

Agricultural Trade

Growth in global agricultural trade will be slowed over the next 2 to 3 years by weakened demand in key markets, particularly in Asia and the former Soviet Union (FSU). In these regions, import demand will be constrained by reduced incomes, and by the impact of large currency devaluations on both consumer and producer prices. Global trade will, however, continue to be supported by relatively strong demand in other developing country markets in Latin America, North Africa, and the Middle East. U.S. agricultural exports will slow over the next 2 to 3 years, reflecting slowed growth in global trade, as well as increased competition. In the near term, U.S. farm exports are likely to face increased competition stemming from productivity gains by other exporters, particularly Argentina, and from developing and transition economies where currencies have been sharply devalued.

Longer term prospects for global and U.S. trade remain relatively bright. The Asian economies are assumed to recover to relatively strong rates of growth over a 3 to 4 year period, and long-term growth in other developing regions is expected to be higher than during the 1980s. This generally favorable economic outlook for developing countries is expected to drive faster gains in agricultural trade after 2000. Trade expansion will also be aided by freer trade associated with ongoing unilateral policy reforms and existing multilateral reforms. Relatively strong growth in import demand for bulk agricultural commodities is projected, supported by broad-based expansion across developing regions, including China, South and Southeast Asia, Latin America, North Africa, and the Middle East. The FSU, formerly a key grain importer, is not expected to be a source of significant import demand over the projection period. Higher incomes in developing countries, where consumers tend to spend a relatively large share of new income on food, will be a key determinant of demand and trade growth. As incomes rise in developing countries, the demand for agricultural goods expands rapidly, both through increases in direct food use and through derived demand for livestock feeds to meet rising meat demand.

Future trends in China's agricultural trade remain an important question in the global outlook. Significant uncertainty regarding basic data and future policies, combined with the size of China's agricultural economy, make alternative trade projections both plausible and globally significant. The current projections indicate only modest growth in China's import demand for most bulk commodities, particularly wheat and coarse grains. Recent developments in China suggest that there is still significant potential for boosting crop yields, and that historical growth in meat demand and feed use has been slower than once thought.

World commodity prices are expected to remain depressed in the near term by the combination of weakened global demand and increased exportable supplies from traditional and nontraditional competitors. Prices are projected to strengthen over the longer term, as supplies adjust and a recovery in Asian demand is added to steady growth in other regions. However, particularly with limited growth in imports by China and the FSU, real prices are projected to continue to decline over the longer term as productivity gains continue to outpace growth in demand.

Grains are expected to lead the stronger projected growth of bulk commodity trade during 2000-2008. Projected gains in coarse grain trade are particularly strong, predicated on rising incomes in developing regions and increased demand for livestock products and feeds. Wheat and vegetable oil trade will also continue to expand in response to rising incomes and urbanization in developing countries. Trade in soybeans and meal also is projected to show solid long-term growth as a result of the expansion of meat consumption and production in developing countries. Raw cotton demand and trade are expected to strengthen after 2000, but growth is expected to be slower than in the 1980s, when there was increased substitution of cotton for synthetic fibers.

Table 33. International trade summary, by decade or indicated period 1/

Years	Wheat	Rice	Coarse grains	Soybeans	Soybean meal	Soybean oil	Cotton
World trade growth, annual percent 2/							
1960 to 1970 3/	1.1	2.2	4.9	11.4	14.4	11.3	0.8
1970 to 1980	4.7	4.9	8.7	8.2	11.7	12.8	1.2
1980 to 1990	-0.3	0.6	-1.0	-0.4	2.9	0.5	2.5
1990 to 2000	-0.7	6.1	0.4	5.3	4.4	6.6	-0.9
2000 to 2008	2.3	2.7	2.8	1.6	1.9	2.8	1.9
U.S. export growth, annual percent							
1960 to 1970 3/	-0.8	6.3	3.8	12.6	13.0	5.3	-5.4
1970 to 1980	6.4	6.8	12.7	7.2	5.8	5.4	6.1
1980 to 1990	-3.3	-0.5	-0.7	-3.7	-1.8	-5.5	2.3
1990 to 2000	-0.4	0.5	0.4	4.7	5.7	11.6	-1.7
2000 to 2008	2.3	0.8	3.3	1.3	-0.4	3.3	1.6
U.S. share of world trade, average percent 2/							
1960 to 1970 3/	37.6	19.0	50.0	90.6	65.6	66.6	18.3
1970 to 1980	43.0	22.1	59.4	82.6	43.5	37.5	19.8
1980 to 1990	37.3	20.2	59.4	72.6	23.7	19.3	21.5
1990 to 2000	31.3	14.0	56.0	64.5	19.7	16.1	25.1
2000 to 2008	33.6	9.4	57.3	62.2	20.2	22.2	24.6

1/ Years refer to the first year of the commodity marketing year.

2/ Trade and trade shares include intra-FSU trade for periods starting in 1990 and later; intra-FSU trade for cotton also is included in the 1980 to 1990 and the 1970 to 1980 periods.

3/ Data for soybeans, soybean meal, and soybean oil begin in 1964.

U.S. exports are projected to strengthen for most bulk commodities over the longer term. U.S. wheat and coarse grain exports are projected to expand the fastest, although competition is expected to increase in both markets. By the middle of the projection period, U.S. wheat exports are projected to slow when higher world prices and declining internal EU prices permit the EU to export wheat without subsidy. U.S. corn exports are expected to face continued competition from China and, particularly, Argentina. U.S. rice exports are projected to be roughly constant, as domestic demand captures nearly all the gains in U.S. production. Anticipated growth in U.S. exports of soybeans and products is faster than in the 1980s because of projected gains in both area and yields, despite weaker market prices. U.S. raw cotton exports are projected to

strengthen in the longer term, benefiting from rising demand and reduced competition in some countries.

Global meat demand and trade, and U.S. meat exports, will be depressed in the near term by the slowdown in import demand in East Asia and the FSU. Growth in meat trade is, however, projected to resume after 2000, as demand recovers in these key markets. Already negotiated reductions in trade barriers will support gains in meat trade in East Asia. Although FSU import demand is likely to be depressed for 3 to 5 years by the recent economic crisis, imports are expected to rebound in the longer term, with the return of modest economic growth and only slow expansion in the domestic feed-livestock sector.

U.S. Agricultural Trade Value

The total value of U.S. agricultural exports is projected to decline in 1999 and 2000, but then grows for the rest of the baseline, reaching about \$73 billion by 2008. U.S. imports rise to \$50 billion in 2008. The resulting agricultural trade surplus in fiscal 2008 is projected at \$22.5 billion.

Table 34. U.S. agricultural trade values, baseline projections, fiscal years

	1997	1998	1999 1/	2000	2001	2002	2003	2004	2005	2006	2007	2008	1998-2008 growth rate
	<i>Billion dollars</i>												<i>Percent</i>
Agricultural exports:													
Animals and products	11.4	11.2	11.3	11.4	11.9	12.3	12.9	13.5	14.2	14.8	15.4	15.9	3.5
Grains, feeds, and products	16.5	14.1	13.9	14.1	15.8	17.0	18.1	18.9	19.5	20.1	21.2	21.4	4.2
Oilseeds and products	11.4	11.1	9.3	7.1	7.2	7.7	8.2	8.7	9.0	9.3	9.6	9.8	-1.2
Horticultural products	10.6	10.3	10.1	10.7	11.4	12.0	12.7	13.4	14.2	14.9	15.7	16.5	4.8
Tobacco, unmanufactured	1.6	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.4	-0.6
Cotton and linters	2.7	2.5	1.6	1.9	2.4	2.4	2.5	2.6	2.6	2.7	2.7	2.8	1.0
Other exports	3.0	2.9	2.9	3.6	3.8	3.9	4.1	4.2	4.4	4.5	4.6	4.8	5.2
Total agricultural exports	57.3	53.6	50.5	50.2	53.9	56.7	59.9	62.8	65.2	67.6	70.6	72.6	3.1
Bulk commodities exports	23.3	20.0	18.0	17.5	19.7	21.0	22.5	23.6	24.2	25.0	26.2	26.5	2.8
High-value product exports	33.9	33.6	32.5	32.7	34.2	35.7	37.4	39.2	41.0	42.7	44.4	46.1	3.2
High-value product share	59.2%	62.7%	64.4%	65.1%	63.5%	62.9%	62.4%	62.5%	62.8%	63.1%	62.9%	63.5%	
Agricultural imports:													
Animals and products	6.4	6.8	6.8	6.9	7.0	7.1	7.4	7.7	8.0	8.3	8.6	9.0	2.8
Grains, feeds, and products	2.9	2.9	3.0	3.0	3.1	3.2	3.3	3.4	3.6	3.7	3.7	3.7	2.5
Oilseeds and products	2.2	2.2	2.4	2.5	2.6	2.9	3.2	3.2	3.5	3.5	3.6	3.6	5.0
Horticultural products	12.7	13.9	14.5	15.1	15.8	16.5	17.2	17.9	18.5	19.2	19.7	20.3	3.9
Tobacco, unmanufactured	1.2	0.8	0.9	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.3	5.0
Sugar and related products	1.9	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.5	2.5	2.5	3.9
Coffee, cocoa, and rubber	6.4	6.3	6.5	6.6	6.7	6.7	6.7	6.8	6.8	6.9	6.9	7.0	1.0
Other imports	2.1	2.4	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	0.9
Total agricultural imports	35.8	37.0	38.5	39.6	40.8	42.3	43.7	45.2	46.7	47.9	48.9	50.0	3.1
Net agricultural trade balance	21.5	16.6	12.0	10.6	13.1	14.5	16.1	17.6	18.5	19.8	21.7	22.5	3.1

1/ The projections were completed in November 1998 based on policy decisions and other information known at that time. For updates of the nearby year forecasts, see USDA's *Outlook for U.S. Agricultural Trade* report, published in February, May, August, and December.

Note: Other exports consists of seeds, sugar and tropical products, and beverages and preparations. Essential oils are included in horticultural products. Bulk commodities include wheat, rice, feed grains, soybeans, cotton, and tobacco. High-value products (HVP's) is calculated as total exports less the bulk commodities. HVP's includes semi-processed and processed grains and oilseeds, animals and products, horticultural products, and sugar and tropical products. Other imports includes seeds, beverages except beer and wine, and miscellaneous commodities.

Declining prices resulting from large world supplies, weak global demand, and a strong U.S. dollar led to lower export value in FY 1998, with exports of both bulk and high-value products (HVP's) declining. U.S. export value is projected in the baseline to fall to near \$50 billion for FY 1999 and 2000. After 2000, however, growth in both bulk and HVP exports is expected to rebound for the remainder of the baseline. Averaging 2.8 percent per year during 1998-2008, projected bulk commodity value growth exceeds growth in both the 1980s and the 1990s, lending strength to total export earnings. HVP export growth is projected to average 3.2 percent annually during 1998-2008. Much of the HVP gain is in horticultural products. Exports of animals and products, led by beef, pork, and poultry, also show significant growth.

U.S. imports are projected to rise from \$37 billion in fiscal 1998 to \$50 billion in fiscal in 2008, an average annual increase of 3 percent. From 1994 to 1997, agricultural imports increased 10 percent annually. Import growth has recently returned to the expected long-term growth pace due to slower increases in domestic prices of meats and grain-based foods. While a stronger U.S. dollar has reduced prices of imported commodities, a small response in the import volume for many high-value food items has lessened the growth in the value of imports. Imports of horticultural products, the largest component of U.S. agricultural imports, are expected to increase by \$6.4 billion from 1998 to 2008, with average annual growth of 4 percent. Beverages, fruits, and vegetables will be supplied largely by Mexico, Canada, Chile, and the European Union.

Foreign Agricultural Policy Assumptions and Highlights

Policy assumptions underlying both U.S. and foreign projections are based on full compliance with all bilateral and multilateral agreements affecting agriculture and agricultural trade as of November 1998. Bilateral agreements affecting agricultural trade between the United States and Canada, the United States and Mexico, the United States and Japan (beef and citrus), and the United States and Korea (beef) are examples of agreements for which full compliance is assumed. In contrast, no compliance is assumed for any agreements not formally ratified by November 1998.

For multilateral agreements, the projections assume full compliance with the internal support, market access, and export subsidy provisions of the Uruguay Round Agreement on Agriculture by all parties to the agreement. Several potential multilateral agreements that could have a significant impact on agricultural trade are now under consideration, but are assumed *not* to occur in these projections. These include:

- C No accession to the World Trade Organization (WTO) by the FSU, China, or Taiwan;
- C No enlargement of the EU-15 to add one or more Central or East European countries;
- C No implementation of more liberalized trade among the Asia-Pacific Economic Cooperation (APEC) countries, and;
- C No expansion of NAFTA to include additional countries.

Domestic agricultural and trade policies in individual foreign countries are assumed to continue to evolve along their current path, based on the consensus judgment of regional and commodity analysts. In particular, economic and trade reform underway in many developing countries is assumed to continue. Similarly, the development and use of agricultural technology and changes in consumer preferences are assumed to continue to evolve based on past performance and analyst judgment regarding future developments. Key assumptions underlying the projections for major foreign countries are summarized below.

European Union

The projections for the European Union (EU) incorporate policy changes adopted as part of the 1992/93 reform of the Common Agricultural Policy (CAP), as well as EU commitments under the Uruguay Round (UR) agreement that limit subsidized exports and improve market access. The final price cuts under the 1992 CAP Reform took place during 1995/96 and, for most commodities, basic support prices are assumed to remain constant in the baseline at 1995/96 nominal levels. Two potential changes with significant implications for agriculture that are not included in the projections are the accession of the Central and Eastern European (CEE) countries, and the adoption of agricultural reforms included in the Agenda 2000 proposal. They are not incorporated into the baseline at this time because of the high degree of uncertainty regarding the final terms and timing of these initiatives.

The baseline assumes that the EU's UR commitment on internal support is not a binding constraint, since many policies resulting from CAP reform meet the WTO "production-limiting" criteria and are exempt from reduction commitments. Tariffication of nontariff barriers and tariff reductions are assumed to have little impact because the high tariff equivalents established for most products are unlikely to permit significant additional imports beyond minimum access tariff-rate quotas. Continued high levels of import protection mean that price transmission from the world market will be negligible for all baseline commodities except oilseeds and their products and, in years when unsubsidized exports occur, wheat. The most important UR commitments for the baseline are the limits on subsidized exports and the minimum import levels agreed under the market access provisions.

