

# Iowa Ag Review



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Center for Agricultural  
and Rural Development

## Supporting U.S. Agriculture under World Trade Organization Rules

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**F**or the fourth straight year, market prices for Midwest crops are low. Central Iowa soybean prices hover around \$4.00 per bushel. Corn prices are around \$1.80 per bushel, and wheat markets remain stuck at below \$3.00 per bushel. What to do about these low prices has occupied a great deal of Congress's time as it attempts to craft new farm legislation. Nearly all farm bill proposals would continue to provide farmers levels of support much higher than those offered by the market.

Senator Lugar (R-Ind.), among others, argues that these subsidies are self-defeating in the sense that the subsidies induce farmers to produce, which lowers market prices, which then leads to increased demands for subsidies. Strong advocates of trade expansion criticize the subsidies because they weaken our trade negotiating position by making us vulnerable to the charge that the U.S. should practice what it preaches when it comes to subsidizing farmers. And other exporting countries criticize the subsidies because the resulting increase in U.S. supply hurts them by lowering world market prices.

The validity of the arguments against farm subsidies depends on how responsive supply is to government payments. If U.S. supply is largely unresponsive to government payments, then U.S. farm subsidies have little effect on agricultural markets, other exporting countries are not hurt by U.S. farm policies, and

our trade negotiating position should not be affected at all. However, if subsidies induce greater U.S. supply, then they have a downside that should be recognized by U.S. agriculture as it prepares for a new round of World Trade Organization (WTO) negotiations.

### WHAT LEVEL FOR LOAN RATES?

The House and Senate have allocated an additional \$73.5 billion in agricultural spending above existing baseline levels over the next 10 years. Recently the Administration agreed to this level of spending. What there is no agreement about is how to spend the money. And the primary policy difference between the House, the Senate, and the Administration is where to set loan rates.

Loan rates put a floor on prices farmers receive for their crops, but they no longer put a floor on market prices because of loan deficiency payments (LDPs). When market prices are below loan rates, farmers can sell their crops at market prices and receive an LDP—the difference between market prices and the loan rate—from the government. The U.S. Department of Agriculture (USDA) tries to make sure that LDP payment rates are attractive enough so that farmers do not forfeit their crops to the government.

Capitalism works because people and companies look to market prices and their own cost of production for guidance about what and how much to produce. When market prices are higher than production costs, it is a signal to expand production. Similarly, a drop in market price is a signal to contract production.

For crops covered by non-recourse loans, it is a different story. When market prices are below loan

rates, farmers do not look at market prices for guidance about what to plant; instead, they look to loan rates for guidance, because they know that LDPs will make up the difference. Loan rates provide what some economists call a "hot incentive" to produce. This means that higher loan rates directly increase total production and decrease market prices, whereas a cut in loan rates should decrease production and increase market prices.

Congress has considered proposals that range from elimination of LDPs to dramatic increases in loan rates. For example, the National Corn Growers Association (NCGA) has proposed changing the marketing loan program to recourse loans (which would eliminate all price guarantees). And the National Farmers Union (NFU) has proposed increasing loan rates for corn, soybeans, and wheat to \$2.49, \$4.10, and \$5.40 respectively from their current levels of \$1.89, \$2.59, and \$5.26.

### HIGH LOAN RATES OR LARGE DECOUPLED PAYMENTS?

The large variation in loan rate levels among competing proposals does not translate into similarly large variations in projected payments to farmers. Nearly all proposed programs would spend at least \$73.5 billion of the additional money allocated to agriculture. Proposals with lower loan rates would make up the difference with other types of payments. For example, the NCGA proposal would have continued Agricultural Market Transition Act (AMTA) payments and created a new countercyclical payment program. The NFU proposal would have elimi-

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## IN THIS ISSUE

Supporting U.S. Agriculture under the World Trade Organization ..... 1

The Cost of Food Self-Sufficiency and Agricultural Protection in South Korea ..... 4

Iowa's Agricultural Situation ..... 6

Meat Traceability: Its Effect on Trade ..... 8

Public or Private Price Protection? ..... 10

Incentives to Boost Conservation Tillage Adoption ..... 11

Meet the Staff:  
Holger Matthey ..... 13

Recent CARD Publications ..... 13

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nated AMTA payments and relied solely on loan rates.

The key difference in these policy proposals is whether they rely primarily on programs that create direct production incentives, such as marketing loans, or whether they rely on programs that make payments on a fixed base. When a farmer's planting decision or harvested production level has no effect on the amount of payment the farmer receives, then the program payments are said to be "decoupled." That is, payments and production levels are not related. AMTA payments are completely decoupled from a farmer's current production decision because they arrive even if a farmer's land is held idle.

Fixed, decoupled payments provide little incentive for a farmer to plant because the planting decision has no effect on the size of the payment. Some argue that increased decoupled payments may result in increased planted acreage because the payments infuse enough liquidity into farming operations that farmers choose to plant some kind of crop rather than idle land, but this effect likely is quite small.

Payments do not have to be fixed to be decoupled. For example, the NCGA countercyclical payment proposal would have made payments whenever national crop revenue fell below a target revenue level. The per-acre payments would have been paid to all farmers based on their average planted acres and yield levels during a historic base period. The payments would have been made regardless of a farmer's current planting decisions and current per-acre revenue levels. Adoption by Congress of the NCGA proposal would have meant that all program payments would have been decoupled from current production decisions. The only possible "coupling" would have been if farmers strategically planted acres of a particular crop in order to develop a new base in the hope that future farm bills would allow them to update that base.

So, the choice of loan rate levels is really a choice about how much Congress wants to maintain planting incentives when market prices are low. A high loan rate policy translates into a high degree of intervention. Low loan rates combined with large decoupled payments imply a low degree of intervention.

## HOUSE AND SENATE AGRICULTURE COMMITTEE PROPOSALS

As shown in Table 1, the House agriculture committee farm bill (H.R. 2646) and the Senate agriculture committee farm bill (S. 1731) give farmers about the same level of total support, when expressed on a per-unit basis. The per-unit support levels include support from loan rates, countercyclical payments, and fixed, decoupled payments. Corn, wheat, and rice have a little higher level of total support in the House than in the Senate, and soybeans have a little higher level of total support in the Senate than in the House. But overall, the total amount of payments going to farmers is about the same.

A comparison of these support levels to average prices received by farmers over the last three years or to recent price levels indicates how unwilling Congress is to let farmers live by market prices.

The rough equivalence of payments masks significant differences in the degree of intervention of the two approaches. The House farm bill relies heavily on a countercyclical payment program that would pay farmers when prices are low. The House countercyclical payment programs would be decoupled because they are paid on a fixed acreage and yield basis and there are no planting requirements. In contrast, as shown in Table 2, the Senate bill relies much more heavily on marketing loans to subsidize farmers, which implies a much higher degree of intervention.

