Farmland Spring 2010 SEASONS

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in every season

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NET FARM INCOME REBOUNDS IN 2010

Net cash income is estimated at \$76.3 billion, up \$5.5 billion from last year, according to USDA. Crop receipts are forecast at \$160.3 billion, down \$6 billion from last year, but still the third highest on record. Livestock receipts will rise \$11.5 billion to \$130.3 billion, also the third highest on record, mainly because dairy prices improve.

These estimates are based on trend yields and USDA's expectations that acreage planted to the eight major crops to be 247.3 million, down 1.5 million acres from 2009 and down 5.6 million from 2008's recent high. The March 31 Prospective Plantings report will better indicate what farmers plan—subject to weather, of course!

THIRD HIGHEST NET FARM INCOME THIS YEAR?



SOURCE: USDA/ERS

THE WORLD NUMBERS GAME

In each issue of Seasons, we'll supply comparative numbers in these countries that affect farmland prices or investment. The answer to what these numbers represent appears on the next page.



Argentina	2.5
Australia	1.0
Belgium	0.8
Brazil	4.0
Canada	1.6
China	8.5
France	0.4
Germany	0.6
India	6.5
Indonesia	3.5
Italy	0.7
Malaysia	2.5
Sweden	1.9
USA	2.5
Venezuela	0.5

AG BANKS FARED BETTER

Bank profit margins have fallen, but ag banks have fared better than commercial banks, reports Brian Briggeman of the Federal Reserve Bank of Kansas City's Omaha office. "Funds are available for lending at ag banks. But many bankers are old enough to remember the 1980s, so there is a lot of prudent lending going on." If history is a guide, when the government begins exiting its accomodative policy and raising interest rates, funds availability generally will tighten, he says.

BANK RETURN ON ASSETS



BANKS' TIER 1 CAPITAL RATIO



The tier 1 capital ratio compares banks' captive capital with their total assets, including loans, which are rated for risk. It is a measure of riskbearing ability. Ag banks' higher ratio mean they are in a better position to make loans.

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FARMLAND VALUES HOLD STRONG THROUGH FIRST QUARTER 2010

By Josh Waddell, Vice President

Our farmland sales activity has been very steady in early 2010. While there have been new challenges to face this year, agricultural land remains a powerful asset looking forward. Northern Illinois values have held at historically high levels and central Illinois has experienced a renewed surge in the first part of this year.

We have experienced a shift toward increased caution from many lenders. In many cases, farmland appraisals are coming in 10% to 15% below the sale price. This is largely due to fears and pressures from the economy as a whole. Ag land remains one of the strongest, least-leveraged asset classes in the United States. We are confident that the inherent strength of farmland will help alleviate this new challenge. Our clients, ranging from first-time farm buyers to seasoned investors, remain confident in the land market. While there may be speed bumps along the way, the fundamentals remain very strong.

As we reported in our Summer 2009 issue of Seasons, the flight to farmland as a wealth preserver has steadily increased demand across the state. Many of these first-time land buyers from last summer have continued to add to their land portfolios over the past six months. The availability of 3% to 5% net returns in northern Illinois and 4% to 6% net returns in central Illinois has encouraged additional investment from our "non-agricultural" buyers.

A big part of our activity in the past 6 to 8 months has been brokering distressed transitional and development properties. Many properties that sold during the housing boom for \$30,000 to \$90,000 an acre are now selling for \$9,000 to \$12,000 an acre. We have a large pool of investors that have stepped in to acquire thousands



of acres of distressed development land. The farm management team at MGW has been actively involved in this transition as well. Our farm managers have assisted lenders, investors and developers in finding qualified farm operators who will provide the strictest level of land stewardship and the highest possible return.