There is significant uncertainty regarding the measures the EU will adopt to cope with the prospects for large surpluses that are likely to emerge under current CAP provisions and UR commitments. The European Commission's own forecasts suggest that grain stocks will accumulate to more than 70 million tons by 2005, with large increases also anticipated in stocks of beef, butter, and skim milk powder. The EU must make adjustments in the CAP to deal with the inevitable market imbalances forecast for the next decade, and is currently considering a set of reforms under the Agenda 2000 initiative. The outcome of the Agenda 2000 process is, however, uncertain and it is necessary to adopt a set of EU policy assumptions for the current baseline projections. There are several options:

- C The EU could be permitted to accumulate stocks as indicated in the Commission's own analyses. Stock accumulation, however, is probably not a viable long-run policy option. The Commission views its forecast stock increases as an indicator of the scale of the policy problem the EU faces.

Proposed EU Policy Reforms Under Agenda 2000

In March 1998, the European Commission proposed significant reforms to EU agricultural and financial policies, as well as guidance on EU enlargement to Central and Eastern Europe (CEE). These reforms, dubbed Agenda 2000, would result in considerable changes to the current Common Agricultural Policy (CAP) of the EU. EU farm ministers are currently debating the Agenda 2000 reforms, and a final proposal should be agreed on in March 1999 at the Cardiff Summit. At this time, however, there is considerable uncertainty about what actual reforms will be agreed upon. Although it is not clear that the reforms outlined in Agenda 2000 proposals will be adopted as written, the proposals are indicative of direction in which policies may change.

For agriculture, the Agenda 2000 reforms adhere to the following principles:

Reducing Gaps Between EU and World Prices. The Commission proposes a 30-percent reduction in the intervention price of beef, a 20-percent reduction in the intervention price of cereals, and a 15-percent reduction in the intervention price of dairy products (butter and skimmed milk powder).

Increasing Direct Income Support. Grain producers were overcompensated by the 1992 CAP reform because market prices did not fall to anticipated levels. Once again, the Commission believes that internal grain prices will not fall to new intervention levels because of increased EU demand for grain feeds. This time, it is proposed that grain producers will be compensated through direct payments for only 50 percent of the price cut. Per-head payments will increase in the beef sector, and cow payments will be instituted in the dairy sector. In contrast, oilseed prices are not expected to fall because they are not currently subsidized, and per-ton compensation payments for oilseeds are slated to fall roughly 60 percent.

The extent to which the direct income supports will be linked (coupled) to current production levels and influence producer behavior is a key issue in determining the impacts of the proposed reforms. The current proposal calls for payments to be based on per-unit support rates derived from historical averages and current levels of production.

Reducing the Default Land Set-Aside Rate. With the reduction in support prices, the EU is expected to be less dependent on export subsidies to export grain surpluses, reducing the potential for accumulating intervention stocks and the need for supply controls. The proposal calls for reducing the default set-aside rate from 17.5 percent to zero, while maintaining the option of increasing the set-aside rate in case over-production once again becomes a problem. Additionally, the voluntary set-aside would continue to be allowed at a minimum level of 10 percent.

Maintaining the Milk Quota. The milk quota would be increased by 2 percent and maintained through 2006. Half of the increase would go to young farmers (i.e. new entrants to farming) and half to farmers in mountainous regions. The lower prices for dairy products would allow the 2-percent increase in the milk production quota.

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Proposed EU Policy Reforms Under Agenda 2000 -- continued

Establishing “National Envelopes.” Each member state, as opposed to the Commission, would be permitted to allocate a portion of the direct income support payments as it sees fit, provided that the method does not distort competition within the EU. Thus, member states can decide which types of agriculture to support.

“Modulating” Direct Income Support. The Commission proposes setting limits for member states on how much direct aid each farm could receive.

Other Reforms. The Agenda 2000 proposal also includes other agricultural reforms, including: simplification of EU rules; increasing the horizon for setting policy prices from monthly or annually to cover the 2000-2006 period; increasing resources for agri-environmental measures, and; developing and financing a rural development policy. It also proposes guidelines for EU enlargement, including providing aid to improve the agricultural and rural sectors of new members prior to accession.

Funding for the CAP under Agenda 2000 would be significantly higher than under the present policy, at least for the first few years, because increases in direct payments would more than compensate for the loss of market price support. EU finance ministers, however, are debating placing a ceiling on CAP funding at historical levels, thus jeopardizing the Agenda 2000 reforms as proposed by the Commission. Most observers agree, however, that significant reform of the CAP will be needed to address emerging surpluses, contain costs, and accommodate eastward enlargement.

- C The EU could pursue more restrictive production and marketing controls. The maximum set-aside rate for arable crops could be increased beyond the current 17.5 percent, and current provisions for voluntary set-aside could allow significant additional idling of land by revision of national restrictions. However, approval of a very large obligatory set-aside is seen as politically unlikely.
- C The EU could allow internal market prices to decline. The EU only makes intervention purchases of bread quality wheat. It has allowed feed wheat prices to decline well below intervention prices, significantly increasing wheat feed use. The management committees have the authority to tighten quality standards for intervention in the feed grains and could pursue a course like that taken for wheat, establishing market prices below intervention levels. It has been proposed that intervention prices for feed grains be reduced relative to bread wheat, but that would require ministerial level action by EU members.

For the purpose of the baseline, it is assumed that EU policy permits internal market prices of grains to fall below intervention, along with adjustments to the land set-aside within current CAP provisions. For grains, production in excess of intervention purchases and on-farm use that

cannot be exported depresses the internal market price, dampening output and increasing use. Grain stocks are assumed to remain at constant percentages of domestic use that are consistent with historical experience. By 2002, declining internal market prices for wheat converge with world prices, permitting EU wheat exports to rise above the UR limits for subsidized exports. Internal coarse grain prices, however, never fall enough to permit unsubsidized exports. Despite increases in domestic use and exports, the area set-aside must be increased to prevent stock accumulation. The area set-aside increased from 5 percent in 1998/99, to 10 percent in 1999/2000, 15 percent in 2000/01, and the statutory maximum of 17.5 percent in 2003/04. Internal market prices for wheat end up falling a maximum of 12 percent below intervention prices, while barley prices fall a maximum of 15 percent below intervention.

There is also uncertainty regarding what measures that will be adopted to deal with a projected imbalance between beef supply and use stemming, in part, from the bovine spongiform encephalopathy (BSE) crisis. The extent of the potential oversupply problem is now believed to be less serious than once thought. The accelerated slaughtering program in the United Kingdom has effectively liquidated the affected portion of the herd, and beef consumption has not dropped as much as anticipated, in part due to increasing confidence in the safety of the beef supply. To the extent that beef surpluses continue to accumulate, it is assumed that revisions to the CAP will further reduce beef producer incentives.

The current baseline assumes that there will be no enlargement of the EU-15 to add one or more Central or East European country during the projection period. Accession of the large agricultural-producing CEE countries could cause serious problems for the CAP in its current form, providing impetus for policy changes to further reduce levels of price and budget support below those implied by the current projections. Similarly, implementation of the Agenda 2000 policy reforms (see Agenda 2000 box, page 89), as currently written, could also have significant impacts on the projections.

Asia and Oceania

Australia. The economic slowdown in Asia is expected to continue to slow the Australian economy for another two years. In Australia, the shock of the crisis has been cushioned by depreciation of the Australian dollar, which helped retain export competitiveness, and by diversification of exports away from Asia and toward the United States and Europe.

Production for export dominates Australian agriculture. Australian producers are expected to continue to adjust cropping patterns, and to switch between crop and livestock enterprises, to maximize returns. With increasing populations and incomes forecast globally, exports and production of the major commodities are forecast to continue to expand. Key issues in the outlook for production are the response of producers to uncertainties regarding price variability and the availability of water. Until more irrigated area is available, area expansion will be slow for some crops. Crops will again be planted in the area of the Ord River project in Western Australia, and several new dams are in the planning stage.

While little growth in wheat area is expected, growth in wheat yields is projected to support increases in both exports and domestic feeding of wheat. However, further growth in rice

exports will be very limited due to constraints on increasing both area and yield. Increases in barley output will depend primarily on yield gains, with the share of barley area and exports devoted to malting barley continuing to rise. Cotton yield, production, and export growth remain heavily dependent on the availability of irrigation water and are projected to show only moderate gains. Although low prices and more favorable returns for other enterprises may limit growth of the cattle herd in the short run, beef production and exports are projected to increase in the medium term.

China. China's economy is assumed to continue to grow at a rapid but gradually declining rate over the projection period. In the near term, real GDP growth is expected to slow to about 7 percent due to the weaker performance of neighboring Asian countries. By 2000, growth is expected to recover to around 8 percent annually, somewhat below rates achieved in the recent past, before slowing gradually to about 7.5 percent annually by the end of the projection period. It is assumed that China will continue to reform its economy gradually, with reform efforts focusing on restructuring and improving the performance of state-owned enterprises. Also, domestic and foreign direct investment are assumed to continue to grow, but at a slower rate than in the past. It is expected that two of the principle bottlenecks to future economic growth, transport and energy, will remain the focus of investment and provide the infrastructure necessary to support the projected future growth of agricultural output and trade flows.

Agricultural policy intervention is now expected to focus more narrowly on maintaining self-sufficiency in the grain sectors, while relaxing earlier policies aimed at self-sufficiency in other commodities. Administrative and financial support is expected to give priority to boosting output and limiting imports of wheat, rice, and, to a lesser extent, corn. The new focus on the grain sector is expected to lead to reduced support and greater potential reliance on imports for commodities other than grains.

China's agricultural trade system is assumed to continue to be slowly reformed. Although central government quantitative controls on trade in key commodities, including wheat, rice, corn, and cotton, are expected to be maintained, the share of trade handled by private and joint private-public trade companies will likely expand. Trade in other agricultural commodities is also expected to be influenced by policy, but mostly through non-quantitative measures, such as licensing, tariffs, and export taxes. The baseline assumes that China will not become a member of the WTO during the projection period. Although China has applied for WTO membership, the ultimate provisions and timing of a final agreement are very uncertain.

Production of most major crops is expected to increase as rising domestic prices boost yields by stimulating more use of improved varieties, fertilizer, and better management. It is assumed that the government's recent multi-year commitment to annual real increases in agricultural research and technology investment funding will be sustained through the projection period. It is expected that total cultivated area will continue its current gradual decline under pressure from non-agricultural uses.

Assumptions regarding agricultural policy, the data and parameters used for projecting livestock production and feed use, and future movements in China's real exchange rate are important keys to the current China projections (see box, page 93), and are all subject to a high degree of

Assumption Changes for China Lower Grain Import Projections

The China baseline projections are sharply different from last year because of altered assumptions for government agricultural policy and the real exchange rate, as well as a revised outlook for meat production and feed demand. These changes contribute to lower projections of grain imports, but have generally offsetting impacts for other agricultural commodities.

Agricultural Policy. China's agricultural policies have been in a state of flux over the last several years as priorities have shifted and reform initiatives have been adjusted. The most important changes, especially in terms of their trade impacts, are in the grain sector. The so-called "Grain Reform" policy initiated in 1998 reverses several years of liberalization by severely restricting private grain marketing. Also, numerous pronouncements by senior officials have indicated the government's intent to maintain support for grain farmers via price supports, government purchase programs, and continued restriction of imports. Our interpretation of the recent policy moves is that the central government will increase its intervention in grain production and trade, even while reducing intervention in other sectors of agriculture.

Government support will induce increased output of rice, wheat and, to a lesser extent, corn, than would otherwise have occurred, reducing projected increases in imports. However, imports of a number of other commodities, including oilseeds, meals, and oils, are expected to continue to rise due to relaxation of trade and domestic marketing restrictions. The recently announced elimination of the state's cotton pricing, purchasing, and distribution monopoly beginning with the 1999 harvest is a further indicator of the intent to reduce intervention in nongrain sectors.

Anticipated Livestock Data Revisions. In October of 1998, China's official statistical agency, the State Statistical Bureau (SSB), released revised 1996 livestock sector data which indicate lower animal inventory and meat production levels of 20 to 30 percent (see table 35). However, the revised data were not released early enough to permit a complete revision of historical meat and feed supply and use data to be incorporated into the current China projections. Also, SSB did not revise the historical data series, leaving unanswered the question of what adjustments might be needed in long-term meat production growth rates.

The current baseline projections incorporate a preliminary assessment of the impacts of the forthcoming data revisions on future growth in the supply, demand, and trade of meats and feeds. This assessment is based on the recent official revisions for 1996, as well as ongoing ERS research on China's feed-livestock statistics. Accordingly, the projections are based on estimates of reasonable long-term growth in meat supply and use extrapolated from ERS estimates of revised historical data.

The recent data revisions prompted a reexamination of projected supply and demand growth for all meats. In general, the changes in long-term meat production growth mean smaller animal inventories and reduced levels of feed demand. Some of the reduced feed demand implies less

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Assumption Changes for China Lower Grain Import Projections -- continued

use of non-grain feeds, such as slops, weeds, and grain husks, which still compose a substantial portion of the total feed ration in China. Nevertheless, the lower estimates of future meat production, combined with the policy initiatives that are expected to stimulate domestic grain output, contribute to sharply lower long term projections of net coarse grain imports compared with earlier USDA baselines.

Table 35. Revised China livestock inventory and meat production statistics for 1996

	Original 1996	Revised 1996	Percent change
	<i>1,000 head</i>		
Yearend inventories:			
Cattle	139,813	110,318	-21.1
Hogs	457,357	362,836	-20.7
	<i>1,000 metric tons</i>		
Meat production:			
Beef	4,949	3,557	-28.1
Pork	40,377	31,580	-21.8
Poultry 1/	10,746	8,472	-21.2

Source: 1998 *China Statistical Yearbook*

1/ Revised poultry meat production data estimated by ERS.

Real Exchange Rate. In the longer term, the baseline assumes a gradual but steady depreciation of China's real exchange rate against the U.S. dollar. This assumption is based on a review of the macroeconomic fundamentals, leading to a decision to maintain the clear long-term trend of real depreciation against the dollar since the 1970s. This differs from previous baselines, which have assumed that China's real exchange rate would remain roughly constant. For the current baseline, China's currency is assumed to depreciate during 2000-2008 at about half the rate implied by the historical trend. In the near term, however, the currency is expected to continue to appreciate in real terms, as it has since 1994 due to tight domestic monetary policy and large capital inflows, as China holds off future devaluations until neighboring economies stabilize.

The depreciating real exchange rate reduces the long-term projections of China's net agricultural imports by both increasing the local currency cost of imports and increasing export competitiveness. Changing assumptions from a constant real exchange rate to annual depreciation has the most impact on net imports of commodities where supply or demand is relatively responsive to price changes. Net imports of grains and meats in 2008 declined 35-40 percent compared with a constant exchange rate scenario, while net imports of oilseeds and products were down 5-15 percent.

uncertainty. Projections of China's future demand and trade for many commodities, particularly meats, feeds and edible oils, are also highly dependent on the assumption of continued rapid economic growth. Future economic performance and agricultural trade are now more uncertain due to the crisis affecting many other Asian economies. Likewise, small changes in technical parameters, including feed-conversion rates and income elasticities of demand, which are very difficult to estimate reliably, can result in dramatic changes in trade projections for a country of 1.2 billion people.