The higher loan rates in the Senate bill—and the associated increased planting incentives—perhaps reflect the desire of mem-



TABLE 1. PER-UNIT SUPPORT LEVELS (\$/YIELD UNIT)

Crop	Per-Unit Support		Market Prices	
	House Ag Committee	Senate Ag Committee	Average 1998-2000	December 2001
Corn	2.50	2.38	1.87	1.92
Soybeans	5.48	5.75	4.77	4.13
Wheat	3.92	3.60	2.59	2.89
Cotton	0.73	0.71	0.54	0.30
Rice	10.14	9.49	6.86	4.09
Barley	2.41	2.27	2.09	2.19
Oats	1.62	1.61	1.08	1.77
Sorghum	2.56	2.47	1.66	1.85

TABLE 2. LOAN RATES (\$/YIELD UNIT)

	House Ag Committee	Senate Ag Committee
Corn	1.89	2.08
Soybean	4.92	5.20
Wheat	2.58	3.00
Cotton	0.52	0.55
Rice	6.50	6.85
Barley	1.65	2.00
Oats	1.21	1.50
Sorghum	1.89	2.08

bers of the committee to make sure that acreage in their states continues to be used for crop production. High-cost/low-yield production areas are those most at risk of losing planted acreage without the high loan rate incentives. And important members of the committee represent states that have high-cost/low-yield production areas.

### WTO IMPLICATIONS

Our current commitment under the WTO is not to exceed \$19.1 billion in so-called amber-box support in any year. Payments that fall in the amber box are in some way related to current production or prices. Price support payments and crop insurance indemnities (net of the producer-paid premium) both fall in the amber box because they depend directly on a farmer's production level and/or market price. AMTA payments do not fall in the amber box because they are fixed payments paid on historical base acreage and yields. USDA decided that market loss assistance

(MLA) payments belong in the amber box because low market prices induced Congress to pass them.

The decision to place MLA payments in the amber box is understandable when viewed in light of the legal definition that amber-box payments are any payments that depend on current prices or production. But the purpose of limiting amber-box payments is to place limits on government's ability to create incentives for farmers to produce more than they would produce if they responded solely to market prices. The rationale for these limits is that production in response to government incentives lowers world prices and hurts farmers in other producing countries. The limits are supposed to enhance market-based competition rather than competition in producer subsidies. Most economists would judge that MLA payments really did not create an extra incentive to produce crops, because a farmer did not have to produce anything to receive the payments.

Because MLA payments fall in the amber box, so too would the countercyclical payments proposed in the House and Senate agriculture committee farm bills, even though the payments are completely decoupled from a farmer's production decisions and therefore would not lower world prices. Under current WTO rules, payments that have little or no effect on world prices count against countries' limits on payments that distort world prices if they are related in some way to current prices or production.

The irony of current WTO rules is that the House farm bill is more likely to result in amber-box payments in excess of our \$19.1 billion limit than the Senate bill, even though, as shown in Table 2, the Senate bill is much more likely to lower world prices because of the higher loan rates.

### U.S. SUBSIDIES AND FUTURE WTO AGREEMENTS

Late last year, WTO members met in Doha, Qatar, and agreed to work toward the elimination of agricultural subsidies. What this will mean in practice is that countries will work toward stricter limits on the types of subsidies that have an impact on other countries' producers. Given our unwillingness to let farmers' incomes be determined by market forces, the United States could take the position that countries should eliminate (or limit) all payments that directly entice farmers to produce more than what market prices dictate. If adopted, this position would allow Congress to subsidize farmers all it wanted, as long as it did so with decoupled payments. Countercyclical payments based on historical payment bases would be allowed without limit. Such an agreement would result in U.S. farmers, and farmers in other countries, growing the types and quantity of crops demanded by the market, while allowing Congress to subsidize the agricultural sector to the desired level. ♦

## The Cost of Food Self-Sufficiency and Agricultural Protection in South Korea

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South Korea has the most supported agricultural sector among member countries of the Organization for Economic Cooperation and Development (OECD). Public intervention mainly consists of high production prices supported by government purchases, together with high tariffs that protect domestic producers from foreign competition and implicitly tax consumers. Trade liberalization recently took place in particular sectors, and Korea is now a major importer of oilseeds and coarse grains. However, Korea only reluctantly exposed its agricultural sector to the provisions of the Uruguay Round Agreement on Agriculture (URAA) of the World Trade Organization (WTO). It has kept nearly prohibitive tariffs in the rice, meat, and dairy sectors; high production subsidies in most other sectors; and significant non-tariff trade barriers on many commodities, including administrative barriers (import monopolies) and sanitary restrictions.

Exporting countries have stressed that Korean farm policy imposes high food costs on consumers and increases the cost of labor for its manufacturing sector. By artificially maintaining resources in agriculture, Korean agricultural policy allegedly slows the growth rate of the entire domestic economy. Other WTO member countries complain that Korea, while benefiting from global manufacturing export opportunities, creates considerable obstacles to other countries' exports of food products.

In preparation for the Doha Round of the WTO negotiations, Ko-

rea has promoted food security objectives and has emphasized the need to ensure an adequate supply of food under all market conditions. Korea defines food security as a joint reliance on trade, domestic production, and self-sufficiency. Despite trade concessions under the URAA, Korea has pursued food self-sufficiency as the way to achieve food security. Food security based on self-sufficiency is a recurring theme among developing-country members of the WTO. For instance, India has proposed similar policies. However, self-sufficiency objectives are detrimental to (poor) consumers and are inconsistent with food security as "access to food for all" proposed by the World Food Summit of the Food and Agriculture Organization.

### WELFARE COSTS OF KOREAN AGRICULTURAL POLICY

Table 1 shows the producer support estimate, a measure of domestic subsidization expressed as a percentage of the value of production, calculated by the OECD. It reaches 74 percent in Korea compared to an OECD average of 40 percent in 1999. The Korean government provides a few direct payments and some input subsidies (fertilizers and interest subsidies), but 95 percent of subsidies are transfers from consumers. These subsidies cost consumers far more than producers gain.

Table 2 shows that it takes 15.8 won in lost consumer income for every 10 won increase in farmer income. These high costs are attributable to policy instruments that are coupled to production and consumer taxation. High tariffs and administrative prices reflect the Korean government's preference for self-sufficiency objectives regardless of the cost to consumers in sectors such as rice, pork, or poultry. Rice growers get the largest transfer, followed by beef, pork, and milk producers. Rice policy contributes

most to resource misallocation, followed by beef, dairy, and pork. Beef has the lowest efficiency of transfer, with around 47 percent of lost consumer income being gained by Korean producers.