Central Illinois. The land market in central Illinois remains largely unaffected by urban development. Much of the strength in farmland values in the area is a product of excellent soil quality, a longer growing season than northern Illinois, and close proximity to a wide variety of markets. Raw land values have not returned to the \$8,000plus-per-acre range, but they have shown a lot of support at or above \$7,000 per acre. With some very strong transactions closing in late 2009 and early 2010, I fully anticipate that land values will hold firm throughout 2010.

We have increased our presence in central Illinois exponentially over the past three years. We have added a new member to our appraisal team: Our real estate appraisal division, led by Mark Akers, now features four highly qualified appraisers with offices in Sycamore and Bloomington, Illinois. We are now managing farmland in nearly 30 counties throughout the state. This growth, coupled with our real estate sales activity statewide, has contributed greatly to the expansion of our company.

Planting Delays Ahead?

Soils are soggy across much of the heartland, and after two years of drought, the Southern tier is wet as well. Farmers may be challenged to complete field work that wasn't done during the wet fall and get the crops in on time.



Possible Crop Price Volatlity

As the market watches wet fields and potential effects on planting progress, there may be some price volatility, offering opportunities for producers to forward price their crops. However, prospects for growing stocks following last year's big crops may keep a lid on any rallies.

Corn and cotton have the best potential for price increases. Huge South American supplies will weigh on soybeans and the world has plenty of wheat.

Do Biotech Crops Make CROP DISASTERS OBSOLETE?

Evidence points to smaller impacts from weather

By 2050, the Earth will be home to 9.2 billion people versus the current 6.8 billion. At current production levels, we'd need an additional 250 million acres of cropland to feed the population—about equal to all the cropped acres in the United States. At the same time, per-capita arable land is shrinking and the growing population will increasingly claim water currently used by agriculture. Fortunately,

PERCENT OF BIOTECH CROPS Planted Worldwide

53% Soybeans 30% Corn 12% Cotton 5% Canola

modern seed technology promises to help farmers rise to these challenges.

"The combination of marker-assisted breeding, biotechnology traits, and continued advances in agronomic practices has the potential to double corn and soybean yields in the United States over the next two decades," says Michael Edgarton of Monsanto. (See chart, page 6.)



WEATHERPROOFING

The past few years have demonstrated that current corn hybrids and soybean varieties planted in the United States will perform well despite late planting and cool, moist summers that lead to slower maturity.

New varieties also are making it possible to reliably grow corn and soybeans farther north and west. "What once were considered border states are now growing these crops regularly," says Jerry Gulke an Illinois and North Dakota farmer and founder of the Gulke Group, a commodity trading company in Chicago. "Last year, for example, yields in Ohio were the same as in Illinois."

Clearly, the U.S. Department of Agriculture believes biotech lowers yield risk. Its Biotech Endorsement Program reduces premiums for producers buying crop insurance if at least 75% of acres in the unit being covered are planted to qualifying corn hybrids. Started in 2008 as a pilot in four states for corn hybrids from one company, it was available in 11 states in 2009. Premiums saved totaled more than \$50 million. This year, the program is available in 12 states and includes hybrids from four companies.

CORN DROUGHT TOLERANCE

If Earth's warming is real—natural cycle or human-caused—drought will be the challenge in the future. "France's heatwave in 2003 was widely reported because of the number of deaths it caused, but it also reduced crops by 20% to 35%. A few decades from now, temperatures of that magnitude may be normal. We could be experiencing summers hotter than we've ever seen," says Nina Fedoroff, science and technology adviser to the U.S. State Department, citing University of Washington research (see graph below).

Hot or not, increased competition between agriculture and people for available water, and large populations living in arid regions, make it easy to see how important drought tolerance could be.

Today's corn hybrids already are much more tolerant of drought than in the past. Pioneer International research, for instance,





Temperatures seen in France's 2003 crop-reducing heatwave may become common.



found that under the same controlled conditions of just 12" of water during June-August, the top three varieties from the 1940s produced about 3 bu./acre per inch of water; 1990s varieties produced 10 bu. Those varieties were bred with traditional selection of both parent lines.