East Asia. South Korea and Japan are projected to remain large net importers of livestock products. Barriers to imports continue to fall in both countries, as dictated by the Uruguay Round agreement. Deficiency payments to assist the beef cattle sector and dairy import quotas will support cattle production at about present levels, but growing demand will be met through imported beef. Pork and poultry meat production in both countries has been strengthened by structural change and encouraged by the weakness of the won and the yen. Imports will grow more to satisfy new consumer demand than to replace domestic production, and the rate of import growth is likely to be slower than in the past unless additional tariff reductions are negotiated. South Korea's imports of pork and poultry meat are projected to be smaller than in previous projections as the impacts of 1998 financial crisis both reduce demand and increase domestic production relative to previous baselines. Japan is expected to make maximum use of the pork and beef safeguard mechanisms negotiated in the Uruguay Round, which permit temporary hikes in tariffs and levies in order to limit imports.

Taiwan's livestock sector has been deeply affected by liberalization accompanying its WTO membership application, and by the lingering effects of the 1997 outbreak of foot-and-mouth disease (FMD) on its huge hog farms. Taiwan's import ban on offal, chicken meat, and pork cuts (other than hams, loins, and shoulders) was lifted slightly and a quota instituted after the February 1998 agreement with the United States about WTO accession. The outbreak of FMD in March 1997 has completely shut down Taiwan's pork exports. Exports of uncooked pork are not expected to resume for a few years, and then to recover to only about half of the 1990-96 average export level by 2008.

All three East Asian economies are assumed to maintain tight state control over rice trade. Rice production in South Korea will continue to be insufficient to both meet domestic needs and maintain adequate stocks, but Korea's aversion to imports is so strong that it is assumed to take the risk of low stock levels through much of the projection period. Japan and South Korea will continue to meet their minimum access commitments, but will not import above those levels.

Wheat, barley, and soybean production in Japan, and barley and soybean production in South Korea, are maintained through border protection and the use of domestic products by processors in response to government mandates or subsidies. The quota for corn for new industrial uses introduced during the Uruguay Round should expand Japan's non-feed imports of corn.

The projections assume that East Asian governments will continue enormous expenditures to help domestic agriculture restructure itself. A continued outflow of labor from farming will help full-time farmers achieve larger operations and economies of size.

Asian Growth: Recovery Key for Agricultural Trade

With 40 percent of U.S. agricultural exports going to Asia, strong Asian economies have been an engine of growth for U.S. agricultural trade in the last few decades. The financial crisis that hit Asia in mid-1997, and spread to other regions in 1998, has affected global trade and contributed significantly to declines in U.S. agricultural trade in the near term, and has created uncertainty regarding longer-term prospects.

Agricultural impacts of the crisis, including reductions to import demand, have reflected the effects of both lower incomes in the region and currency devaluations. Improvements in import demand in the region, global agricultural trade, and U.S. agricultural exports during the baseline will depend heavily on the timing and magnitude of Asian economic recovery.

The crisis has reduced Asian growth and wealth, depressed commodity demand and prices, and decelerated world trade growth. The World Bank (*Global Economic Prospects Report*, 1998) estimates that the crisis reduced world GDP growth by 0.3 to 0.4 percentage points in 1998. The pace of the region's recovery remains highly uncertain. Japan, already in recession, has announced domestic stimulus packages with income tax cuts and banking reforms, but the pace of recovery remains slow. China's 1998 growth is expected to be below target at 7.8 percent, with a slowdown in both the domestic economy and exports. South Korea and Thailand have begun to make reforms and restore investor confidence. The Malaysian economy has stabilized behind capital controls, but reform and recovery remain elusive in Indonesia.

Keys to Asian Recovery

Prospects for improved Asian economic performance in the medium to long-term depends critically on several factors:

- C recovery in Japan,
- C successful structural and financial reform in crisis countries, and
- C the return of investor confidence in emerging markets.

Japan's recovery. The delay in Japan's recovery could prolong the region's comeback. In November 1998, Japan announced an Emergency Economic Package that will provide over 17 trillion yen (\$145 billion at 117 yen per dollar) to help put the Japanese economy on the recovery track in 1999 and 2000. A permanent tax deduction will increase the package to a total of 20 trillion yen (\$171 billion). The package aims to increase domestic demand and employment, stabilize the financial system, and increase international coordination. To finance the package, the government plans to double the volume of government bonds in the next fiscal year, leading to a decline in bond prices and a further decrease in stock prices. Amidst these developments, the IMF has forecast further contraction of the Japanese economy. Japan's recovery path remains uncertain.

Policy reform in crisis countries. Policy reform has moved most rapidly in Korea and Thailand. In both countries, long-term measures in IMF-led packages aim to speed up trade liberalization and open capital markets. Each country is implementing difficult financial and structural reforms to expedite recovery

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Asian Growth: Recovery Key for Agricultural Trade -- continued

through fiscal expansion and cautious monetary policy. Initial high interest rates have been reduced, providing more credit. Banking reforms have begun, leading to closure of failed banks or mergers with the stronger ones. Bankruptcy laws have been strengthened. Sharp declines in imports have strengthened current account balances and provided stability to exchange rates. Both countries have added more measures to increase foreign direct investment and privatization in order to allow greater business participation. Even with these reforms, full recovery in Korea and Thailand is likely to take longer than once expected.

Reforms in other countries have moved more slowly than in Korea and Thailand. In Malaysia, the introduction of capital controls to stabilize financial flows is controversial and may hinder the restoration of inward investment and growth. In Indonesia, Southeast Asia's largest economy, both political and economic reforms continue to move slowly.

Restoring investor confidence. The pace at which investor confidence is restored in the future of the region's economies will be key to recovery. The sudden withdrawal of investment capital by foreign creditors through recalled loans and equities has had major impacts, increasing the vulnerability of weak financial institutions, and increasing liquidity pressure in already highly leveraged economies. Prior to the crisis, strong investor confidence led to net capital inflows to the Asian 5 (Indonesia, Korea, Malaysia, Philippines, and Thailand) of \$84 billion in 1995 and \$94 billion in 1996. In 1997, when the turmoil started, these inflows shifted to a net outflow of \$100 billion of capital from the region in 1997. Only a small portion of this capital flight has returned and the region still faces a severe credit crunch. Longer-term prospects remain difficult to assess, but there are positive signs. Korea's credit rating has recently been upgraded, and the country has begun to pay back IMF loans.

Impacts on Other Developing Countries

While there are now signs of restored financial stability in Asia, some non-Asian developing and transition regions, including the former Soviet Union and Latin America, remain at risk. Russia's declaration of a debt moratorium in August 1998, and the potential for a Russian default, increased the vulnerability of other regions, particularly Latin America, to financial instability.

In Latin America, the financial turmoil in Asia and Russia, together with associated declines in commodity prices, are threats to recent economic stability and growth. According to the UN, Latin American economic growth in 1998 was slowed by about 1 percentage point as a result of the Asian financial crisis. Financial conditions have deteriorated because of reduced inflows of capital that help finance budget and current account deficits, and depressed prices for key primary exports, including oil, grains, oilseeds, and minerals.

In Brazil, reduced foreign investor confidence led to a large drawdown of foreign reserves. For the baseline, Brazil's economy is assumed to be slowed by these events, but a \$41.5 billion reserve and austerity package negotiated with the IMF in November 1998 is expected to prevent a deep or prolonged recession. The January 1999 devaluation of the Brazilian currency occurred after the baseline was completed and, therefore, is not incorporated in the projections.

Southeast Asia. The region's financial crisis is expected to result in continued exchange rate instability and slowed economic growth during 1998-2000. For several countries in the region, including Indonesia, Malaysia, and Thailand, long-term real GDP growth rates during 2001-2008 are now expected to average 1-3 percentage points below historical rates due to the impacts of the crisis (see box, page 96). As a result, projected growth in demand of relatively income-sensitive commodities, including meats and feeds, is projected to be significantly slower than in previous projections. Higher local consumer and producer prices stemming from currency devaluations across the region will also play a key role in slowing imports by reducing consumption and raising domestic producer incentives.

Although real GDP growth rates are, in many cases, not expected to fully recover to previous rates, steady growth in import demand for foods and, particularly, feeds is expected to resume by about 2000. Rice imports in the region are expected to continue to increase, as production remains handicapped by slow increases in yields and land constraints in importing countries. Although wheat import demand is slowed in the near term by smaller incomes, higher local currency prices, and Indonesia's reduced consumer subsidy, longer term prospects are still for strong import growth as wheat continues to account for a growing share of diets in the region. Recent rapid growth in production and consumption of livestock products in the region have been dealt a severe setback by the financial crisis, and the pace of recovery of supply and demand remains highly uncertain. Demand for meats and feeds is relatively more responsive to changes in incomes and prices than is demand for other food items. The current projections assume that meat production and per capita consumption will recover to pre-crisis levels over a 3-5 year period. Consumption and imports of feed grains and proteins are also expected to recover during this period, then resume growth at long-term rates somewhat below pre-crisis projections. The pace of recovery of local meat production in the region, and the extent to which sharply higher producer price incentives will stimulate more production of corn and soybeans, are important uncertainties in the projections for the region.

The impacts of the crisis on the region's agricultural exports, including rice, palm oil, and poultry, are expected to be mixed. With their devalued currencies, Thailand and Vietnam are expected to remain large and very competitive rice exporters. Thailand's exports of poultry are expected to continue to receive a competitive boost from devaluation of the baht, although overall poultry output is likely to be down due to weakened internal demand. Indonesian and Malaysian palm oil exports may receive a near-term boost as devaluation shifts some local consumption into export markets, but financial constraints could reduce plantings over a 2-3 year period and slow longer term growth in exportable supplies.

Indonesia's economy and political stability have been the most severely affected by the crisis, and prospects for recovery remain the most uncertain. The economy is assumed to return to modest positive growth by 2000 and reach 6-percent average growth, 2 percent below historical performance, for 2003-2008. Agricultural policy is expected to evolve under the framework agreed with the IMF, involving reduced government intervention, more privatization, and more open trade. Such shifts in policy, combined with reduced resources for developing irrigated rice land off-Java, are expected to increase dependence on imported rice compared with pre-crisis projections. Wheat import demand is projected lower due to the combination of lower incomes

and the removal of consumer subsidies. Meat production, particularly poultry, is down sharply due to the crisis. Meat production and feed demand are expected to recover over a 5-6 year period, but gains in corn production could limit any recovery in corn imports.

South Asia. India's farm sector is expected to continue to benefit from improving terms of trade, as agricultural price incentives are maintained and liberalizing reforms steadily reduce protection in nonfarm sectors. A strong policy emphasis on improving producer price incentives is, however, unlikely during the baseline because relatively fragile coalition governments are likely to give priority to assuring consumer price stability. Food grain production is expected to receive a boost from reduced protection of oilseeds resulting from the recent shift from state trading to tariffication of vegetable oil imports. India's exports of soymeal are expected to continue to grow, as soybean producer incentives are less affected than other oilseeds by lower internal oil prices and domestic feed demand remains limited. Domestic surpluses of rice continue in the baseline, with India's relatively low-quality rice maintaining a significant global market share of trade. While some wheat imports are projected, there may also continue to be periodic surpluses of relatively low-quality wheat sold on the world market. With the reform of vegetable oil trade remaining in place, vegetable oil imports will grow rapidly. Price incentives and productivity gains will sustain strong growth in cotton production, with most production consumed domestically to meet domestic and export demand for cotton-based products.

Economic growth projections for Pakistan have been reduced because of declining capital inflows and continued low rates of domestic savings and investment. Agricultural policy is expected to continue to support gains in cotton area, leading to stagnation of wheat yields due to late planting on double-cropped land. As a result, dependence on imported wheat is expected to continue to rise. Cotton yields are expected to recover gradually from recent pest-related problems. As with India, most cotton production is likely to be processed domestically, contributing to strong growth in exports of cotton-based products. Small increases in rice area will allow rice exports to slowly expand over the baseline. Relatively liberal import policies will likely permit continued growth in vegetable oil imports. Growing livestock product demand is expected to lead to growing soybean meal imports and, possibly, the emergence of feed corn imports during the baseline.

Africa and the Middle East

Sub-Saharan Africa. Food grain consumption in Sub-Saharan Africa will be driven primarily by population growth, which is projected to remain relatively high at roughly 3 percent per year. Real per capita incomes are expected to remain, on average, constant across the region. Production is projected to nearly keep pace with consumption, resulting in slow growth in imports. Food grain imports will continue to be constrained by only small gains in the region's capacity to import commercially, and by the availability of food aid. Although very little growth in global cereal food aid supplies is assumed in the baseline, an increasing share of the available aid is expected to go to Sub-Saharan Africa, allowing some growth in the region's food grain imports over the projection period.

North Africa. Growth in import demand for grains and feeds in North Africa is projected to be stronger than during the 1980s because of the outlook for improved economic growth, limited

production potential, and more open trade policies. In Algeria, wheat and corn imports are projected to rise as crop production is hampered by high input prices, input shortages, and lack of credit. In Egypt, average annual real GDP growth of more than 4 percent, combined with recent policy reforms, generate more growth in wheat, corn, soybean meal, and vegetable oil imports. Since joining the WTO in 1995, Egypt has eliminated or reduced producer and consumer subsidies in agriculture and has opened up trade of grains, cotton, and other commodities to the private sector.

Morocco's real GDP growth of 4 to 5 percent annually, together with further steps to liberalize trade and phase out subsidies in grains, oilseeds, and sugar, are expected to spark stronger growth in import demand. In Tunisia, which began liberalizing its domestic markets and trade in 1992, annual real GDP growth of 5 to 6 percent is projected to boost import demand for wheat, corn, soybean oil, sunflower oil, refined sugar, and livestock products. Tunisia, a member of the WTO, has also signed a Free Trade Zone agreement with the EU, which will gradually eliminate tariffs by 2008.

Middle East. Economic growth in the Middle East region will be slowed by weakened global demand and lower oil prices. The region's economies are projected to experience moderate economic growth during 1999-2008, somewhat higher than occurred during the 1980s. Prospects for recovery in Iran are highly dependent on both oil prices and the implementation of structural reform. Moderate economic growth, together with limited success in improving crop yields, and an ambitious livestock/dairy development program, lead to the projected growth in Iran's wheat, rice, corn, and barley imports. Both economic and political prospects in Iraq remain highly uncertain. Recent increases in oil export revenues have led to rising imports of wheat, rice, and other foodstuffs. Under the assumptions of 4 to 5 percent annual real GDP growth, continued modest recovery in petroleum export revenues, and expansion of trade under the current oil-for-food arrangement, Iraq's food imports are projected to recover gradually from the lows of the early 1990s. Although Iraq's feed-livestock sector has yet to begin its recovery, some expansion of poultry production and feed imports is likely during the projection period.