### TRADE IMPACTS OF KOREAN AGRICULTURAL POLICY ON TRADING PARTNERS

As a member of the WTO, Korea had to convert quantitative restrictions on imports into bound tariffs, reduce these tariffs over an implementation period, open its market to imports under the minimum access provisions, and reduce the most trade-distorting forms of domestic support in 1994. However, Korea applied the Uruguay Round provisions so that it could shelter its producers from foreign competition in key sectors. For example, Korea postponed the tariffication of rice for 10 years and negotiated an obligation to import only 4 percent of its consumption by 2004. In most staple foods, Korea also has kept import restrictions through its special domestic rules. Prohibitive tariffs and administrative barriers still restrict imports of many agricultural goods to Korea. Self-sufficiency remains a policy objective (see Table 3), particularly in the rice sector, because of the strength of the rice producer lobby, the cultural significance of this food, and South Korea's possible reunification with North Korea—which has been experiencing dramatic shortages of rice, making this issue particularly sensitive.

Other countries involved in the Doha Round care more about import and export volumes than about the politics of any given country. Despite the recent surge in imports of corn, wheat, and soybeans, we estimate that 2,273 billion won at (1995 prices; \$1=1,290 won) of trading opportunities are foregone every year. Self-sufficiency targets reduce de-



mand by imposing high prices on consumers, which can lead to the absurd situation where a country insulates itself from the vicissitudes of world markets by making a portion of its population go hungry. A reasonable alternative would be to set production levels of staple foods as targets and rely on imports as an additional source of food items. Low or no tariffs on the consumer side would result in higher demand. However, domestic production would be maintained, thus affording some insurance against world market uncertainty. This policy would result in the same "security" for domestic supply as that offered by self-sufficiency, without imposing large food taxes on consumers.

Table 4 presents the trade implications of alternative approaches to food security using historical production levels as a target. This reflects a policy based on deficiency payments and no tariffs.

A policy that sets production targets rather than self-sufficiency targets represents a more palatable option for importing countries within the WTO and could be implemented with large deficiency payments. This policy, which has been used in U.S. farm programs for years, would minimize consumer losses and generate additional Korean imports, with a limited loss of tariff revenue. In addition, lower food costs increase consumption and result in significant efficiency gains, sufficient to more than pay for the farm program. Targeted deficiency payments in the staple grains sector (rice and barley) that achieve historical production levels, while removing tariffs on imports, would reduce efficiency losses by 72 percent (to 1,716 billion won at 1995 prices) and would expand opportunities for exporters. ♦

**TABLE 1. SUPPORT TO KOREAN AGRICULTURE, 1998–2000**  
(THREE-YEAR AVERAGE)

Producer support estimate	65%
Consumer tax	63%
Consumption at domestic price/consumption at world price	2.27
Production at domestic price/production at world price	3.05

**TABLE 2. TRANSFERS AND WELFARE LOSSES INDUCED BY KOREAN AGRICULTURAL POLICIES, 1998–2000 (THREE-YEAR AVERAGE)**

Transfer to farmers	10,571
Tariff and tax revenues	1,228
Cost of resource misallocation	6,152

Note: All figures in billion 1995 won.

**TABLE 3. SELF-SUFFICIENCY IN KOREAN AGRICULTURE, 1998–2000**  
(THREE-YEAR AVERAGE)

	Production (10 <sup>3</sup> /tons)	Consumption (10 <sup>3</sup> /tons)	Net imports in percent consumption,
Rice	5,217	5,148	-1%
Wheat	4	3,113	99%
Barley	271	469	42%
Corn	0	9,438	100%
Soybeans	128	1,667	92%
Dairy	2,186	2,595	16%
Beef	327	547	40%
Pork	911	959	5%
Poultry	346	401	14%

**TABLE 4. MARKET ACCESS UNDER PRODUCTION TARGETS, 1998–2000**  
(THREE-YEAR AVERAGE)

	Actual Situation	Production Target, Historical Levels		
		Staple Grains Only	Meat Only	Grains, Meat, and Milk
Value of imports at world prices	3,275	5,044	5,065	4,431
Lost trading opportunities <sup>a</sup>	2,272	515	485	1,132

Note: All figures in billion 1995 won.

<sup>a</sup>Relative to the absence of governmental intervention.

## Iowa's Agricultural Situation

### *LDPs and Marketing Assistance Help Iowa Farmers Weather the Ups and Downs of Global Supply and Demand*

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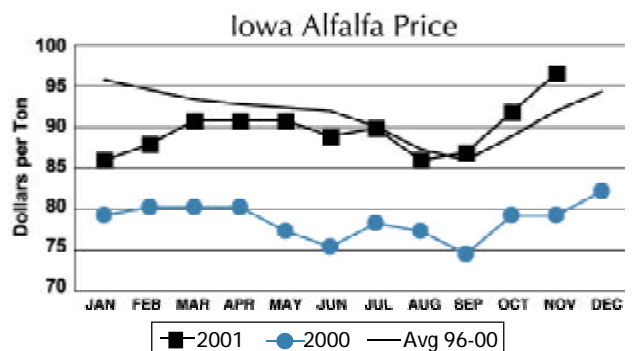
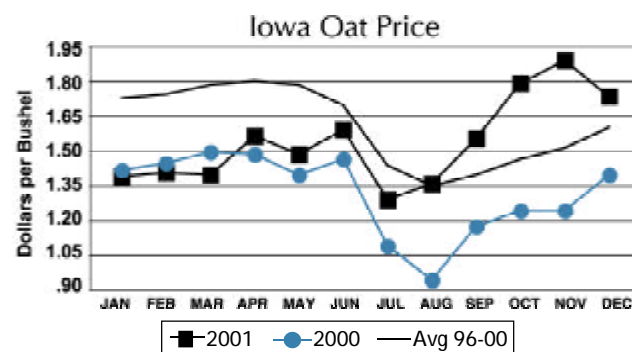
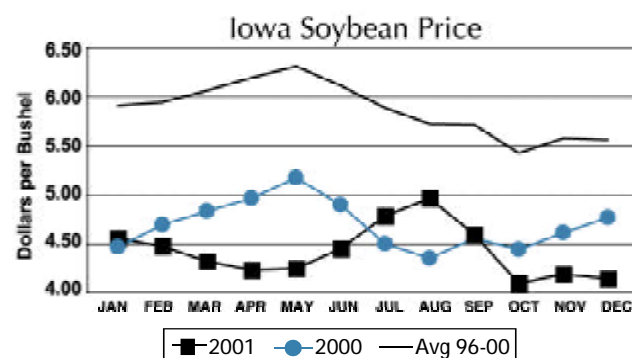
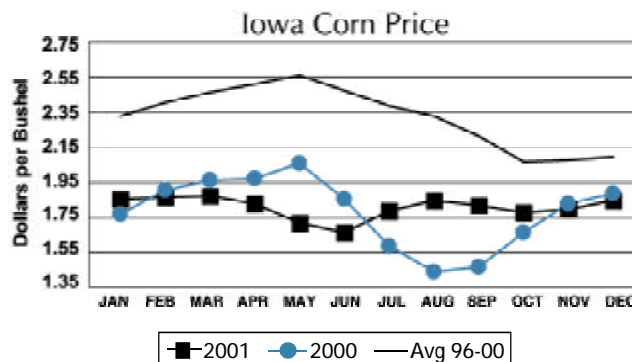
**T**his winter, major developments in South America, China, and Eastern Europe are affecting world grain markets, resulting in overall depressed prices. However, Iowa producers are able to make use of advantages provided by loan deficiency payments (LDPs) and marketing loans. While LDPs and marketing loan gains for corn are lower than last year, the payments provided through marketing assistance programs for the soybean crop are higher.