In the field, corn and soybean yield loss to drought since 2000 is less than losses in comparable droughts between 1980 and 1989, confirms a study by the Center for Agricultural and Rural Development (CARD) at Iowa State University. Based on counties in Iowa, Illinois and Indiana, under moderate droughts (1.2 to 1.7 in the graph above), corn yield loss was about 20% compared with nearly 40% in the earlier period. For soybeans, the bushels per acre lost to drought didn't drop, but because of better yield potential, the percentage did.

"Although today's biotech seeds were not developed with drought-tolerance as a goal, it appears that is an unanticipated benefit," says CARD's Bruce Babcock. It could be that these varieties allow earlier planting and are

TODAY'S CROPS PERFORM BETTER, ESPECIALLY UNDER MODERATE DROUGHT



Using an index to account for both rainfall and temperature, the percent of potential yield lost has improved for both corn and soybeans. SOURCE: ISU/CARD

overall healthier or have better root systems, making them better able to deal with heat and dryness.

"These improvements in drought tolerance could be dwarfed in the future if seed companies are successful in their efforts to introduce genes that enable crops to withstand drought," he adds.

Seed companies seek to improve yields under drought through better root systems, increasing the plant's ability for silk emergence during drought stress and less abortion of kernels in the tip of the ear.

Marker-assisted selection allows scientists to identify and choose drought-tolerant genes. Because they use native droughttolerance traits, and are not genetically modified, they don't require regulatory approval. Based on 2006-2008 results, these hybrids typically improve yields 5% to 10% over the best existing hybrids in limitedwater areas.

Pioneer biotech varieties that combine native tolerance with genes from other species have been under test since 2000. They boost yields 10 to 16 bu./acre. Because these are biotech products, they will require regulatory approval. "These encouraging yield results in diverse environments over three years indicate we are well on our way to meeting our goal of bringing such seed to market in the 2014 to 2016 time frame," says Jerry Harrington of Pioneer.

SOYBEANS

Soybean yield improvements have lagged corn yields, but that is about to change, according to Aaron Robinson of Monsanto. "The soybean trait pipeline is now full. You will see new products come to market

> every couple of years. They will improve plant health by promoting more root mass, more main stem nodes and better retention of flowers as pods, offering the >>



"Soybean yield improvements have lagged corn yields, but that is about to change."

potential for up to a 70% increase in yield, as that many pods currently are lost. The 2010 hybrids should yield 53.5 bu./acre; 2011, 54.6 bu., he estimates.

As is the case with corn, agronomic improvements will help, providing about one-fourth of the increase needed to double yields by 2030, Robinson estimates (see table). "Some of these really represent the low-hanging fruit for soybean yield improvements," he notes.

BIOTECH FOR FOOD CROPS

As the years go by without fruition of the biotech disasters that some feared, acceptance is growing. Biotech crops are now planted on 330 million acres in 25 countries.

In a landmark move, China has become the first major grain producer to endorse the use of genetically modified technology in a food staple. It recently approved GM rice pending completion of production trials. The Bt rice contains proteins derived from bacteria. It could reduce pesticide use 80%, while increasing yields by 8%, scientists say.

According to Huang Dafang, a member of the Biosafety Committee at the Ministry of Agriculture in Beijing, "GM technology is essential to ensure grain security." China has a target of boosting grain production 50 million tons between 2009 and 2020 and clearly believes biotech will help it happen. Drought-tolerant GM wheat is under test in Australia, with a 20% yield advantage in initial field trials. U.S. companies recently have turned their attention in the same direction. Given that 35% to 50% of wheat growing areas face drought risk, such crops could be lifesavers.

Whereas the first major biotech crops aimed at better performance in the field, much of today's work is on nutrition enhancement for human health. So-called "Golden" rice, rich in vitamin A, may combat blindness in developing countries where rice is a major staple, for example.

As food-crop biotech gains acceptance, we will see its value grow from field to fork.