In Saudi Arabia, economic growth will be tempered by the weaker outlook for petroleum prices. Grain output is expected to continue to decline as budget constraints force subsidy cuts. Concern about depletion of water resources will also reduce grain output. Rising imports of rice and wheat are projected as population growth continues strong. Ambitious expansion of the livestock/dairy/poultry sectors, combined with recent steps to privatize feed grain imports, are expected to result in higher imports of feed grains and oil meals.

Turkey's expanding population is becoming increasingly urbanized, raising demand for livestock and poultry products. While poultry output is rising sharply, livestock development continues to lag, resulting in high meat prices that contribute to inflationary pressures. Lack of a strong commitment to privatization and restructuring in the farm sector is expected to affect output growth throughout the projection period. High support prices are likely to continue to stimulate domestic grain production in the near term. It is assumed, however, that high current price supports for wheat and coarse grains will not be sustained in the longer term, leading to slower output growth and rising imports later in the projection period. Rice imports are expected to grow steadily. Cotton consumption is projected to rise as the textile sector expands and, despite

area expansion on new lands in the Southeastern Anatolian Project towards the latter half of the projection period, imports should remain strong and exports small.

Western Hemisphere

Canada. The global slowdown resulting from the Asian financial crisis and its spillover effects to other regions will affect Canada's economic growth over the next few years. Canada's competitive position continues to improve because of depreciation of the Canadian dollar against the U.S. dollar, slower growth in domestic unit labor costs, and lower inflation. While some strengthening of the Canadian dollar is anticipated over the next 2 years, the long-term trend of real depreciation against the U.S. dollar is expected to continue during 2000-2008.

Domestic support for agriculture, through programs such as the Net Income Stabilization Account (NISA), Crop Insurance, Companion Programs, Advance Payments Program, and Price Pooling Program, is expected to decline during the projection period. The major support program, NISA, is assumed to be production neutral in the baseline analysis. Supply management programs are expected to be maintained for dairy, eggs, and poultry products. In addition, it is assumed that WTO commitment levels will extend to the year 2008.

Canada is facing a major restructuring as a result of transportation and marketing deregulation. Pending completion of an ongoing official Canadian review, it is assumed that current transport and marketing regulations remain in effect, with no significant change in transportation policy with respect to grain movement to export position.

The 1995 elimination of transportation subsidies encouraged production of high value products such as livestock and canola in Western Canada. In the near term, the livestock sector will be depressed by weak Asian demand. Despite low meat prices, adjustments to current low grain prices are expected to include both expansion of herd size for future production and longer retention of animals on feedlots. In the long term, it is expected that more Canadian-produced feeds will be fed domestically to support growing livestock operations.

Crop production patterns are expected to continue to favor canola in Western Canada, with wheat acreage remaining below 13 million hectares in the near term. Canada is expected to continue to maintain a number of important niche export markets, including oats in the United States; barley malt in China, Latin America, the Middle East, and Japan; and durum wheat in the United States and North Africa.

Mexico. Mexico is expected to show the fastest economic and population growth in North America over the next decade. Relatively fast growth, along with trade liberalization and domestic policy reform, will be the key factors shaping the outlook for Mexican agriculture during 1999-2008. Mexico is expected to be a progressively larger importer of grains, oilseed products, and meats during the projection period. Production capacity will remain limited by scarce water and land and low levels of technology, while rising incomes drive up demand for livestock products and feeds.

Agricultural policy is expected to continue to be driven by the Alianza para el Campo, of which the PROCAMPO program is a major component, and by NAFTA. Under PROCAMPO, the government continues to reduce its role in supporting grain prices. With lower import duties on corn, sorghum, and wheat, there will be more price transmission between the world and the Mexican domestic grain markets. PROCAMPO direct payments, which require planting but are otherwise decoupled, will continue to be phased out. Mexico is also expected to continue to reduce consumer subsidies. Subsidies on animal feed through CONASUPO will also be eliminated as feed compounders procure corn directly from farmers.

Under NAFTA, all tariffs on baseline commodities will be eliminated by 2008. Because of the price-competitiveness and quality of U.S. corn, pork, poultry, and eggs, particularly to the border areas, it is assumed that Mexico will import at least the tariff-rate quota quantities. In the case of poultry, it is assumed that Mexico will continue to not enforce the TRQ, leading to steady modest growth in imports.

New programs aimed at improving agricultural productivity are assumed to have a small impact on farm output during the projection period. The new programs include initiatives for water distribution and irrigation investment, improved genetic material and equipment for livestock producers, technology transfer for the cattle and oilseed sectors, certified seed exchange, and an extension initiative for corn. The objective is to provide producers with the tools to operate in an environment largely free of government intervention but, until there is concrete progress in implementing the programs, it is assumed that impacts will be relatively small.

South America. Although near-term economic growth in the region is assumed to be slowed somewhat by financial and trade impacts of the Asia crisis, virtually all of the region's economies are expected to register stronger long-term growth during the next decade than in the recent past. Growth is expected to be led by the two largest economies in the region, Argentina and Brazil. Like many countries in the region, they are expected to continue to benefit from their successful evolution from semi-authoritarian political systems and managed economies to political pluralism and market-oriented economies.

Crop production in Argentina exceeded all expectations in 1997, as record production levels were established for corn and soybeans, with wheat output within 10 percent of the record set a year earlier. Near-perfect weather conditions induced by El Niño helped farmers achieve yields that eclipsed previous highs by more than 10 percent for wheat and soybeans, and more than 30 percent for corn. Even with substantial increases in domestic use and stocks, Argentina sharply increased corn exports.

Over the 10-year horizon of the baseline, Argentine production potential will continue to expand rapidly (see box, page 103), although this expansion may be tempered somewhat if global demand and commodity prices remain weak. Argentina's transportation infrastructure, which has largely been privatized, continues to be upgraded to handle the expanding supply of products more efficiently and at lower costs. The livestock sector, which has recently been suffering through a period of depressed cattle prices, is poised to rebound, as Argentina has been declared free of foot-and-mouth disease, opening new markets for Argentine fresh and frozen beef.

Expanding Production Potential in Brazil and Argentina

Brazil and Argentina both have tremendous agricultural production potential, which has only begun to be fully exploited during the past 10 years. In the current economic environment, however, much of this potential may remain untapped for a considerable time. International commodity prices are weak and the Asia crisis limits the ability of export markets to absorb new production, so there is considerably less incentive for growth. Brazil's current economic problems limit its ability to fund large-scale development projects in the near term.

Brazil is one of the few countries to increase its agricultural land base during the 1990s. According to FAO, Brazil's arable land area rose from 45.6 million hectares in 1990 to 53.5 million hectares in 1995. The large increase was in cultivated pastures, especially in Mato Grosso, Mato Grosso do Sul, and Tocantins, converted from forests and woodlands (Brazil; 1995 Agricultural Census). Cropland, however, did not expand. Total cropped area, including area in traditional and well-developed agricultural areas, declined between 1985 and 1995. Declines in wheat, rice, barley, sorghum, and cotton area more than offset increases in sugarcane and soybeans.

In Brazil, new soybean area has been developed through investments that improved river and rail traffic, opening up new areas of production where it was not economically feasible before. Introduction of new varieties suitable for cultivation in Brazil's tropical savannah area (cerrados) in Goias, Mato Grosso do Sul, and Mato Grosso, has also permitted area expansion. Soybean area increased from about 11.5 million hectares in the late 1980s to 13 million in 1997 and yields improved by more than 20 percent, boosting output from 23 million metric tons to 31 million.

Figure 6

Corn yields

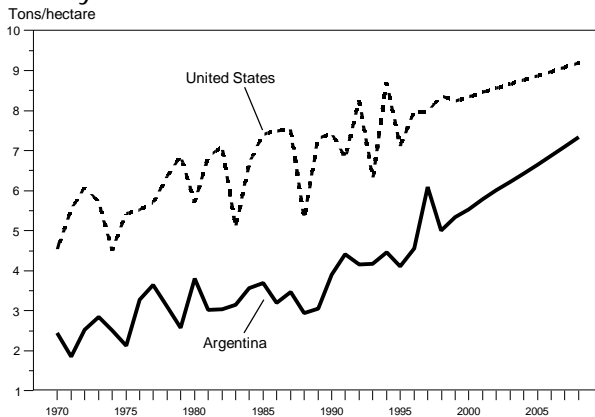
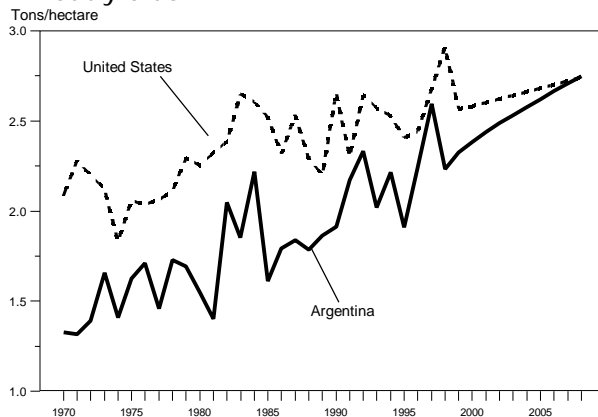


Figure 7

Wheat yields



In Argentina, both grain and oilseed production have increased dramatically since the late 1980s. Gains are associated with the more favorable economic climate provided by currency realignment and other market-oriented reforms, by allocation of road and railroad concessions to the private sector, by privatization of communications and power sectors and ports, and by strong world commodity prices for part of the period. These changes have transformed the way the country produces and markets agricultural commodities. Between 1990 and 1997, production of

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Expanding Production Potential in Brazil and Argentina – continued

wheat increased from 10.9 to 14.8 million tons, corn from 7.6 to 19.4 million tons, sunflowerseed from 4.2 to 5.4 million tons, and soybeans from 11.5 to 18.7 million tons. Gains have been driven by area expansion, and by dramatic increases in yields due to improved genetics and to more use of fertilizers, irrigation, and machinery. The favorable weather effects of El Nino also aided 1997 crops.

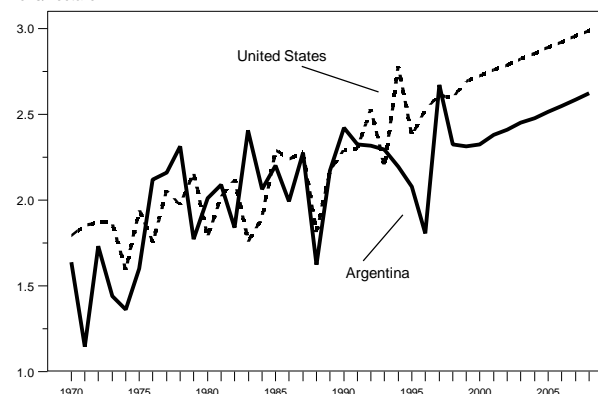
The current baseline projections anticipate that agricultural production growth rates in Brazil and Argentina will remain strong. Growth, however, is not expected to be as spectacular as in the past few years, as only moderate increases in commodity prices and the effects of the current financial crisis weigh on expansion plans. If favorable market conditions do develop, however, Brazil and Argentina are poised to resume their spectacular growth rates of 1990-97.

In the states of Maranhao and Tocantins in north-central Brazil, for example, the potential exists to increase soybean area from only 0.2 million hectares in 1998 to about 3 million hectares, putting this region on a par with the main traditional soybean producing areas of Rio Grande do Sul and Mato Grosso. With the devaluation of the Brazilian currency, Brazilian soybeans and products will be even more competitive with U.S. exports in the international market.

In Argentina, future growth will likely manifest itself in the form of higher yields, rather than area expansion. Yields of wheat, and especially corn and soybeans, are still considerably lower than in the United States (see figures 6-8). But, with continued adoption of higher-yielding plant varieties and more intensive input use, Argentina may more rapidly close this gap.

Figure 8

Soybean yields
Tons/hectare



After enjoying prosperity and stability since late 1994, Brazil's economy is expected to turn downward in 1999. Despite the successes of the Real Plan, large trade and budget deficits necessitated sharp hikes in real interest rates in an attempt to choke off currency speculation. The November 1998 IMF agreement, providing a \$41.5 billion reserve package to accompany austerity measures, is expected to help return Brazil to a relatively strong growth path over the next 2-3 years.

Brazil's agricultural production prospects are expected to improve in the longer term (see box, page 103), despite near-term constraints on investment in processing facilities and other infrastructure stemming from the current austerity measures. With continued gradual real depreciation of the exchange rate over the long term, Brazilian producers should continue to face stronger price incentives in local currency terms. Waterway and railroad transportation is also expected to improve, making more agricultural production accessible to terminals and more competitive in international markets. The conversion of undeveloped land to arable land is

expected to gain momentum in the decade, leading to further gains in soybean area and, particularly, cultivated pastures to support livestock expansion. Area planted to wheat and corn is, however, expected to show little or no growth because of competition from more efficient producing areas in neighboring Argentina.

Transition Economies

Former Soviet Union. The economic crisis that hit Russia in August 1998, and the ensuing replacement of the reformist government under Prime Minister Kirienko by the more conservative government of Prime Minister Primakov, requires substantial reassessment of macroeconomic assumptions for Russia. Russia's crisis was precipitated by the twin decisions of the government in August to default on the state's short-term debt and devalue the ruble. The effects (already in progress) are large-scale capital flight, major depreciation of the ruble (in both nominal and real terms), high inflation following the depreciation, and a fall in GDP, mainly because the capital flight will reduce investment and consumer demand. Russia's crisis has also spread to Ukraine.

The anti-reform policies of the new Russian (and Ukrainian) government are likely to include increased subsidies to support industrial and agricultural production, stronger controls over foreign trade and exchange earnings, and possibly price controls, particularly if the government finances the new spending by the inflationary printing of money. The baseline assumes, however, that after a few years, the anti-reform policies in both countries will lead to such serious economic problems (mainly growth stagnation and inflation, either open or repressed) that market reform policies will be renewed (see box, page 106).

In Russia and Ukraine, GDP is assumed to fall through 2000. The drop in GDP in Ukraine is expected to be smaller than in Russia because it has less reform progress to lose. As reform is renewed early in the next decade, GDP in both countries is assumed to rise at an annual rate of 3 percent. Over the next 4 years the exchange rates of both countries are assumed to depreciate in real terms by about 50 percent. When reform is renewed, real exchange rates are assumed to again appreciate in real terms by 50 percent. However, this leaves rates at the end of the projection period lower in real terms by about 25 percent, reflecting long-term suspicion of the currency's strength after the huge recent depreciation. Price transmission between world and domestic markets is assumed throughout the forecast period to be 75 percent, which means that a 1 percent change in the world price for a good would result in a 0.75 percent change in the domestic price.