#### CORN

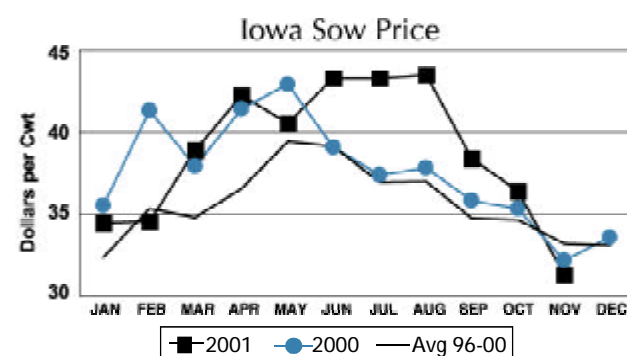
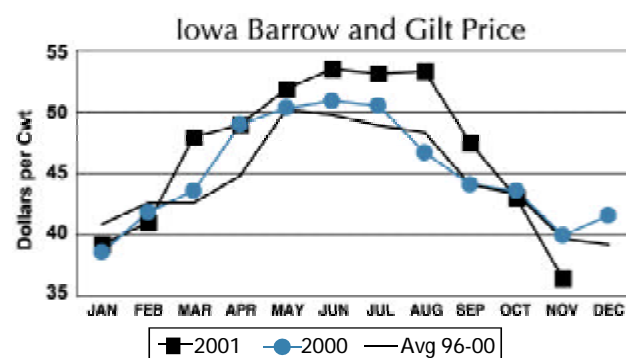
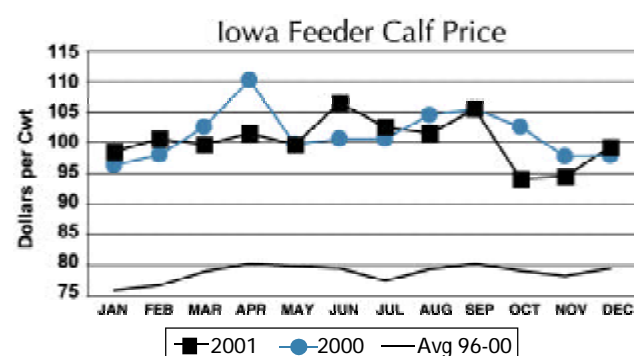
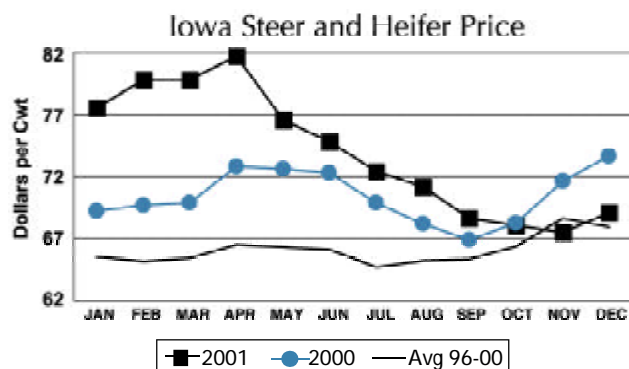
With a decrease in acreage, the U.S. 2001 corn crop was 4 percent below last year's large production, despite higher-than-expected yields in Iowa and nationwide, according to the December 11 U.S. Department of Agriculture (USDA) *Crop Production* report. Even so, in December domestic corn prices climbed only 8¢ above the season's (October) low of \$1.84 per bushel and are still 5¢ lower than at this time last year.

Overall, the economic forces driving international grain markets seem to be working to offset each other. On the one hand, there are price-strengthening expectations about China's imports, fueled by the large purchase announced at the end of November as well as news of less competition from the combined crops of Argentina and Brazil. On the other hand, there is an increase in production in Canada as well as emerging sources of competition from growers in Eastern Europe and the Former Soviet Union. On the international demand side, contributors to weak prices are lower demand for feed in Taiwan as well as increased substitution of feed wheat for corn in South Korea. In the end, sluggish shipments during the year resulted in 2001 corn exports falling 10 percent short of the previous year's number, according to the January 7 USDA *U.S. Export Sales* report.

Nonetheless, for 2002, the USDA projects U.S. corn exports of 2 billion bushels, up 6 percent from 2001. As recorded in USDA's December 11 *World Agriculture Supply and Demand Estimates* (WASDE) report, the corn use in 2001 came to nearly 10 billion bushels, which exceeds the previous year's use by 3 percent, leading into a beginning stock of 1.9 billion bushels in 2001/02, which is larger than that in 2000/01 by 10 percent. However, steady domestic demand for corn by processors and the livestock sector appears adequate to support prices. The WASDE report narrowed the forecast price for the 2001/02



Continued on page 12



## Iowa Cash Receipts Jan. – Sept.

	2001	2000	1999
(Million Dollars)			
Crops	3,433	3,310	3,259
Livestock	4,391	4,463	3,501
Total	7,825	7,774	6,760

## World Stocks-to-Use Ratios

	Crop Year		
	2001/02	2000/01	1999/00
	(Dec. Projection)	(Estimate)	(Actual)
(Percent)			
Corn	20.58	25.17	28.36
Soybeans	16.00	16.53	16.83
Wheat	24.16	27.65	28.75

## Average Farm Prices Received by Iowa Farmers

	Nov.* 2001	Oct. 2001	Nov. 2000
(\$/Bushel)			
Corn	1.80	1.78	1.83
Soybeans	4.15	4.05	4.59
Oats	1.91	1.81	1.24
(\$/Ton)			
Alfalfa	97.00	92.00	79.00
All Hay	95.00	88.00	78.00
(\$/Cwt.)			
Steers & Heifers	67.00	67.60	71.30
Feeder Calves	94.60	94.30	98.00
Cows	35.60	36.70	36.60
Barrows & Gilts	36.30	43.10	39.90
Sows	31.10	36.40	32.00
Sheep		26.40	34.50
Lambs		44.90	63.00
(\$/Dozen)			
Eggs	0.44	0.40	0.48
(\$/Cwt.)			
All Milk	13.90	16.00	11.90

\*Mid-month



## Meat Traceability: Its Effect on Trade

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Several livestock and meat-related crises have given rise to increased worldwide consumer concern over meat safety and an increased desire for information about the meat products they purchase. During the past several years, a series of food safety and animal disease crises has occurred in the European Union (EU), including dioxin contamination of livestock feed, the announcement of the possible link between Bovine Spongiform Encephalopathy (BSE) and new-variant Cruetzfeldt-Jakob disease, and outbreaks of foot-and-mouth disease and classical swine fever. Many EU consumers have lost confidence in the safety of meat products (especially beef) and in the ability of regulatory agencies to protect the food supply. Not surprisingly, the European Union now leads most other countries in the development and mandatory implementation of traceability protocols for livestock and meat products.