MGW MARTIN, GOODRICH & WADDELL, INC.



Soybean yield improvements now will begin catching up with those already seen in corn, plant breeders say. Although biotech produces the sharpest yield improvement curve, contributions from other factors are significant as well.

Improvements in Agronomic Practices Add 10 Bushels Per Acre

Practice	Yield contribution
	(bu./acre)
Improved variety selection	~2
Seed treatment	~2
Precision tillage/fertilizer	~2
Improved planting patterns	~2
Fungicide	~2
Better weed control	~1

Martin, Goodrich & Waddell LAND LISTINGS FOR SALE IN ILLINOIS

All acreage and mileage figures listed here are approximate —

BOONE COUNTY

30.5 acres. Hunter Farm. Located 4 mi. E of Rockford, 56 miles NW of Chicago. \$6,500/ac.

BUREAU COUNTY

■ 48.82 acres. Van Orin Farm. Located 3.25 mi. W of LaMoille; 85 miles SW of Chicago. \$6,500/ac.

DEKALB COUNTY

- 110 acres. Hurley Farm. Located 8 mi. SE of DeKalb and 40 mi. SW of Chicago. \$6,500/ac.
- **40 acres. Crego Farm.** Located 1 mi. S of DeKalb and 44 mi. W of Chicago. \$8,700/ac.
- **190 acres. Donnelly Farm.** Located 2 mi. S of DeKalb and 48 mi. SW of Chicago. \$9,300/ac.
- 155.71 acres. Kaalaas Farm. Located 10 mi. SE of Rockford and 70 mi. NW of Chicago. \$7,900/ac.
- **40 acres. Kasper Farm.** Located 6 mi. SE of DeKalb and 65 mi. W of Chicago. \$8,300/ac.
- 144.51 acres. R. Gallagher Farm. Located 1.5 mi. S of DeKalb and 62 mi. W of Chicago. \$9,200/ac.
- 132.62 acres. Kirkpatrick Farm. Located 4 mi. SW of Hinckley; 51 mi. W of Chicago. \$9,300/ac.

GRUNDY COUNTY

80 acres. Grundy County Farm. Located 6 mi. NW of Dwight; 68 mi. SW of Chicago. Near existing wind farm with potential for future wind income. \$6,000/ac.

KANE COUNTY

94 acres. Gurke Farm. Located 1 mi. W of Elgin;
40 mi. W of Chicago. Abuts forest preserve.
\$18,000/ac.

KNOX COUNTY

■ 458 acres. Big Water Farm. Located 3 mi. W of Maquon and 28 mi. W of Peoria. \$2,950/ac.

LASALLE COUNTY

- **43.75 acres. LaSalle County Development.** Abuts Streator; 120 mi. SW of Chicago. \$12,500/ac.
- 75.4 acres. Rex Farm. Located 3.5 mi. E of Mendota; 90 mi. SW of Chicago. \$12,900/ac.

LEE COUNTY

■ 17 acres. Auchstetter Farm. Located 5.5 mi. NW



OUR FEATURE FARM—ANTHONY ROAD FARM, MCHENRY COUNTY

of Mendota; 90 mi. SW of Chicago. \$4,000/ac. **208.13 acres. Borell Farm.** Located 12 mi. N of Mendota and 85 mi. SW of Chicago. \$6,250/ac.

- 64 acres. Barber Farm. Located 1 mi. SE of Paw Paw and 73 mi. SW of Chicago. \$5,450/ac.
- **171.47 acres. Farrel Farm.** Located 1 mi. S of Rockford and 24 mi. NW of DeKalb. \$6,975/ac.
- **209 acres. Scully Farm.** Located 14 mi. SW of Dixon and 90 mi. SW of Chicago. \$4,450/ac.
- 5 acres. Franklin Grove Lot. Located on Route 38, Lot 3, Tract 10, Iron Springs, Franklin Grove (Ashton-Franklin Center Community School District 275); 18 mi. W of Rochelle and 97 mi. W of Chicago. Lake frontage, access road, and a trail to the nearby state park. \$130,000.