Productivity gains in both the crop and livestock sectors are assumed to remain small, particularly during the anti-reform years. Government concern during this time will be with increasing output by raising subsidies to push up input use in agriculture, rather than pursuing institutional-type reforms which could increase productivity by improving incentives to use inputs more wisely. Agricultural productivity growth is assumed to pick up when reform begins again around 2002.

The Russian Economic Crisis: Impacts on Agriculture

Russia's agricultural trade will be strongly affected by both the current economic crisis and the government policy response to the crisis. The general effect of both developments will be to reduce Russia's agriculture and food imports. The crisis will decrease imports for two reasons. First, GDP, employment, and consumer income are all going to decline over the next few years, and have already begun to do so. This will reduce demand for imported foodstuffs, particularly meat and other high value imports for which demand is relatively sensitive to drops in consumer income. Second, the severe depreciation of the ruble has made all imports much more expensive relative to domestic goods.

In addition to these market-driven impacts, agricultural trade will also be affected by the trade policy measures adopted by the new Russian government in response to the crisis. The new regime is expected to impose an economy-wide increase in government controls, including more restrictions on foreign trade and the use of foreign exchange. During this period of anti-reform, assumed to extend until 2001, trade is expected to become more administratively driven. Russia's agriculture and food imports consist mainly of high value products, such as meat, fruit, beverages, and confectionary products. In spending its scarce foreign exchange, the new regime is not likely to favor imports of Western high value foods. The one exception might be poultry. Poultry is the only major foodstuff in Russia for which imports supply more than half of total domestic consumption. Imported poultry has become very popular in Russia, particularly dark meat, which means the regime might continue to import it in order to please consumers.

In addition to reducing imports of meat and other high-value products, the depreciation of the ruble could potentially increase net exports of certain commodities. In the last few years Russia has been a small net importer of grain, but the sharp depreciation of the ruble could increase the price-competitiveness of Russian grain enough to permit significant net exports. It is unlikely, however, that the anti-reform government would allow this market-driven result to occur. Although the government values foreign exchange earnings, it has equally strong concerns about national food security (whether justified or not) and containing consumer price inflation. Just as regional governments are currently restricting grain outflows, it is likely that the central government will control and restrict grain exports during the next few years. Therefore, it is assumed in the projections that grain exports, although likely to rise somewhat, will be restricted by the equivalent of export taxes in the period of anti-reform measures through 2001.

Central and Eastern Europe. The economic outlook for the region calls for continued income growth and falling inflation. As the economic transition proceeds, it is assumed that most of the rigidities inherited from the Communist period of central planning will be removed, leading to fuller transmission of world market prices to internal markets. The projections are based on the assumption that most world agricultural commodity prices will be fully transmitted to domestic markets and that import tariffs in most cases will not exceed 30 percent. In the short term, policies in the Visegrad countries (Poland, Hungary, the Czech Republic, and Slovakia) have kept domestic producer prices near world levels. These measures have tended to counter the downward pressures on prices coming from lingering bottlenecks in the downstream sectors. As

a result, it is assumed that domestic producer prices will not differ greatly from world market prices. Pressure to keep state budgets in balance is expected to remain the principal constraint on agricultural policy. Of the Visegrad Four countries, only Hungary seeks to be a major grain exporter. Others aim for self-sufficiency.

The projections also incorporate the assumption of a steady increase in efficiency in the agricultural sector, reflected in moderate gains in crop yields and greater feeding efficiency in the livestock sector. These productivity increases are expected to come about as a result of continuing progress toward market reform in all the CEE countries. Rising incomes and lower interest rates will bring badly needed investment to both agriculture and food processing. There will likely be some consolidation of the small fragmented farms that currently dominate much of the landscape. It is anticipated that land tenure will become more permanent, bottlenecks in issuing titles will be resolved, and true land markets will develop as capital markets improve.

The baseline assumes that none of the CEE countries will join the EU during the projection period. Although some CEE countries may join the EU by 2003, the timing and terms of accession are uncertain. When CEE countries do accede to the EU, significant changes in domestic and trade policies from those assumed here are likely.

Commodity Trade Highlights

Growth in global and U.S. trade of most bulk commodities will be slowed during the next 2 to 3 years by weakened demand associated with the Asia crisis. U.S. near-term trade prospects will also be affected by increased competition associated with productivity gains, particularly in Argentina, and with sharp devaluation of currencies by some competitors. Near-term growth in both global and U.S. meat trade will be affected by depressed Asian demand and, particularly, the drop in effective demand in the key Russian market.

In the longer term, during 2000-2008, growth in global and U.S. bulk commodity trade is projected to strengthen, with trade volume for most commodities expanding faster than during the 1980s or 1990s. Projected growth is driven by the anticipated recovery of the Asian economies within 3 to 4 years, combined with broad-based expansion in other developing areas, including Asia, Latin America, North Africa, and the Middle East. Growth in world meat trade is also expected to recover after 2000, along with the recovery of the large East Asian markets, but long term growth is projected to remain slower than during the 1980s or 1990s. Competition from other suppliers, including the EU (wheat), Argentina (corn, wheat, and soybeans), Brazil (soybeans), and China (corn), will continue to limit gains in U.S. market share.

Rising per capita consumption of meat, feed, wheat, and vegetable oils, driven by higher incomes and urbanization across developing countries, are the key source of the strong projected growth of bulk commodity trade. Future developments in China and the FSU are among the key uncertainties in the outlook. In the current projections, China's grain imports are expected to show only moderate growth over the projections period, and little growth is anticipated in FSU trade, even in the longer term.

World commodity prices are expected to remain depressed in the near term by the combination of weakened global demand and increased competition. Prices are projected to strengthen over the longer term, as supplies adjust and a recovery in Asian demand is added to steady growth in other regions. However, particularly with limited growth in imports by China and the FSU, real prices are projected to continue to decline over the longer term as productivity gains continue to outpace growth in demand.

Coarse Grains

Demand for coarse grains is expected to grow robustly over the next decade, increasing faster than during the 1980s and 1990s, but slower than during 1970s. An important constraint on coarse grain demand over the last decade was the decline in animal numbers and reduced feeding in the former Soviet Union and Eastern Europe as these economies experienced structural reform. Even though these transition economies are expected to increase grain feeding only modestly over the next decade, declines in these regions will no longer offset the growth in demand that occurs elsewhere. Despite a slowdown in demand in the early years of the baseline caused by the Asian financial crisis, developing regions, especially China, Latin America, North Africa, and the Middle East, are expected to lead world growth in feed grain demand over the next decade.

About two-thirds of global coarse grain supplies is used as animal feed, and coarse grain that is traded is primarily used as feed. Thus, rising incomes and associated gains in per capita meat consumption, particularly in developing countries, drive projected gains in coarse grain feed use and trade. Industrial uses, such as starch production, ethanol, and malting, are relatively small but growing. Food use of coarse grains is concentrated in parts of Latin America, Africa, and Asia, and has generally declined over time as consumers tend to shift consumption toward wheat, rice, or other foods as incomes rise.

As with demand, foreign coarse grain production is projected to rise more rapidly in the baseline projections than during recent decades. Except for corn, coarse grain area has been falling for decades in most countries, as producers turned to higher priority or more profitable crops. The projections indicate that foreign coarse grain area will stop declining. Foreign corn area is expected to continue to increase at the strong pace of recent decades, while sorghum, barley, and other coarse grain area stabilizes or increases slowly. Growing demand for malting barley is expected to support barley area. With corn yields expected to grow much faster than for other feed grains, corn will account for an increasingly dominant share of feed grain use and trade.

World coarse grain import demand is projected to strengthen, with projected annual growth of about 3 percent reversing a decline that began in the early 1980s. Global coarse grain trade is projected to exceed the 1980/81 record of 108 million tons in 2003/04 and reach 126 million tons by 2008. Strong economic growth is expected to fuel higher coarse grain imports by China, North Africa, and Latin America. East Asia's imports are projected to remain mostly steady despite near-term macroeconomic problems, as these countries tend to maintain domestic livestock and poultry production, while slowing meat imports. Taiwan's feed imports are expected to begin recovering by 2000, as hog numbers start to rebound and poultry production continues to expand. Southeast Asian feed grain imports are expected to be slowed by the

effects of the financial crisis, but show strong longer term growth. The FSU, one of the world's largest importers during the 1980s, is expected to be a modest net exporter of coarse grains, mostly barley. Only slow growth in consumer demand and livestock output is anticipated in the FSU.

World corn trade is projected to expand rapidly in the baseline, reaching 91 million tons by 2008. The largest gains in corn imports are expected to occur in Southeast Asia, Latin America, North Africa, and the Middle East, where demand for feed for livestock is expected to expand modestly and production potential for corn is limited. Also, China is projected to become a net importer of corn by 2005, as feed demand outpaces productivity gains.

For barley, much of the demand growth will occur in China and other malting barley markets. Feed barley imports by Saudi Arabia are expected to expand but, in most other markets, growth in feed barley imports may be slowed by constrained supplies and substitution of other feeds. Crop competition will likely reduce feed barley area in Canada and Australia, and EU exports will be constrained by the Uruguay Round limits on subsidized exports. Although some increase in net barley exports by the FSU is anticipated following the depreciation of the ruble, the quantities that can be exported outside the FSU may be limited. The responses of barley exporters and importers to changing price signals are important uncertainties in the coarse grain trade projections.

U.S. coarse grain exports are projected to grow about 3 percent annually during the baseline, reaching the 1979/80 record of 71 million tons by 2008. U.S. exports of corn are projected to rise by an average of 2 million tons per year and reach 63.5 million tons by 2008. The U.S. share of world coarse grain trade is projected to increase modestly to about 58 percent in 2006, and then stabilize.

Competitor corn exports are also expected to increase, with Argentina achieving particularly rapid gains in market share because of rising yields and improved infrastructure. China is projected to remain a significant corn exporter even after shifting to a net import position late in the baseline.

Wheat

World use of wheat is projected to rise slightly faster in the baseline than during the past 10 years, but only half the rate of the 1972-86 period. Developing countries account for 81 percent of the projected increase; the transition economies of the former Soviet Union and Central and Eastern Europe about 12 percent, and; developed countries about 6 percent. In the United States, domestic use of wheat is stagnant as small increases in food use demanded by a slowly expanding population are offset by lower feed use. The lack of growth in U.S. domestic use indicates that increases in U.S. production will need to find foreign markets.

The trend in average world per capita use of wheat and flour is expected to be flat during the projection period. Demand is constrained by somewhat slower income growth now projected for the developing economies, particularly in Asia. World average per capita use peaked at 106 kilograms in 1990 before falling to 96 kilograms in 1995. Since the projected growth rate in

total use slightly exceeds the global population growth rate of 1.3 percent per year, per capita use is projected to climb slowly from the 1996-98 average of 100 kilograms per year to 102 kilograms by 2008.

World wheat production is expected to increase by about 1.5 percent per year. World wheat area is projected to expand gradually as a slightly increasing price ratio of wheat to other grains attracts additional area. However, world area is not projected to exceed the 1996 level until about 2004, and remains about 3 million hectares below the 1981 record of 239 million hectares at the end of the baseline. The global average wheat yield declined slightly in 1998 from the record 2.66 metric tons per hectare set in 1997, but is projected to climb about 1 percent annually over the next 10 years. The trend growth rate for world wheat yields has been declining for the last 3 decades, caused in part by lower quality soils being brought into production and reduced budgets for research and development.

World wheat trade (including the wheat equivalent of wheat flour) is projected to grow at an average annual rate of 2.3 percent during 2000-2008. Projected growth in imports is concentrated in the developing countries, primarily in North Africa, the Middle East, China, Indonesia, and Pakistan. Very small increases in imports are expected in the newly industrialized countries of East Asia or the FSU, and small declines in wheat imports are projected in Eastern Europe.

Although nominal wheat prices are expected to increase over the next 10 years, real wheat prices are projected to continue to decline, consistent with the long-term trend. The share of world exports supplied by developing and transition economy competitors, including Argentina, Kazakhstan, Ukraine, and Eastern Europe, is projected to increase slightly. Canada's market share is projected to decline somewhat. The United States is projected to maintain a roughly constant one-third share of the world market.

Limits on export subsidies under the UR agreement, coupled with budgetary pressures, are expected to make export subsidies less important in determining wheat market shares in the future than they have been in the past. However, a portion of budgeted EEP funds are assumed to be used for wheat starting in 1999/2000, so targeted U.S. export markets receive larger exporter subsidies than in recent years. Over the longer term, however, export market share is likely to be determined by the cost effectiveness of wheat production, transportation, and marketing. Wheat production and exports in the United States are expected to be limited by the slow growth in wheat yields relative to other crops. In Canada, higher transportation costs, may encourage area shifts toward higher-valued crops, including canola. In Australia, increasing wool prices, and limited areas with enough rainfall, will limit expansion. Argentina is expected to shift area between wheat, corn and oilseeds, depending on relative world market prices.

The EU is expected to lose market share during the next several years as exports are constrained by export subsidy limits set by the UR agreement. All other exporters, including the United States, are expected to gain some market share from the EU until the combination of higher world prices and lower internal EU prices permits the EU to export without subsidy. Projected world and EU internal prices permit unsubsidized EU wheat exports beginning in 2002, after which the EU market share begins to recover.

Rice

Global rice trade is projected to grow more than 2 percent annually from 2000 (MY 1999/2000) through 2008. World trade is expected to drop in 1999 as the impacts of the 1997 and 1998 El Nino diminish. World trade is projected to rise to 22 million tons in 2001, and reach 26.7 million tons by 2008--more than 6 percent above the current record of 25.1 million set in 1998. Projected trade growth is faster than in the 1980s, but slower than in the 1970s and much of the 1990s. The growth in trade is expected to exceed the pace of expansion in production, resulting in trade's share of production rising from a little more than 5 percent currently to more than 6 percent by 2008.

Trade is expected to continue to consist predominantly of long-grain varieties, despite anticipated gains in medium-grain (japonica) rice imports by Japan and South Korea under the Uruguay Round agreement. Nominal prices are expected to rise throughout the projection period, while real prices are expected to fall, although less rapidly than in the past. Global medium-grain rice prices are expected to rise relative to long-grain prices due to limited world export supplies of high-quality japonica rice and greater import demand.

Foreign production is projected to rise gradually, growing about 1 percent per year. Projected growth is slower than in the 1970s and 1980s, when irrigation expanded more rapidly in Asia and Green Revolution technology was widely adopted. Slower production growth stems primarily from a projected slowdown in yield increases. Global acreage growth is expected to remain extremely small, as it has since the mid-1970s.