The EU livestock identification and registration system is comprised of ear tags that contain a unique registration number for individual animal identification (double tagging is used); computerized databases of births, deaths, and animal movements; animal passports; and registers for each farm. Effective January 1, 2002, all EU beef products must be labeled with the following information:

- Country of animal's birth
- Country/countries of fattening
- Reference number linking the meat to an animal or group of animals
- Country of slaughter and establishment number of slaughterhouse

- Country/countries of cutting and approval number of cutting plant(s)
- If the beef is from animals born, raised, and slaughtered within a single EU member state, the label may read "Origin: (name of member state)"
- If the beef is from a third country (non-EU member), the label may say "Origin: (name of third country)"

Ground beef labels must list the following:

- A traceability code
- Member state of slaughter
- Member state of preparation
- Member state or states of origin, if different from state of preparation

The new EU standards will have a limited direct impact on U.S. meat producers because U.S. exports to the European Union are quite small. However, if countries that are important markets for U.S. meat products adopt the EU traceability standards, the impact could be substantial.

### JAPAN'S RESPONSE

Japan has responded to its own meat-related (BSE) crisis by implementing full traceability within its domestic beef industry. Japan is by far the largest market for U.S. beef and pork. Current country-of-origin labeling identifies U.S. beef in retail meat counters, and the U.S. has BSE-free status. The question arises whether this will be sufficient labeling for the Japanese consumer. U.S. meat exporters hope so, and they hope that with traceability, Japanese consumers will regain full confidence in beef, both domestic and imported. But the worrisome question is whether Japanese consumers will discriminate against imported beef that is not traceable, which would create increased demand for meat from countries that adopt full traceability systems.

Australia is acting as if the concern over food safety in Japan and in other export markets is a market-



ing opportunity by moving toward full traceability. Currently, Australian producers apply a registered tail tag number identifying their ranch on all cattle leaving that ranch. A temporary tail tag moves with the animal and then with the carcass to the end of the dressing line. Here, carcass tickets are affixed to each side of the carcasses, which are segregated by lots in the coolers and fabricated according to a production schedule. After fabrication, carcasses, quarters, and boxed cuts are labeled with the establishment number and packed-on date. The system provides traceback of carcasses and cuts to the tail tag and ranch of origin.

Soon the Australian beef industry will use a fully integrated, electronic system that links three technologies: the National Livestock Identification Scheme (NLIS), which uses radio frequency tags to identify and track cattle; the European Article Number (EAN) bar-coding technology already used worldwide in the processing and retail sectors; and the Electronic Data Interchange (EDI), an electronic messaging system.



The state of Victoria has made electronic ear tagging compulsory for all cattle born on or after January 1, 2002 except for calves less than six weeks old sold for slaughter. Eventually, all cattle will be identified and all livestock transactions will be entered into the NLIS database. Some Australian ranchers are resisting the idea of a compulsory system, citing cost, difficulty of implementation because of large ranch sizes, and problems with the new technology. However, others are adopting the technology because it will be required for beef exports to the European Union.

Several other meat-exporting countries are in various stages of developing traceability systems. For cattle, Argentina and Canada identify primary production establishments and herds within or leaving the establishments. They also provide traceback for carcasses and cuts to slaughter facilities and production establishments. Based on current production systems, it would be feasible for Canada to provide individual animal identification for animals leaving the production establishment and link individual animals to carcasses and cuts.

## ISSUES AND OPPORTUNITIES

### *Nontariff Trade Barriers*

Concern that traceability will be used as an unjustified trade barrier has been expressed within the meat industry. The World Trade Organization (WTO) requires that traceability measures be scientifically justified based on a risk assessment and not be restrictive of trade between the country imposing the measure and other countries. Thus, an importing country cannot enforce more rigorous standards for imported meat than those applied to the domestic in-

dustry or use these standards as trade barriers. The U.S. challenge to the EU beef hormone ban has shown that the WTO is not always effective in preventing implementation of meat trade policies that do not conform to WTO rules.

### *Increased Costs*

Can the U.S. meat industry provide both traceability from a U.S. farm or ranch to a foreign retail outlet and an economically competitive product? Clearly, costs would increase if line speeds were to decrease with implementation of traceability systems. Thus, smaller plants with slower fabrication speeds may be better equipped to implement traceability to the retail level and may find niche market opportunities.

### *Liability*

Like so many of the issues associated with traceability, there are two sides to the liability issue. There is concern among some producers that they will be held liable for contamination or other problems over which they have no control once an animal leaves the farm. The flip side of this perception is that documentation of management practices, animal health programs, inputs, and animal movements can serve as protection against liability because they can prove where animals came from and how they were raised.

### *Branded Products*

Danish and Dutch hog producers have used traceability to improve herd genetics, meat quality, and palatability for many years. Now, traceability is being successfully implemented in new supply networks for U.S. branded meat programs to ensure quality, consistency, and safety. Producers agree to accept both the responsibility and economic incentives of

raising livestock for these programs, and processors can set higher product standards. Traceability is also a way to provide documented assurance for consumer preferences such as animal welfare and concern for the environment. Branded programs are perceived as one of the best ways to develop new markets for high-value, noncommodity U.S. meats in other countries.

### *Marketing Tools*

In the Netherlands, one veal processor is responding to the consumer preference for traceback information by providing an Internet site where a consumer can enter a product code and a password to receive textual and visual information about the farmer, location of the farm, sex and weight of the calf, and the name of the slaughterer. This use of "story meats" as a marketing tool is being used in many countries to reach consumers on a more personal level by linking the product they are about to purchase with a face and a place.

