United States is projected to surpass Australia to become the world’s largest beef exporter in 2002 and a net exporter of beef in 2004. Likewise, low production costs and competitive prices make it possible for the United States to capture more than 80 percent of the projected growth in broiler trade during the next decade.

The Macroeconomic Assumptions

World economic growth is projected to recover and grow at 2.9 percent in 2000. As shown in Figure 2, most Asian and Latin American countries are continuing their strong recovery after the 1999 turnaround. The countries of the Former Soviet Union (FSU) are recovering as well and are expected to grow by 2.2 percent or more in the coming years.

Among developed countries, Japan, the second largest economy in the world, is projected to have 1.4 percent real gross domestic product (GDP) growth in 2000. Over the long run, the macroeconomic outlook calls for sustained and distributed global economic growth, with world GDP growing more than above 3 percent annually.

Most Asian economies, except Indonesia, are expected to grow at rates between 4 and 6 percent annually in the coming decade. The Latin American region faces an upbeat macroeconomic outlook. Brazil’s economic crisis is over and its economy is expected to grow by 2.8 percent in 2000. The Brazilian currency has stabilized, and it is expected to depreciate a modest 5 percent this coming year.

Policy Assumptions

The FAPRI baseline assumes that U.S. loan rates for crops are held constant in 2000 and 2001. After 2001, they are allowed to fall using the Federal Agriculture Improvement and
Reform (FAIR) Act formulas. The baseline also incorporates the provisions of the 1999 emergency spending package.

The EU’s Common Agricultural Policy (CAP) reform constitutes one of most important unilateral policy changes of 1999. In the crop sector, intervention prices are reduced, while direct payments are increased to help compensate producers. In the livestock sector, the beef intervention price is phased out over the next two years and is replaced by a beef basic price and subsidized private storage scheme.

**World Crop Outlook**

World grain production is projected to increase more than 13 percent over the next 10 years. Corn shows the most growth—more than 16 percent, followed by wheat with 12.4 percent growth. Even with healthy production growth, many developing countries with land constraints are likely to depend on the world market to meet their increasing domestic demand. This demand arises from both income and population growth, and these countries are projected to be a primary growth market for world grain imports for the next decade. World grain trade is projected to grow more than 23 percent in the next decade.

Strong and stable income growth around the world is projected to raise consumption at a rate very close to production, leaving little or nothing added to ending stocks. This results in a declining stock-to-use ratio, from 19 percent in 1999/00 to 16.5 percent in 2009/10. The low stock-to-use ratio in the future suggests that grain prices will be more responsive to any shock from weather, macroeconomic situations, and other external factors. The average grain price is projected to bottom out this year and slowly recover from $117 per metric ton (mt) in 1999/00 to $157 per mt in 2009/10.

Wheat has experienced the greatest decline in acreage, with a more than 15-million hectare (mha) decline since 1996. Although 1999/00 wheat area is projected to be 4 mha lower than the 1995/96 level, production is likely to be 40 mmt higher. Even with declining area, large production and sluggish global demand have kept the wheat prices low. As Asian and Latin American economies recover from the recent currency crisis, world wheat trade is also projected to increase by more than 24 percent in the next decade. Almost all of the growth is expected to come from developing countries, where strong economic growth increases domestic wheat demand. In order to meet domestic demand, developing countries are expected to depend largely on imported wheat because of limited resources, particularly land, to expand domestic production. Among developing regions, Asia is expected to be the fastest growing market in the long run, increasing its imports by more than 38 percent during this period.

Most of the increased import demand from the developing countries will be met by traditional exporters, such as the United States, Argentina, Australia, Canada, and the EU. Except for the United States and the EU, the other three exporters primarily depend on the export market to dispose of surplus production, considering the saturated domestic market in these countries. In the next 10 years, combined exports of these three countries are projected to increase exports by 5 mmt (10 percent).

Over the next 10 years, world coarse grain area is projected to add slightly more than 2 mha, with increases in both corn and barley partially offset by a decrease in sorghum area. World coarse grain production expands mainly through yield growth, increasing from 781 to 904 mmt (an increase of more than 15 percent). World consumption is also projected to rise with the recovery of Asian economies, increasing coarse grain prices by more than 30 percent by 2009/10. During the projection period, world coarse grain trade is projected to increase by more than 29 percent.

Among coarse grains, corn trade tops the list by increasing more than 23 percent over the projection period, accounting for 70 percent of new coarse grain markets. Most of the growth in import demand is likely to come from developing regions. As shown in Figure 3, developing Asia remains the fastest growing market for corn within developing
regions, with its imports increasing by more than 80 percent. On the export side, there are few countries, besides the United States, with the potential to expand exports to meet rising world demand. Among these countries, Argentina has already shown its ability to expand exports under the right circumstances. In the short run, weaker oilseed prices are likely to make corn attractive; however, over the long run, as oilseed prices recover, it is unlikely that much area will shift into corn production. Thus, the inability of competitors to increase their exports allows the United States to expand its exports from 50 mmt in 1999/00 to above 66 mmt in 2009/10, with the U.S. market share of world corn trade increasing from 75 to 81 percent.