Foreign consumption is projected to rise slightly more than 1 percent annually, markedly slower than during the 1980s and early 1990s. Per capita rice consumption in higher income Asian countries has been declining, and is expected to continue to decline, as larger portions of the population achieve middle-class incomes and consumption of rice declines in favor of other foods, such as wheat products, fruits and vegetables, and meat. Per capita rice use in other countries, such as China, is projected to flatten or decline during the coming decade, as consumers continue to shift from lower-quality to higher-quality rice varieties and to diversify their diets away from rice in response to rising incomes. These developments are expected to offset consumption gains in other regions, primarily lower income rice producing countries--such as India--and higher income nonproducing countries--such as Canada and northern and eastern Europe, where per capita rice use is still rising.

The U.S. export market share for rice varied from 15 to 18 percent between 1991 and 1995, and averaged 12.5 percent from 1996 to 1998. It is projected to average about 11 percent from 1999 to 2001, and then steadily decline to under 9 percent by 2008. Small U.S. production gains, continued growth in domestic use, and high U.S. prices relative to Asian competitors are expected to limit the volume of U.S. rice exports. By 2008, total U.S. exports are projected at 2.4 million tons, while total imports are expected to rise to 0.54 million tons, leaving the United States a net exporter of almost 1.9 million tons of rice in 2008.

As a major exporter of medium-grain rice, the United States has benefited significantly from the Uruguay Round agreement. But, despite significant market access gains in East Asian medium-grain markets under the agreement, total U.S. rice export volume is projected to increase only marginally in the baseline. The extent of U.S. gains in medium-grain markets depends on U.S. capacity to expand production and exports on a sustainable basis. California, the primary U.S. producer of high-quality japonica rice, faces increasing environmental restrictions on expanding acreage and improving already high yields. Limited availability of additional water prevents any substantial increase in California rice area as well. Other U.S. growing regions have yet to develop suitable japonica-type varieties for cultivation. The outlook for a widening long-grain export price premium compared with top-quality Asian exports implies that the United States will lose some of its long-grain exports in the more "price-sensitive" markets such as the Middle East. Further, under fixed budget levels, higher domestic prices imply lower program-assisted exports.

Historically, rice trade and prices have exhibited greater volatility than those of other cereals. This volatility stems from the dependence of many large producers and traders, including Indonesia, the Philippines, Thailand, Vietnam, and India on the timing and amount of rainfall during the Asian monsoon season. In addition, only a small share (about 5 percent annually) of world rice production is traded. These factors will continue to affect the world rice market during the next 10 years, with the potential to create dramatic annual swings in trade and prices that could deviate significantly from the trends projected in this baseline.

Cotton

Growth in foreign production and use of cotton both slowed to negligible rates during the last 10 years but, until the Asia crisis, both had begun to rebound. Growth is expected to resume, but not to return to the long-term average growth rate of 2.2 percent per year during the baseline. World cotton consumption is projected to expand approximately 1.5 percent annually during the baseline, underpinning the outlook for relatively strong import growth. However, a key uncertainty in the projection is the extent to which earlier gains in cotton consumption, associated with a shift in consumer fiber preference toward cotton and away from synthetics, can be sustained. Sustained Asian investment in polyester capacity up to the onset of the region's financial reversals suggests vigorous competition for fiber share in coming years.

Foreign cotton production stagnated in the decade up to the mid-1990s, as smaller harvests in China and the FSU offset gains elsewhere. High levels of input use and poor water management have rendered useless much of the area abandoned in Central Asia during the 1990s, and this area is expected to remain out of production during the projection period. Pesticide resistance and competition from other crops hampered production in China, although recently yield growth has apparently resumed. Further losses in these regions are not expected, and Central Asia's production is expected to resume growth, although not as quickly as elsewhere.

World cotton trade is expected to average about 2-percent annual growth in the baseline, reversing much of the decline suffered during the previous 10 years. World cotton trade fell from a peak of 33.4 million bales in 1988 to as low as 25.6 million in 1992, in large part due to declining Russian imports. Imports have again slipped to about 25 million bales in 1998 as the

Asian financial crisis cut purchases by some Asian importers, and Russia's imports again fell. China also switched from a large importer to an exporter in 1998. Import growth is foreseen in Russia, China, and elsewhere after 1999 and, by 2008, world exports are projected at 31.4 million bales.

World trade contracted for two reasons beginning in the late 1980s--the virtual collapse of Russia as a consumer and importer of cotton, and the continued shift of spinning from traditional importers to cotton-producing countries. Neither factor is expected to be as important in the future. Russia's cotton consumption fell more than 80 percent between 1989 and 1996 during the restructuring of Russia's political, economic, and foreign trade systems. Elsewhere, other traditional cotton-importing countries found it less expensive to purchase cotton yarn and fabric for their textile industries as inexpensive textile imports flooded their markets, particularly from Pakistan through the early 1990s. These imports took the place of imported raw cotton.

With Russian and Central and East European consumption beginning to rebound after 1999, world cotton trade is likely to grow during the next 10 years. Also, pest and disease control problems have constrained Pakistan's ability to maintain its earlier growth rates in cotton production, cotton consumption, and textile exports. This strengthens prospects for raw cotton demand by some cotton-importing textile exporters who will face less competition. Finally, several countries that were net suppliers to world markets as late as 1990 have become importers instead. In past years, increasing cotton use in Mexico, Brazil, and Turkey in part represented shifts in consumption from importing countries to non-importing producers. As consumption gains have consistently outpaced production in all three countries, they have begun to steadily import, driving world trade higher.

Foreign export growth is expected to recover during 1999-2008, but to remain below the long-term trend. By 2008, foreign exports are expected to total 23.7 million bales. Foreign export growth will be supported by some resumption of trade relations between countries of the FSU, and by growing import demand from China, Latin America, and Southeast Asia.

U.S. exports are also expected to trend up during 1999-2008, growing to 7.7 million bales by 2008. The U.S. share of world trade is projected to average about 24 percent, below its average share during 1990-1997. U.S. export share was boosted during much of the 1990s by extremely large imports by China and by Step 2 payments to domestic users and exporters of U.S. upland cotton which increased the competitiveness of U.S. cotton.

The rapid consumption growth of the 1980s, spurred by prolonged economic expansion and sharp share gains by cotton versus other fibers in some markets, is not expected to resume. In the short term, demand growth by several cotton importers is likely to be constrained by relatively sluggish economic performance and economic restructuring. In the longer term, the liberalization of textile trade under the Uruguay Round agreement will also constrain cotton imports by the most developed traditional importers, such as the EU and Japan. In contrast, relatively fast demand growth is expected in many developing countries, while steady growth continues in major cotton-producing countries. However, the pace of this structural shift will depend on how the phaseout of the Multi-Fiber Arrangement is implemented. While it is anticipated that the most significant changes will probably be delayed until the end of the

implementation period in 2005, large uncertainties remain about the timing of liberalization and shifts in garment production both to and among developing countries.

Soybeans and Products

World trade in both total oilseeds and soybeans is projected to increase faster in the baseline than during the 1980s, but much more slowly than in the early 1990s. The Asia crisis will limit trade growth for oilmeals (including soybean meal) over the short term but trade is projected to strengthen as those economies recover. During 2000-2008, global exports of soybeans and meal are projected to rise at annual rates of 1.6 and 1.9 percent, each reaching 46.2 million tons by 2008. Combined exports of soybeans and meal, on a soybean-equivalent basis, are projected at 95.3 million tons by 2003 and 104.7 million tons by 2008.

World vegetable oil trade is projected to grow about 3 percent annually in the baseline, less than the rates achieved in the 1980s and the early 1990s. Soybean oil trade is projected to slow even more than total vegetable oil trade, although both world and U.S. exports of soybean oil are projected to grow faster than exports of soybeans. With the outlook for continued faster growth in trade in oil relative to meal, incentives to produce high-oil content oilseeds and palm oil are expected to strengthen.

Soybeans and Meal

U.S. exports of soybeans and soybean meal are projected at 29.0 million and 8.6 million tons, respectively, in 2008. The U.S. soybean market share is projected to cycle higher to 65 percent by 2001 as domestic supplies grow relative to foreign supplies. But once weak prices eventually cut domestic soybean returns and production, the U.S. share drops back to 61 percent in 2003, with a gradual upturn through 2008. Similarly, the U.S. market share of soybean meal trade also edges up to 22 percent by 2000 but contracts to 19 percent again by 2008. These projected U.S. shares contrast with significantly higher shares for soybeans (73 percent) and soybean meal (24 percent) achieved in the 1980s, when U.S. production was a higher proportion of the world total. Increasing U.S. livestock numbers, especially poultry, raise domestic demand for soybeans and meal, eventually constraining U.S. exportable supplies. Rising meat exports also keep more feed supplies within U.S. borders than in the past.

Foreign soybean production is projected to climb to 97.9 million tons in 2008. Foreign supply growth is expected to be sharply slower than during the 1970s and 1980s. Currently, only Brazil has the capacity to add large amounts of land to soybean production. Foreign soybean yields are forecast to rise at a modest 1.3 percent annually. In the near term, low prices and tight credit will constrain area expansion and application of inputs in these countries. A stronger price situation by 2001 will raise returns and production by foreign producers. Argentina's small consumption base and rapidly expanding crush capacity assure long-term growth in exports of soybean meal.

Gains in world soybean meal consumption are projected to be smaller than in the 1980s and early 1990s. Mexican soybean imports remain robust. Protein meal consumption in China and Southeast Asia should recover in the next 2 years, but EU imports of soybeans and soybean meal are expected to slip as the cost of feeding grains declines. Eventually, improved economic

growth in developing nations is projected to rebound and support global consumption growth at about 2.2 percent annually.

Soybean Oil

Foreign soybean oil production is projected to rise 2.6 percent annually and reach 18.8 million tons by 2008. Growth in soybean processing in Mexico, Brazil, Argentina, India, and China accounts for most of the projected gains in foreign soybean oil output. World use of soybean oil is projected to expand at a rate of 2.2 percent annually in the baseline, about the same as in the 1980s, but well below the strong 5.3-percent rate of growth achieved during 1992-97. Projected consumption gains are concentrated in the developing nations of Asia and Latin America, with less growth anticipated in Western Europe, the former Soviet Union, Japan, and the United States.

Slower growth in soybean oil trade is projected in the baseline compared with about 9 percent in the early 1990s, when trade responded to U.S. and EU subsidies and sharp import gains in developing countries. Future growth in soybean oil trade will be curbed by reduced U.S. export subsidies and higher relative prices that shift demand toward competing oils. In the near term, the 1997-98 drought in Southeast Asia will continue to check global palm oil output and trade. The long term outlook, however, is that palm oil producers will reemerge as strong challengers to exporters of soybean oil.

The U.S. share of global trade soybean oil is projected to rise to 25 percent through 2004, with exports peaking at 1.9 million tons. Slower growth in domestic soybean oil production, greater South American competition, and global output gains for other vegetable oils will pare the U.S. market share back to 21-22 percent. Projected U.S. soybean oil exports would slip back to 1.8 million tons by 2008.

Beef

World beef production and consumption are projected to increase by 20 percent between 1998 and 2008. The largest increase in beef consumption is expected to be in China, and will likely be satisfied with increased domestic production. Production is expected to increase significantly in the FSU after the economic situation improves in that region, boosting (mainly intra-FSU) exports from recent low levels back to those that prevailed in the early 1990s. FSU net beef imports are likely to increase in the longer term in response to economic recovery. Besides China and FSU, the only other major beef-producing countries where production growth is projected to exceed 1 percent are Mexico, Canada, and Brazil. U.S. beef production is projected to be relatively stable in the baseline, with an increasingly larger share being higher quality hotel-restaurant-export beef. Production and consumption in the EU are expected to continue gradually declining, with trade remaining constant and stocks high.

Global per capita beef consumption is projected to increase gradually as meat demand increases in response to income growth, mainly in lower income countries. Nearly 50 percent of projected growth in world beef consumption is expected to occur in Asia. Although the current economic crisis in that region will affect beef consumption in the short run, growth is expected to return to

its trend over the baseline period. However, there may be limited potential for growth in demand for beef in some Asian markets such as Japan, where rapid growth has already occurred. Other countries with significant potential for growth in beef consumption, such as China, are expected to satisfy demand with domestic stock. Nevertheless, considerable growth in demand may occur in a number of smaller Asian markets.

With the exception of China, much of the projected growth in beef and veal consumption in Asia is likely to be satisfied by imports. While the projected increases in consumption will be driven by growth in income and population, a fixed and relatively small land and forage base will limit growth in domestic production and, coupled with lower trade barriers, will allow increased imports. Fundamental economic conditions favor significant growth in Asian incomes, beef demand, and beef imports in the longer term.

Other regions where significant increases in consumption are projected to occur include Brazil and Mexico, which may consume an additional 1 million tons and 0.5 million tons of beef, respectively, by 2008. Less significant increases in consumption are likely to occur in the countries of Central and Eastern Europe, and will depend upon the pace of economic liberalization and growth. While beef demand in Russia is likely to rise above the current low levels associated with the economic crisis in that country, strong competition from relatively cheap pork and poultry will limit increases in beef consumption. Beef consumption in the United States generally declines in favor of relatively cheaper poultry and pork, particularly over the next few years as beef supplies decline with herd rebuilding.

All of the major exporters except the EU are expected to increase production for export. EU beef exports will decline as subsidized exports are reduced to meet Uruguay Round commitments. Australian exports are expected to remain steady at around 1.1 million tons, while the United States is projected to emerge as the world's largest exporter of beef as Pacific rim import demand recovers. Mexico is expected to emerge as a major market for U.S. beef exports. However, competition may come from Argentina in a number of markets. Exports from New Zealand are not expected to increase significantly.

Pork

World pork production is projected to increase at a slower rate than in previous decades, as a consequence of lower prices brought about by slowed growth in consumer income, binding environmental constraints, and competitively priced meats that substitute for pork. World pork production is expected to increase at an annual rate of 2.2 percent during 1999-2008. China is expected to be the primary growth area for pork production, with more modest increases projected in the United States, Canada, and the EU-15.

Pork consumption is projected to moderate in developed economies, including the United States, Canada, the EU-15, and Japan, due to modest income gains and competitively priced pork substitutes. Slower demand growth in developed countries is expected to be partially offset by demand growth in Asia and Latin America. Consumption growth in China is expected to average 2.8 percent annually. Pork demand is also expected to grow significantly in developing

countries, such as Mexico, Brazil, and the Philippines, because of economic growth, lower inflation, and higher disposable incomes.

World pork trade is projected to continue to expand, induced by rising demand in Mexico, Hong Kong, and developing Asian countries. Declining domestic production will drive imports in both Japan and Hong Kong. The United States is projected to continue an expanded export role over the next decade, increasing exports by almost 5 percent per year between 1999 and 2008. Factors contributing to robust U.S. growth include a competitive, and increasingly export-oriented, pork production industry. The five largest exporters (the United States, Canada, China, the EU-15, Central and Eastern Europe) account for 87 percent of world pork exports.