## RAISING THE BAR

It should be noted that, although the European Union is leading the charge in implementing traceability regulations, an EU-wide system has not been fully implemented, individual country systems are not yet compatible, and individual country systems operate with varying degrees of accuracy in tracking animal and meat movements. However, the European Union and other countries are setting standards and implementing regulations, and traceability is likely to emerge as a major issue in international meat trade with the potential for a large impact on U.S. meat trade. ♦

## Public or Private Price Protection?

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Assuring that farmers have an adequate financial safety net is appealing to most people. But acceptance of this idea does not mean that the public sector needs to provide it. Other industries manage large financial risks without turning to government for help. So could farmers. A corn farmer can buy a “put” option on the Chicago Board of Trade (CBOT) December corn contract that gives the farmer the right to sell corn for \$2.40 a bushel in December. This put option creates an effective floor price. The current market price for this price protection is about \$0.18 per bushel. Should the farmer buy this protection? The answer depends on both how much price risk the farmer wants to bear and how much price protection is available free of charge from the public sector.

Figures 1 and 2 provide insight into both factors. The horizontal axis measures the range of possible fall harvest prices. The height of the bars measures the probability of a given price outcome. For corn, the most likely local price is between \$1.90 and \$2.00 per bushel. For soybeans, the most likely price is between \$4.00 and \$4.10 per bushel. But corn prices could drop lower than \$1.50 and increase to more than \$3.00 per bushel. And the likely range of soybean prices is from \$3.00 to \$6.00 per bushel.

Should either corn or soybean farmers buy private price protection? For Story County, Iowa, a put option on the CBOT corn contract would create a price floor of about \$2.05 per bushel. Figure 1 shows that the price floor provided by the public sector, through the corn loan rate, is \$1.76. That is, the farmer really only faces \$0.29 in downside price risk. The question becomes,

how valuable is \$0.29 worth of price protection? Probably less than the \$0.18 cost.

For soybeans, an “at the money” put option on the CBOT offers a local price floor of \$4.05 per bushel, at a cost of \$0.20 per bushel. But the government offers a price floor of \$5.16 per bushel free of charge. Clearly, there is no reason for a farmer to buy price protection from the private market when the amount of protection offered for sale is at least \$1.00 per bushel less than what the government offers at no cost.

Over the past three years, nearly \$22 billion has been spent on the marketing loan program. One objective of the crop insurance reform act of 2000 was to entice the private sector to develop innovative risk management tools through government-subsidized research and development costs of privately developed products. An alternative strategy would have been to eliminate government-provided risk protection. This, too, would have induced increased investment in new risk management tools, but not at a cost to U.S. taxpayers. ♦

FIGURE 1. DISTRIBUTION OF HARVEST-TIME CORN PRICES

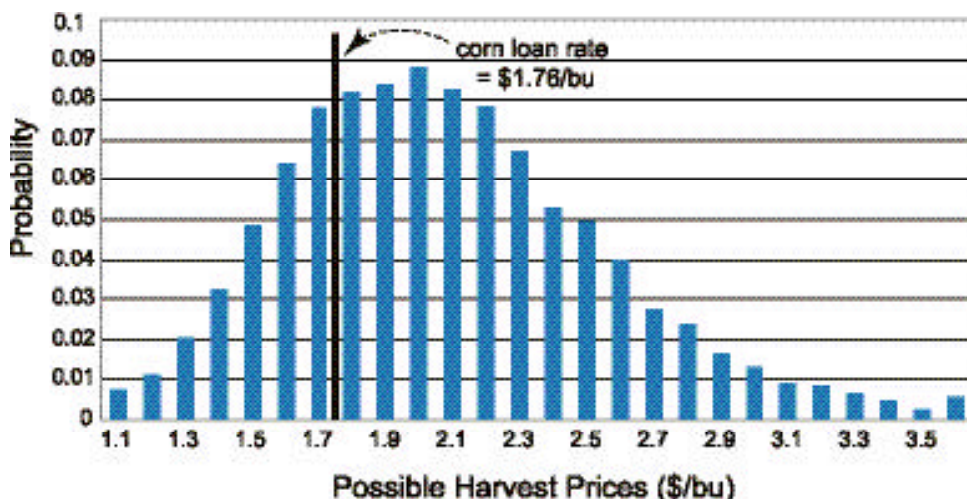
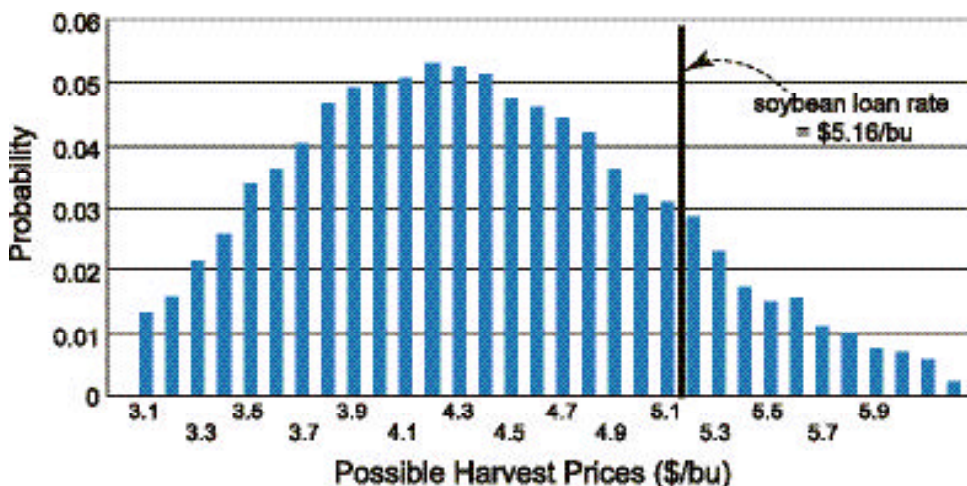


FIGURE 2. DISTRIBUTION OF HARVEST-TIME SOYBEAN PRICES





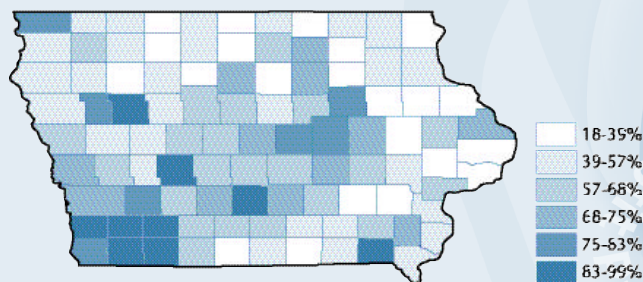
# Incentives to Boost Conservation Tillage Adoption