Unlike grains, world oilseeds area continues to rise, following its historical trends, despite declining prices. This has been possible mainly because of higher relative returns for oilseeds as compared to grains and to some extent, a market-distorting loan rate policy in the United States. Since the record level in 1996, average oilseed prices have declined by 40 to 50 percent. World oilseeds area is projected to increase by more than 3 mha in 1999/00 to 141 mha, with sunflower and rapeseed accounting for most of this increase. Total oilseeds production is projected to reach 294 mmt by 2009/10, both through area and yield (an increase of 19 percent), with a similar increase in oilseeds crush (21 percent). Strong income growth in developing countries is projected to increase the demand for oil meal (through livestock consumption) and vegetable oil consumption, with each country’s domestic policies and crushing capacity dictating imports of either oilseeds or products. Taking into account all these factors, world oilseeds trade is projected to increase by 20 percent, with slightly higher growth in oil meal and vegetable oil trade.

Oil meal consumption is expected to increase sharply from the current 147 mmt to nearly 178 mmt by the end of the projection period. Among different oil meals, the highest absolute increase is expected in soy meal consumption (more than 23 mmt, which is very similar to the increase in soy meal production expected from the nearly 29 mmt increase in soybean crush). Similar to consumption growth, soy meal also accounts for the majority of the growth in oil meal trade. As the largest importer of soy meal in the world, the EU is projected to increase its imports from 15 mmt in 1999/00 to 17 mmt in 2009/10. Apart from the EU, other growth markets for soy meal include China, South Korea, Mexico, and other developing countries.

The increasing income levels in less-developed countries play a crucial role in the more than 18-mmt increase in selected vegetable oil consumption by 2009/10. On a per capita basis, world vegetable oil consumption is expected to increase by an additional 2 kilogram (kg) per person per year over the entire period. The largest increase is expected for palm oil, followed by soy oil and canola oil.

**World Meat**

Animal proteins are a secondary source of nutrition in less-developed countries, but the proportion of calories and protein derived from the consumption of meat and dairy products generally rises as incomes grow in these countries. This fact is the primary driving force in the long-run FAPRI projections for the livestock and dairy sectors. Average meat consumption in countries modeled by FAPRI is expected to increase 5.5 kg per person by 2009.

Total beef, pork, and poultry production increases 16.5 percent to satisfy the rising demand for meat. Pork accounts for 46.5 percent of the total increase, while poultry and beef, respectively, constitute 40.4 and 13.1 percent of the increase. More than 50 percent of the growth in global meat production occurs in China and East Asia, the countries experiencing the most rapid rise in meat consumption. North America accounts for 30 percent of the total increase.

As shown in Figure 4, total meat trade is projected to grow 31 percent over the next
decade, amounting to a 2.8 mmt increase. Rising broiler imports account for nearly half of the increase in meat trade. Beef and pork trade both increase just over 700 tmt from 1999 to 2009. Abundant feed resources, modern production technology, and the lack of binding environmental constraints enable livestock producers in the United States to rapidly increase production and capture 72 percent of the growth in world meat trade.

The Nebraska fed steer price dropped 7.3 percent in 1998 to $61.48 per hundredweight (cwt), reinforcing the established downward trend in cattle and breeding inventories. U.S. beef production reached 12 mmt in 1999, and exports exceeded 1 mmt. Declining cattle inventories over the next three years are projected to gradually decrease U.S. cattle slaughter, causing fed steer prices to exceed $76 per cwt by 2003. Falling cattle prices in the latter half of the projection period enable U.S. beef exporters to remain competitive in international markets well into the next decade.

U.S. hog prices in 1999 averaged $34 per cwt for the year, enabling U.S. exporters to remain competitive with producers in Canada and Europe and to increase exports 3.4 percent. U.S. hog slaughter is projected to decline in 2000 and 2001, reducing the exportable pork surplus and raising prices over the next two years. Abundant grain supplies, a well-developed transportation system, and efficient pork production technology enable U.S. exporters to increase their share of total pork trade from 9.3 to 22.3 percent over the course of the projection period.

World poultry production will grow briskly at 2.4 percent each year. Roughly 50 percent of the total growth in production is expected to occur in the United States. Other countries experiencing major increases in poultry output are China, Brazil, the EU, and Mexico. Broiler trade expands 37 percent from 1999 to 2009 for a total change of more than 1.37 mmt. China, Hong Kong, Japan, and Mexico account for 51 percent of the import growth. U.S. exports of broiler meat are projected to climb rapidly, rising an average 4.5 percent annually.

**World Dairy**

Milk production in modeled countries is projected to increase 12.2 percent over the next decade, primarily through increases in cow yields. Per capita cheese demand around the world is projected to grow an average of 15 percent over the next decade, for a total increase in cheese consumption of 21.3 percent. The United States and the EU account for 75 percent of the total increase in cheese consumption. Increasing import demand in Mexico, Japan, and other Asian countries raise international cheese prices in the long run, bringing them near to 1998 levels by the end of the projection period. Long-run strengthening of non-fat dry milk (NFD) import demand causes international NFD prices to inch up an average of 1.4 percent annually over the projection period, drawing additional exports from Australia, Argentina, and Poland. U.S. NFD exports are expected to drop off sharply following the elimination of domestic support programs, eventually stabilizing at 67 tmt.