Poultry

Poultry meat consumption is expected to continue to grow on a worldwide basis during 1999-2008. Higher consumption will be based on poultry's continued cost advantage relative to pork and beef. Increasing incomes and changing food demand patterns are expected to increase the demand for relatively low-cost protein products. Adding to the demand for poultry is the fact that pork is not a desired product in a number of areas where meat consumption is expected to rise. As the world's largest exporter of poultry parts, the United States is expected to benefit from any growth in global demand and trade.

Per capita poultry meat consumption is expected to continue to expand, but at rates less than occurred in the recent past. Much of the projected growth will be in areas such as China, Mexico, and Eastern Europe, where current consumption levels are relatively low. Growth in many developed country markets is expected to be relatively modest, but consumption in the United States is expected to continue to climb at the expense of beef and pork. In the FSU and CEE, poultry consumption is expected to increase slowly in the longer term, as economic conditions gradually improve and poultry remains the cheapest meat protein for consumers in those countries.

Global trade in poultry meat is projected to trend upward to about 8.5 million tons by 2008, but growth is slower than in the past. Much of the slowdown in trade growth for poultry is associated with the impacts of the economic crises in Russia and in Asia. Presently, world poultry trade is a mixture of whole birds, parts, and processed products, with some exporters strong competitors in some segments of the market, but not in others. If consumption patterns in developing countries follow the western example, it is likely to mean rising imports of poultry parts, a pattern that would favor greater exports by the United States.

Overall, trade in poultry products is expected to become less restrictive over the baseline period due to the influence of multinational trade accords. While the overall trend is expected to be towards freer, less restrictive trade, many governments will continue to be under some pressure to protect their domestic industries. What this foretells is a continued future need for negotiations to try to remove or reduce any sanitary or phytosanitary barriers that may be enacted without the backing of strong scientific evidence for their need.

Table 36. Coarse grains trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
	<i>Million metric tons</i>											
Importers												
Former Soviet Union 1/	1.8	2.5	2.3	2.2	2.1	2.2	2.4	2.6	2.8	2.9	3.0	3.0
Eastern Europe	1.1	0.8	1.7	1.7	1.8	1.9	2.1	2.4	2.5	2.5	2.3	2.3
Japan	21.0	20.1	20.4	20.6	20.8	20.7	20.6	20.5	20.4	20.3	20.2	20.0
South Korea	7.7	7.2	7.7	8.5	8.7	8.8	8.9	8.9	9.0	9.1	9.1	9.1
Taiwan	4.8	4.7	5.0	5.1	5.2	5.4	5.5	5.7	5.8	6.0	6.1	6.2
China	1.8	2.5	3.2	3.9	4.3	4.7	5.3	5.9	6.6	7.5	8.4	9.5
Mexico	8.0	7.2	8.1	9.0	9.3	9.6	9.8	10.2	10.7	11.3	12.0	12.6
European Union 2/	3.4	3.1	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Latin America 3/	9.6	9.0	9.8	10.3	10.4	10.6	10.9	11.2	11.5	11.8	12.0	12.3
N. Africa & Middle East	16.0	18.9	20.7	21.1	21.8	22.5	23.3	24.0	24.7	25.4	26.1	26.8
Other Asia & Oceania	3.6	3.4	4.2	5.0	5.3	5.8	6.5	7.2	7.7	8.3	8.9	9.5
Sub-Saharan Africa 4/	2.3	2.0	2.6	2.4	2.4	2.4	2.5	2.5	2.4	2.5	2.6	2.6
Other foreign 5/	5.7	4.0	5.0	4.9	5.0	5.1	5.2	5.2	5.3	5.4	5.4	5.5
United States	2.9	2.6	2.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Total Trade	89.7	88.0	96.5	100.8	103.3	105.8	109.2	112.4	115.5	118.9	122.1	125.6
Exporters												
European Union 2/	6.1	9.9	9.5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
China	6.2	4.1	4.1	4.0	3.8	3.6	3.4	3.3	3.1	2.9	2.8	2.6
Argentina	15.3	11.2	14.3	15.4	16.2	17.5	17.9	18.9	19.6	20.5	21.8	22.6
Australia	3.1	3.1	2.5	2.5	2.7	3.0	3.3	3.4	3.7	4.0	4.2	4.5
Canada	3.7	3.6	2.9	3.3	3.4	3.6	3.6	3.8	4.0	4.1	4.3	4.5
Rep. of South Africa	1.3	1.7	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1
Eastern Europe	3.1	2.3	2.2	1.3	1.0	1.0	0.7	0.6	0.6	0.5	0.6	0.9
Former Soviet Union 1/	3.1	1.3	5.0	5.5	5.5	5.0	5.2	5.3	5.4	5.4	5.4	5.4
Other foreign	2.5	2.5	2.3	2.2	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.5
United States	45.3	48.3	52.3	56.4	58.4	60.0	62.6	64.7	66.8	69.0	70.5	72.7
	<i>Percent</i>											
U.S. trade share	50.5	54.9	54.3	56.0	56.6	56.7	57.4	57.5	57.8	58.0	57.8	57.8

1/ Includes intra-FSU trade.

2/ Excludes intra-EU trade, covers EU-15.

3/ Excludes Mexico.

4/ Includes South Africa.

5/ Includes unaccounted.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 37. Corn trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
	<i>Million metric tons</i>											
Importers												
Former Soviet Union 1/	0.6	1.1	0.6	0.6	0.6	0.7	1.0	1.1	1.3	1.4	1.4	1.5
Japan	16.4	15.5	15.8	16.0	16.2	16.1	16.1	16.0	15.9	15.8	15.7	15.6
South Korea	7.5	6.5	7.5	8.4	8.5	8.6	8.7	8.8	8.8	8.9	8.9	9.0
Taiwan	4.5	4.5	4.8	4.9	5.0	5.2	5.3	5.5	5.6	5.7	5.9	6.0
China	0.3	0.3	1.0	1.6	1.8	2.2	2.6	3.1	3.7	4.5	5.4	6.4
Mexico	4.5	4.3	4.9	5.6	5.8	5.8	6.0	6.2	6.5	6.8	7.2	7.5
European Union 2/	2.2	2.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Latin America 3/	8.9	8.4	9.0	9.5	9.6	9.9	10.2	10.4	10.7	11.0	11.2	11.5
North Africa & Middle East	9.3	10.5	11.2	11.6	12.1	12.5	12.9	13.2	13.6	13.9	14.3	14.7
Other Asia & Oceania	5.8	4.8	5.7	6.1	6.4	6.9	7.6	8.3	8.9	9.4	10.0	10.6
Sub-Saharan Africa 4/	2.1	1.8	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.3
Other 5/	2.2	1.6	2.3	2.5	2.7	2.8	3.0	3.4	3.5	3.6	3.5	3.5
United States	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total trade	64.5	62.2	67.6	71.4	73.5	75.5	78.1	80.7	83.1	85.8	88.2	91.0
Exporters												
European Union 2/	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
China	6.2	4.0	4.0	3.9	3.8	3.5	3.4	3.2	3.0	2.9	2.7	2.6
Argentina	13.5	10.0	13.3	14.3	15.1	16.4	16.9	17.8	18.5	19.5	20.7	21.4
Republic of South Africa	1.3	1.7	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1
Eastern Europe	2.5	1.8	1.3	0.6	0.4	0.3	0.2	0.1	0.0	0.0	0.1	0.3
Former Soviet Union 1/	0.5	0.4	0.9	1.0	0.9	0.8	0.7	0.8	0.8	0.8	0.9	0.9
Other foreign	1.7	1.0	1.4	1.2	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9
United States	38.2	42.5	45.1	48.9	50.8	52.1	54.6	56.5	58.4	60.3	61.6	63.5
	<i>Percent</i>											
U.S. trade share	59.2	68.4	66.7	68.4	69.1	69.0	69.9	70.0	70.3	70.3	69.8	69.8

1/ Includes intra-FSU trade.

2/ Excludes intra-EU trade, covers EU-15.

3/ Excludes Mexico.

4/ Includes South Africa.

5/ Includes unaccounted.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 38. Sorghum trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
	<i>Million metric tons</i>											
Importers												
Japan	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Mexico	3.3	2.7	3.1	3.2	3.4	3.6	3.7	3.8	4.0	4.3	4.6	4.9
Other N. Africa & M. East	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other S. America	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Saudi Arabia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
South Korea	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sub-Saharan Africa	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Taiwan	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other 1/	1.1	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
Total trade	7.4	6.6	7.1	7.2	7.3	7.6	7.6	7.8	8.0	8.3	8.5	8.8
Exporters												
Argentina	1.5	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9
Australia	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Saharan Africa	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other foreign	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
United States	5.4	5.0	5.7	6.0	6.1	6.4	6.5	6.6	6.8	7.1	7.4	7.6
	<i>Percent</i>											
U.S. trade share	72.6	74.6	80.9	82.5	83.0	84.1	84.6	84.8	85.4	85.9	86.5	86.5

1/ Includes unaccounted.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 39. Barley trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<i>Million metric tons</i>												
Importers												
Former Soviet Union 1/	1.0	1.1	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.1
Japan	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3
South Korea	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Taiwan	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
China	1.4	2.0	2.1	2.2	2.3	2.4	2.6	2.7	2.8	2.9	3.0	3.1
European Union 2/	0.9	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Latin America 3/	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Algeria	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4
Saudi Arabia	3.3	5.0	5.4	5.4	5.5	5.7	5.8	6.0	6.2	6.4	6.6	6.8
Morocco	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Tunisia	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Iran	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
Iraq	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3
Turkey	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.5
Other N. Africa/M. East	2.0	1.8	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.5
Other foreign 4/	1.8	0.9	1.5	1.6	1.7	1.7	1.9	1.9	1.9	1.9	1.9	1.9
United States	0.9	0.7	0.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Total trade	14.9	15.1	17.5	18.0	18.5	18.8	19.5	19.9	20.3	20.7	21.1	21.5
Exporters												
European Union 2/	4.3	7.3	7.7	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
Australia	2.7	2.8	2.3	2.4	2.6	2.8	3.1	3.2	3.4	3.6	3.8	4.0
Canada	2.2	1.6	1.2	1.5	1.5	1.6	1.6	1.7	1.9	2.0	2.2	2.3
Former Soviet Union 1/	2.5	0.8	2.9	3.5	3.6	3.4	3.8	4.0	4.1	4.0	4.0	4.0
Eastern Europe	0.5	0.4	0.8	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Turkey	0.6	1.2	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2
Other foreign	0.4	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
United States	1.6	0.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<i>Percent</i>												
U.S. trade share	10.9	5.1	8.7	8.5	8.2	8.1	7.8	7.7	7.5	7.4	7.2	7.1

1/ Includes intra-FSU trade.

2/ Excludes intra-EU trade, covers EU-15.

3/ Includes Mexico.

4/ Includes unaccounted.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 40. Wheat trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<i>Million metric tons</i>												
Importers												
Former Soviet Union 1/	6.3	6.8	6.7	6.4	6.4	7.0	7.0	7.0	6.9	6.8	6.9	6.8
China	1.9	2.0	3.0	3.5	3.9	4.0	4.0	4.2	4.5	4.7	5.1	5.3
Egypt	7.2	7.2	7.2	7.1	7.2	7.4	7.6	7.9	8.2	8.5	8.8	9.1
Other North Africa	20.4	18.4	19.1	20.0	20.6	21.2	21.8	22.5	23.2	23.9	24.7	25.5
Sub-Saharan Africa 2/	5.9	6.1	5.7	5.5	5.6	5.7	5.8	6.0	6.1	6.3	6.5	6.6
Japan	6.2	6.2	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.9	5.9
South Korea	3.9	4.2	4.0	4.0	4.1	4.1	4.2	4.2	4.2	4.3	4.3	4.3
Iran	5.2	3.5	4.2	4.8	4.9	5.0	5.0	5.0	5.0	5.1	5.1	5.1
Brazil	5.7	6.1	6.3	6.2	6.3	6.3	6.5	6.6	6.8	6.9	7.1	7.3
Indonesia	3.8	2.5	2.5	2.7	3.0	3.1	3.4	3.6	3.9	4.1	4.4	4.7
Pakistan	4.1	2.0	2.9	2.8	3.2	3.4	3.8	4.0	4.1	4.3	4.4	4.5
Mexico	2.2	2.4	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.6
Other	27.6	28.9	29.0	28.9	29.4	29.6	29.8	30.2	30.7	31.3	32.1	32.8
Total trade	100.4	96.3	98.4	99.9	102.7	105.2	107.1	109.5	112.0	114.6	117.7	120.6
Exporters												
European Union 3/	15.7	17.1	17.8	16.6	16.6	17.2	18.1	18.7	19.4	20.3	21.5	22.5
Canada	20.2	15.0	16.4	16.4	16.9	16.9	17.0	17.1	17.2	17.3	17.4	17.4
Australia	15.5	14.6	13.1	12.2	12.9	13.2	13.6	14.2	14.5	14.7	14.8	14.8
Argentina	10.0	6.0	7.2	7.5	8.4	8.7	9.1	9.7	10.1	10.5	10.9	11.3
Former Soviet Union 1/	3.8	3.8	5.8	6.6	7.0	7.0	6.2	6.1	6.1	6.4	6.5	6.7
Eastern Europe	2.8	2.6	2.1	2.3	2.7	2.7	2.9	3.1	3.4	3.5	3.5	3.5
Other foreign	4.1	6.0	4.1	4.2	4.2	4.1	4.1	4.0	3.9	3.8	3.7	3.7
United States	28.3	31.3	32.0	34.0	34.0	35.4	36.1	36.7	37.4	38.1	39.5	40.8
<i>Percent</i>												
U.S. trade share	28.2	32.5	32.5	34.0	33.1	33.6	33.7	33.5	33.4	33.2	33.5	33.8

1/ Includes intra-FSU trade.

2/ Includes South Africa.