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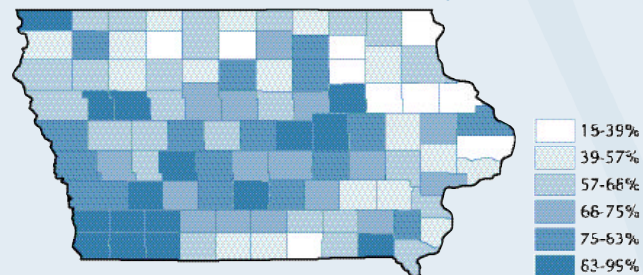
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With increasing public demand for clear air and clean water, many inside and outside Washington, D.C., have suggested that federal farm income support should be tied to enhanced conservation practices. Researchers in the Resource and Environmental Policy Division at CARD and in ISU's Department of Economics are trying to gauge the effect of a direct subsidy on the adoption of conservation tillage practices in the state of Iowa. The analysis used 1992 data and found that in that year, on average, a subsidy of \$2.40 per acre for corn and \$3.50 per acre per year for soybeans would have allowed Iowa farmers to overcome a possible profit loss and aversion to the risks they perceived in adopting conservation tillage practices. Because of varying soil, weather, and farmer characteristics, the adoption is predicted to differ significantly across Iowa. The full report, "The Subsidy for Adopting Conservation Tillage" (CARD Working Paper 01-WP 286), is available at [www.card.iastate.edu](http://www.card.iastate.edu). A follow-up study in the works is an investigation of possible least-cost incentive payment policy designs. ♦

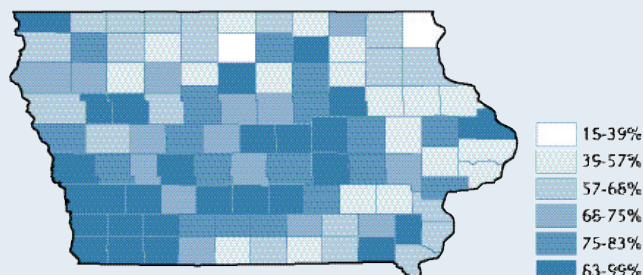
CONSERVATION TILLAGE ADOPTION WITH NO INCENTIVE PAYMENTS



CONSERVATION TILLAGE ADOPTION WITH A \$3/ACRE INCENTIVE PAYMENT



CONSERVATION TILLAGE ADOPTION WITH A \$5/ACRE INCENTIVE PAYMENT





marketing year to \$1.85–\$2.15 compared to \$1.85 in 2000. In contrast, during the first week of January, farmers received average corn prices of between \$1.77 and \$1.82 compared to the range of \$1.90–\$1.94 at this time last year.

## SOYBEANS

The December WASDE report revised soybean ending stocks for 2001/02 down by 25 million bushels to 330 million, which is still above the 2000/01 carryout. The increase in total soybean use came from a 20-million-bushel rise in U.S. exports and 5 million in crushing. Despite growing competitor supplies, soybean exports reached 1 billion bushels, which is almost 5 percent above 2000 levels. In general, exports were boosted by new sales to Japan, Indonesia, and China as well as by higher European Union soybean meal consumption. Growing soybean meal consumption in the European Union and Japan is a result of substitution for meat and bone meal in livestock rations, in addition to tightening supplies of other oil meals. A notable exception to these increases is a decline in soybean imports in December, which includes a 100,000-ton reduction for Taiwan in response to increased meat imports following the country's accession into the World Trade Organization. A small increase in domestic crushing to 1,670 million bushels stems largely from stronger meal export prospects and demand for oil. The same report also raised domestic use of soybean oil by 150 million pounds to 16.7 billion pounds and projects U.S. season-average soybean prices for 2001/02 of between \$4.00 and \$4.80 per bushel, an increase of 10¢ from the previous report. During the first week of January, Iowa farmers received average soybean prices of

\$3.95 compared to \$4.62 per bushel at this time last year.

## LOAN DEFICIENCY PAYMENTS AND MARKETING LOANS

Because of somewhat stable prices, LDPs and marketing loan gains for the corn crop are lower this year. Corn producers have continued to use LDPs more actively than marketing loans over the last two years. Iowa growers claimed LDPs on 886 million bushels of corn, which is approximately 2 percent below last year's quantity. They favored the LDP over placing the crop under loan by a ratio of 4 to 1 compared to a ratio of 3 to 1 last year. The average marketing loan gains and LDPs are virtually identical at 13¢ per bushel and are below last year's figures: the average LDP is pegged at 28¢ per bushel and the marketing loan gain is 15¢. In 2001, LDPs in Iowa were slightly below the national average of 16¢, which does not reach the previous year's mark of 28¢.

Nationally, corn growers seem to favor LDP over marketing loans more so than do producers in Iowa, with a national preference of an LDP to a loan of 6 to 1 in 2001 compared to 5 to 1 last year. Iowa farmers also were slightly slower than the national average in repaying marketing loans for corn, having repaid loans on only 3 percent of 218 million bushels under loan by December 19, 2001, compared to 6 percent nationwide.

For soybeans, LDPs and marketing loan gains are on the rise compared to last year. In 2001, Iowa soybean producers took LDPs on 365 million bushels for an average of \$1.25 per bushel compared to 347 million bushels claimed for an average of 92¢ per bushel a year ago. While last year Iowa soybean producers overwhelmingly favored the LDP to placing the crop under loan, the soybean loans are gaining popularity, as the ratio this year is less than 6 to 1. The marketing loan gains for soy-

beans averaged \$1.29 compared to 95¢ a year ago. Nationally, soybean average LDP is \$1.24 compared to the average LDP of 93¢ last year. The nationwide choice between the LDP and a loan for the soybean crop remained stable at 9 to 1. As of December 19, Iowa soybean growers had repaid loans on 13 percent of 65 million bushels under loan compared to 15 percent nationwide.

## LIVESTOCK

As for livestock, USDA's December 28 *Hogs and Pigs* report had some good news for producers, as it showed little evidence of expansion in the industry. In fact, all three inventory categories—breeding herd, marketing hogs, and all hogs—are almost 1 percent lower than a year ago. Some analysts suggest that as smaller producers are giving way to larger producers, the industry is becoming more disciplined about production capacity. In 2001, 75 percent of the U.S. hog inventory was held by 3,000 operations with inventories of over 2,000 head, which accounts for only 9 percent of all operations. Consistent with the national trend, 45 percent of Iowa's inventory was on farms with 5,000 head or more, up from 40 percent in 2000. The total inventory of hogs in Iowa, the largest hog-producing state, constitutes 25.5 percent of the national inventory of 58.77 million head.