3/ Excludes intra-EU trade, covers EU-15.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 41. Rice trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
	<i>Million metric tons</i>											
Importers												
Canada	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
Mexico	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Central America/Caribbean	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Brazil	1.2	1.0	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.4
Other South America	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9
European Union 1/	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Former Soviet Union 2/	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Other Europe 3/	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
China	0.3	0.5	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7
Japan	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
South Korea	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indonesia	5.9	2.0	1.8	1.9	2.1	2.2	2.4	2.6	2.7	2.8	2.9	3.0
Malaysia	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
Philippines	1.2	1.5	1.3	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7
Other Asia & Oceania	2.7	2.6	2.5	2.5	2.6	2.7	2.7	2.8	2.8	2.9	3.0	3.0
Iraq	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
Iran	0.5	0.7	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5
Saudia Arabia	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0
Turkey	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Other N. Africa & M. East	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2
Sub-Saharan Africa	3.4	3.4	3.4	3.5	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.3
Republic of South Africa	0.6	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8
Unaccounted	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
United States	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6
World	25.1	21.3	21.3	22.0	22.8	23.5	24.1	24.8	25.4	26.1	26.7	27.4
Exporters												
Australia	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Argentina	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.1	1.2
Other South America	1.0	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4
European Union 1/	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4
China	3.3	1.3	1.0	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.3	1.3
India	3.5	2.0	2.1	2.5	2.8	3.1	3.2	3.4	3.6	3.7	3.8	4.0
Pakistan	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.5	2.6	2.7	2.7
Burma	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Thailand	6.1	5.8	6.3	6.7	6.8	7.0	7.1	7.3	7.4	7.6	7.7	7.9
Vietnam	3.6	3.5	4.0	4.0	4.2	4.3	4.4	4.4	4.5	4.6	4.7	4.8
Other foreign	1.4	1.2	0.8	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Total foreign	22.3	18.5	19.1	19.7	20.6	21.2	21.9	22.5	23.1	23.7	24.3	25.0
United States	2.8	2.8	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4
World	25.1	21.3	21.3	22.0	22.8	23.5	24.1	24.8	25.4	26.1	26.7	27.4
	<i>Percent</i>											
U.S. trade share	11.1	13.0	10.3	10.4	9.8	9.7	9.4	9.4	9.2	9.1	8.9	8.8

1/ Excludes intra-EU trade, covers EU-15.

2/ Includes intra-FSU trade.

3/ Other Western Europe and Central and Eastern Europe.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 42. All Cotton trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<i>Million bales</i>												
Importers												
European Union 1/	4.8	4.8	4.6	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.2	4.1
Former Soviet Union 2/	1.9	1.6	1.9	2.2	2.5	2.7	2.8	3.1	3.2	3.3	3.5	3.6
Indonesia	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.4	2.5
Thailand	1.2	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Brazil	1.9	1.4	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.5
Eastern Europe	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.9
Other Asia & Oceania	4.1	4.0	4.2	4.3	4.4	4.4	4.4	4.5	4.6	4.7	4.8	4.9
Japan	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.9	0.9
South Korea	1.3	1.3	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.9	0.8	0.8
China	1.8	0.8	0.9	0.9	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4
Mexico	1.6	1.4	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.4	2.5
Other foreign	4.0	3.8	4.3	4.6	5.2	5.7	5.9	5.5	5.5	5.5	5.5	5.5
United States	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total imports	27.1	25.2	26.4	26.8	28.1	29.1	29.6	29.8	30.3	30.7	31.2	31.7
Exporters												
Former Soviet Union 2/	5.9	5.7	5.8	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.8
West Africa 10	3.7	3.8	3.9	3.8	4.1	4.3	4.4	4.5	4.6	4.6	4.7	4.7
Australia	2.7	2.9	2.7	2.7	2.9	2.9	3.0	3.0	3.1	3.1	3.2	3.3
Argentina	0.9	0.9	0.9	0.9	1.1	1.2	1.3	1.3	1.4	1.4	1.4	1.5
Pakistan	0.3	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.7
India	0.2	0.2	0.5	0.5	0.7	0.9	1.0	1.1	1.2	1.3	1.3	1.4
China	0.0	1.8	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7
Turkey	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Egypt	0.3	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Other Latin America	0.7	0.6	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Other Sub-Saharan Africa 3/	1.0	0.9	1.2	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4
Other foreign	2.9	2.9	3.1	2.6	3.0	3.3	3.2	2.8	2.9	2.9	3.0	3.0
United States	7.5	4.5	5.6	7.0	6.8	7.0	7.2	7.3	7.4	7.5	7.6	7.7
Total exports	26.3	25.0	26.1	26.5	27.8	28.8	29.3	29.5	30.0	30.4	30.9	31.4
<i>Percent</i>												
U.S. trade share	28.5	18.0	21.4	26.2	24.3	24.2	24.5	24.7	24.6	24.6	24.6	24.5

1/ Includes intra-EU trade, covers EU-15.

2/ Includes intra-FSU trade.

3/ Includes Republic of South Africa.

Note: Imports exceed exports by 300,000 bales each year due to statistical differences across countries' reported trade. The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 43. Soybean trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<i>Million metric tons</i>												
Importers												
European Union 1/	15.6	15.5	16.4	15.9	15.9	15.6	15.7	15.5	15.5	15.4	15.4	15.3
Japan	5.0	4.7	4.7	4.7	4.7	4.7	4.7	4.8	4.8	4.8	4.8	4.9
South Korea	1.4	1.4	1.4	1.4	1.5	1.4	1.5	1.5	1.5	1.5	1.6	1.6
Taiwan	2.4	2.5	2.5	2.5	2.6	2.7	2.7	2.8	2.8	2.9	2.9	3.0
Mexico	3.2	3.4	3.6	3.7	3.8	3.9	4.0	4.2	4.3	4.4	4.6	4.7
Former Soviet Union 2/	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Eastern Europe	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
China	3.0	3.6	3.8	4.0	4.2	4.3	4.8	5.0	5.3	5.5	5.8	6.0
Malaysia	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.1
Indonesia	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.0
Other	8.0	5.4	6.4	6.5	6.7	6.9	7.1	7.2	7.4	7.6	7.8	8.0
Total imports	40.3	38.4	40.7	40.7	41.3	41.7	42.8	43.3	44.1	44.8	45.4	46.2
Exporters												
Argentina	3.1	2.8	2.4	1.7	1.9	2.1	2.2	2.2	2.2	2.3	2.4	2.5
Brazil	9.3	8.3	8.4	8.7	9.0	9.5	10.5	10.6	10.5	10.5	10.1	10.0
China	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other foreign	4.1	4.2	4.3	3.8	3.9	3.9	3.9	4.0	4.2	4.2	4.4	4.5
United States	23.7	22.9	25.3	26.3	26.3	26.0	26.0	26.3	26.9	27.6	28.3	29.0
Total exports	40.3	38.4	40.7	40.7	41.3	41.7	42.8	43.3	44.1	44.8	45.4	46.2
<i>Percent</i>												
U.S. trade share	58.7	59.6	62.3	64.5	63.6	62.4	60.8	60.6	61.2	61.6	62.3	62.8

1/ Includes intra-EU trade, covers EU-15.

2/ Includes intra-FSU trade.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 44. Soybean meal trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
	<i>Million metric tons</i>											
Importers												
European Union 1/	16.2	16.9	17.1	16.8	16.6	16.2	15.8	15.8	15.8	15.8	16.0	15.9
Former Soviet Union 2/	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.9
Eastern Europe	2.1	2.3	2.4	2.4	2.5	2.5	2.5	2.6	2.7	2.7	2.8	2.9
Canada	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
Japan	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7
China	4.0	4.4	4.5	4.9	5.2	5.5	5.9	6.2	6.5	6.8	7.1	7.4
Southeast Asia	3.1	2.7	3.1	3.4	3.6	3.9	4.1	4.4	4.6	4.9	5.1	5.4
Latin America	3.5	3.9	4.3	4.1	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
North Africa & Middle East	3.7	4.1	4.0	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
Other	3.5	2.6	2.5	2.4	2.5	2.6	2.7	2.7	2.8	2.8	2.9	2.9
Total imports	37.9	38.9	39.8	39.8	40.5	40.9	41.5	42.4	43.5	44.4	45.4	46.2
Exporters												
Argentina	10.5	11.2	11.2	11.3	11.4	11.6	11.6	12.0	12.4	12.9	13.3	13.6
Brazil	10.6	10.6	11.2	10.7	10.9	11.2	11.6	12.1	12.6	13.0	13.5	13.8
India	2.5	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2
European Union 1/	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Other foreign	1.4	1.7	1.4	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.8
United States	8.5	7.8	8.3	8.7	8.8	8.7	8.6	8.6	8.5	8.4	8.5	8.6
Total exports	37.9	38.9	39.8	39.8	40.5	40.9	41.5	42.4	43.5	44.4	45.4	46.2
	<i>Percent</i>											
U.S. trade share	22.4	20.2	21.0	21.9	21.7	21.3	20.8	20.2	19.5	19.0	18.7	18.5

1/ Includes intra-EU trade, covers EU-15.

2/ Includes intra-FSU trade.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 45. Soybean oil trade baseline projections

	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
	<i>Million metric tons</i>											
Importers												
European Union 1/	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
China	1.7	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.5
Other Asia	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.6	1.6
Latin America	1.2	1.2	1.3	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5
North Africa & Middle East	1.5	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.7
Former Soviet Union & Eastern Europe 2/	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Other	0.6	0.7	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total imports	6.9	6.9	6.8	6.9	7.0	7.2	7.4	7.6	7.8	8.0	8.3	8.6
Exporters												
Argentina	2.2	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.7	2.8	2.9
Brazil	1.3	1.3	1.2	1.2	1.3	1.5	1.6	1.5	1.6	1.7	1.8	1.9
European Union 1/	1.4	1.4	1.4	1.4	1.2	1.1	1.0	1.0	1.1	1.1	1.2	1.3
Other foreign	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
United States	1.4	1.2	1.3	1.4	1.5	1.6	1.7	1.9	1.8	1.8	1.8	1.8
Total exports	6.9	6.9	6.8	6.9	7.0	7.2	7.4	7.6	7.8	8.0	8.3	8.6
	<i>Percent</i>											
U.S. trade share	20.3	17.8	18.9	20.1	21.2	21.7	23.4	25.0	23.4	22.2	21.2	21.5

1/ Includes intra-EU trade, covers EU-15.

2/ Includes intra-FSU trade.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 46. Beef trade baseline projections

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<i>Thousand metric tons, carcass weight</i>												
Importers												
United States	1,063	1,184	1,266	1,270	1,270	1,247	1,225	1,225	1,202	1,202	1,179	1,179
Japan	924	924	975	977	989	1,008	1,031	1,052	1,075	1,095	1,112	1,127
South Korea	195	255	135	239	185	200	216	231	248	265	282	298
Taiwan	72	68	82	88	93	97	103	109	116	123	131	139
European Union 1/	349	328	350	350	350	350	350	350	350	350	350	350
Russia	650	750	432	305	374	488	542	620	584	596	606	615
Easten Europe	58	71	85	112	119	122	118	99	92	77	62	65
Mexico	150	195	216	225	228	227	232	235	250	264	278	293
Canada	250	250	218	213	209	205	201	197	193	189	185	181
Major importers	3,711	4,025	3,758	3,778	3,816	3,944	4,017	4,117	4,110	4,159	4,186	4,249
Exporters												
United States	969	979	1,061	975	998	1,051	1,090	1,121	1,158	1,194	1,231	1,268
Australia	1,140	1,160	1,076	1,036	1,043	1,073	1,087	1,095	1,086	1,086	1,090	1,097
New Zealand	507	470	481	486	485	482	481	483	486	489	490	489
European Union 1/	946	943	877	817	817	817	817	817	817	817	817	817
Eastern Europe	91	101	99	102	100	99	100	102	98	95	93	108
Ukraine	76	70	171	198	209	192	170	170	170	170	170	170
Argentina	430	420	314	331	343	361	376	395	412	429	447	463
Brazil	275	285	274	274	265	275	289	302	316	329	342	356
Canada	340	340	311	323	329	348	359	372	371	372	372	372
Major exporters	4,774	4,768	4,665	4,542	4,589	4,697	4,768	4,856	4,914	4,981	5,051	5,139

1/ Excludes intra-EU trade, covers EU-15

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 47. Pork trade baseline projections

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<i>Thousand metric tons, carcass weight</i>												
Importers												
United States	287	308	318	299	290	288	293	295	295	298	302	304
Japan	733	740	785	810	831	853	874	896	917	937	956	974
Hong Kong	178	205	257	273	284	295	306	317	328	338	347	356
South Korea	77	60	50	57	58	54	55	57	61	64	67	71
Russia	444	488	496	402	389	492	485	479	484	486	485	486
Mexico	41	47	89	100	127	142	139	143	149	159	173	186
Canada	54	50	50	50	51	52	52	53	53	54	54	55
Major importers	1,814	1,898	2,043	1,991	2,029	2,175	2,205	2,240	2,286	2,335	2,383	2,431
Exporters												
Canada	410	390	396	389	394	414	420	426	424	423	420	417
European Union 1/	811	861	886	887	885	887	887	886	885	885	884	883
Eastern Europe	417	402	458	452	439	485	491	481	473	460	456	450
Taiwan	69	50	5	5	5	5	25	50	75	100	125	150
China	150	90	121	114	114	118	118	118	114	111	109	105
United States	474	559	615	576	590	601	646	692	726	771	817	851
Major exporters	2,331	2,352	2,481	2,423	2,426	2,509	2,587	2,653	2,698	2,749	2,810	2,856

1/ Excludes intra-EU trade, covers EU-15.

The projections were completed in November 1998 based on policy decisions and other information known at that time.

Table 48. Poultry trade baseline projections

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	<i>Thousand metric tons, ready to cook</i>											
Importers												
Russia	1,206	1,311	920	948	948	1,047	1,107	1,178	1,180	1,195	1,212	1,231
European Union 1/	311	328	300	300	300	300	300	300	300	300	300	300
Japan	501	500	507	575	596	609	631	649	672	692	712	732
Hong Kong	856	820	907	953	1,000	1,050	1,101	1,154	1,208	1,264	1,322	1,384
China	900	850	829	926	974	989	1,040	1,075	1,144	1,209	1,284	1,363
South Korea	39	40	35	31	33	34	36	37	40	42	44	47
Saudi Arabia	247	245	281	249	251	252	255	255	252	246	241	234
Egypt	4	20	19	20	28	19	27	32	46	55	65	76
Mexico	205	213	222	226	229	232	238	245	253	263	266	270
Canada	138	140	146	149	152	155	159	162	165	168	171	174
Major importers	4,407	4,467	4,166	4,377	4,511	4,686	4,892	5,085	5,258	5,433	5,618	5,809
Exporters												
Brazil	664	638	671	682	710	739	755	776	786	801	813	826
European Union 1/	956	990	936	930	886	893	875	868	848	835	820	806
Hungary	112	114	99	87	74	66	57	52	46	41	34	27
China	435	430	396	399	415	439	457	479	496	514	533	551
Hong Kong	569	576	638	673	710	750	791	834	880	929	980	1,033
Thailand	197	227	258	279	294	300	310	318	330	340	353	365
Saudi Arabia	35	35	28	38	40	42	43	45	47	49	51	53
United States	2,561	2,410	2,344	2,431	2,572	2,758	2,921	3,073	3,202	3,332	3,461	3,590
Major exporters	5,529	5,420	5,369	5,520	5,701	5,986	6,208	6,445	6,635	6,841	7,042	7,251

1/ Excludes intra-EU trade, covers EU-15.

The projections were completed in November 1998 based on policy decisions and other information known at that time.