Turning to the demand-side of the equation, pork demand at the retail level appears strong, as pork successfully competes with chicken and beef on the home dinner plate as well as in restaurant menus. Hog producers are likely to have profitable returns through at least the first three quarters of 2002. However, the increase in farrowing intentions, if realized, will add to June-August supplies, and prices in September-November are expected to return to last year's levels. ♦

## Meet the Staff: Holger Matthey

**R**egular readers of the *Iowa Ag Review* are no doubt familiar with the *U.S. and World Agricultural Outlook*, published by the Food and Agricultural Policy Research Institute (FAPRI), a CARD affiliate, in the spring of each year. The FAPRI outlook is a series of baseline projections for the U.S. agricultural sector and international commodity markets. Holger Matthey is the international oilseeds analyst at FAPRI. His work involves updating market projections and analyzing supply and demand relationships, agricultural trade policies, and interactions of major oilseed crops with grain and livestock markets.

As part of a routine assessment of the outlook projections, the group took their preliminary results to Washington, D.C., in December for review by a panel of government and industry experts. Holger says that the fact that his model functioned well and held up in these reviews gives him a great sense of accomplishment. "I usually spend a long time building a model, which is not too thrilling, but then seeing it perform a certain task is the interesting part."

Holger says the appeal of agriculture as his chosen discipline probably can be traced to his father's position at a state veterinary and food safety institute in Germany. "As a teenager, I had a few

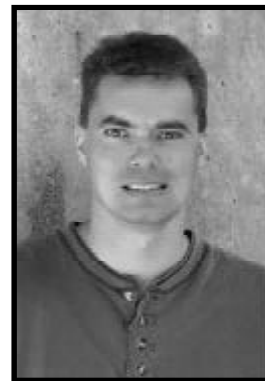
summer jobs at his place. Before going to the university, an internship is required. I went to milk cows for a few months."

Holger was a noncommissioned officer in the East German Army from 1985 to 1988, where he served as leader of a group of 15 maintenance and repair specialists in the motor pool of a missile brigade. He received an Ambassadorial Scholarship from the Rotary International Foundation in 1992 to study in the United States.

He received his master's degree in agribusiness at the University of Nebraska in 1994, where he was named Outstanding M.S. Student. In 1995, he was graduated from the University of Leipzig, Germany, with a master's degree in Economic and Social Science of Agriculture. He completed his Ph.D. in agricultural economics at the University of Nebraska in 1999. Following a research position at the Nebraska Investment Finance Authority, he joined the economics department at Iowa State University, where he heard about the opportunity at FAPRI. He joined the staff in June of 2000.

"I like the field of policy analysis," he says. "The position was attractive to me because its focus is international. It allows me to interact with people from around the world."

This past summer, Holger contributed to a study on the



Holger Matthey

accession of China to the World Trade Organization, and he helped to model the effects of a reduction in U.S. area planted to commodity crops, a study requested by Senator Tom Harkin's office. These projects represent some of the "real world" challenges that he most enjoys.

"In grad school starting out, I worked on theoretical problems," he says, "which are fairly dry. But I can identify more with studying the impact of political decisions or market movements on actual observable variables."

After staring at a computer for hours at a stretch, it comes as no surprise that Holger's endeavors outside of the office emphasize physical over mental exertion. "I try to make it to the mountains in Colorado or at least to the Minnesota slopes," he says. "Most things I do have to do with sports or outdoor activities." ♦

## Recent CARD Publications

### BRIEFING PAPER

Babcock, Bruce A., and Chad E. Hart. "Construction of a 'Green Box' Countercyclical Program." Briefing Paper 01-BP 36, October 2001.

### WORKING PAPERS

Batres-Marquez, S. Patricia, Helen H. Jensen, and Gary W. Brester. "Salvadoran Consumption of Ethnic Foods in the United States." Working Paper 01-WP 289, October 2001.

Beghin, John C., and Jean-Christophe Bureau. "Quantification of Sanitary, Phytosanitary, and Technical Barriers to Trade for Trade Policy Analysis." Working Paper 01-WP 291, December 2001.

Corrigan, Jay. "The Effect of Future Availability of Information on Willingness to Pay." Working Paper 01-WP 290, December 2001.

Lence, Sergio H., and Dermot J. Hayes. "Response to an Asymmetric Demand for Attributes: An Application to the Market for Genetically Modified Crops." MATRIC Working Paper 01-MWP 5, November 2001.

Schneider, Uwe, Bruce A. McCarl, and Richard Woodward. "Harvesting the Greenhouse through Altered Land Management: Economic Potential and Market Design Challenges." Working Paper 01-WP 288, December 2001.

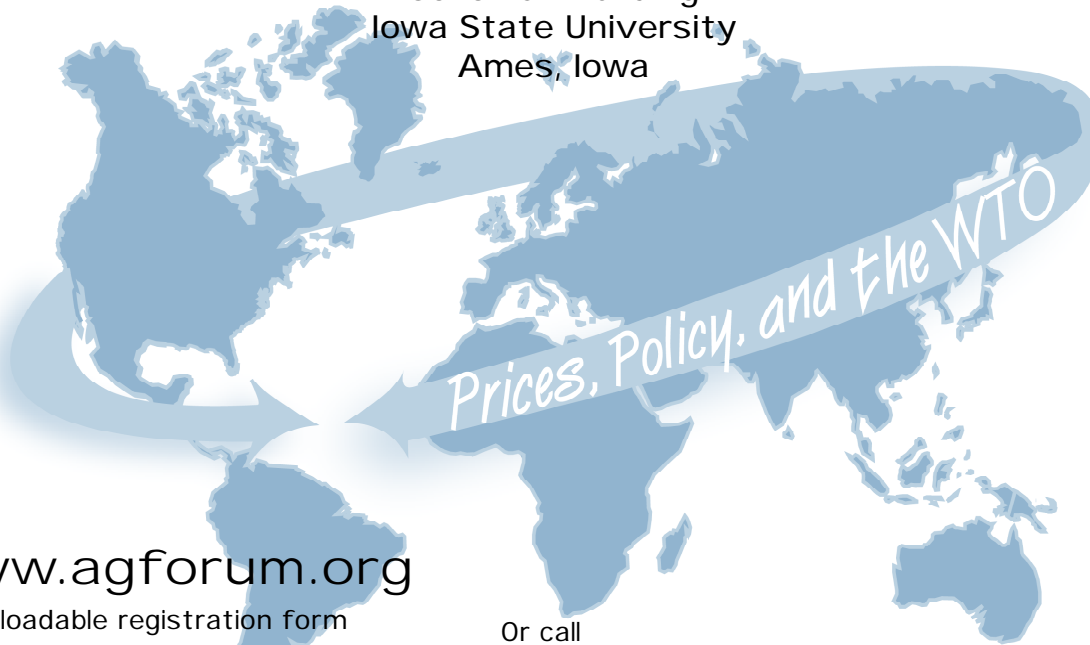
### STAFF REPORT

Fuller, Frank, Dinghuan Hu, Jikun Huang, and Dermot J. Hayes. "Livestock Production and Feed Use by Rural Households in China: A Survey Report." Staff Report 01-SR 96, November 2001.



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