OGLE COUNTY

- **35.4 acres. Boyle Farm.** SE corner of intersection of I-39 & I-88; 58 mi. W of Chicago. \$8,900/ac.
- **40 acres. Pine Rock Timber North Farm.** Located 10 mi. NW of Rochelle and 90 mi. W of Chicago. \$5,475/ac.
- 40 acres. Pine Rock Timber South Farm. Located 10 mi. NW of Rochelle and 90 mi. W of Chicago. \$5,475/ac.
- 87 acres. Thompson Farm. Located 6 mi. S of Rockford and 80 mi. SW of Chicago. \$6,475/ac.
- 110 acres. Sanderson Trust Farm. Located 5 mi. E of Rochelle; 60 mi. W of Chicago. \$25,000/ac.
- 135.66 acres. Cave Farm. Located 3 mi. W of Mount Morris; 80 mi. NW of Chicago. \$5,475/ac.
- **269.01 acres. Parker Farm.** Located 4 mi. NE of Rockford and 56 mi. SW of Chicago. \$6,500/ac.

93.3 acres, 92 tillable, located 44 mi. NW of Chicago and 3.5 mi. S of Marengo on I-90. The property has approximately 4/10 mi. of road frontage on Anthony Road and 2/10 mi. on I-90.

Major soil types on this farm include Danabrook silt loam, Drummer silty clay loam and Lisbon silt loam. Now priced at \$8,600/ac.

- 82.81 acres. Prairie Ridge Farm. Located 2 mi. SE of Oregon and 90 mi. W of Chicago. This farm supports abundant wildlife, including deer and turkey. Great home site or weekend getaway. \$5,700/ac.
- 77.36 acres. Christian Farm. Located 8 mi. SW of Rockford and 88 mi. W of Chicago. \$4,511.38/ac.

STARK COUNTY

116.23 acres. Erdmann Farm. Located 8 mi. NW of Bradford; 157 mi. SW of Chicago. \$4,900/ac.

WHITESIDE COUNTY

- 44.99 acres. Clow Farm. Located 1.5 mi. W of Sterling/Rock Falls and 135 mi. SW of Chicago. \$11,900/ac.
- 78.6 acres. Tampico Farm. Located 2 mi. S of Tampico and 127 mi. SW of Chicago. \$6,900/ac.

WILL COUNTY

78.5 acres. Smith Road Farm. Located 2 mi. E of Manhattan and 50 mi. S of Chicago. \$29,500/ac.

WINNEBAGO COUNTY

104.6 acres. Holverson Farm. Located 0.5 mi. W of Durand; 90 mi. NW of Chicago. \$6,475/ac.

For details on these properties, call Jeff or Josh Waddell at 815-756-3606 or visit our Web site at www.mgw.us.com. Commentary by Jeff Waddell, President, Martin, Goodrich & Waddell Inc.

Renewable Fuels Standard 2: MOVING THE BALL FORWARD

The Obama Administration announced its new biofuels provisions on Feb. 3, 2010. Overall, the reaction was positive, and the news is good for agriculture.

Although President Obama would like to see a comprehensive energy and climate bill passed, he noted, "Even if you disagree on the threat posed by climate change, investing in clean energy jobs and businesses is still the right thing to do for our economy. Reducing our dependence on foreign oil is still the right thing to do for our security. We can't afford to spin our wheels while the rest of the world speeds ahead."

The Renewable Fuels Standard 2

(RFS2) announced by the Environmental Protection Agency (EPA) raised this year's standard to 12.95 billion gallons (8.25% of fuel) from 11.1 bil. gal in 2009 and set a target of 36 bil. gal. by 2022.

This is the first time that the RFS covers all transportation fuel, including gasoline and diesel for highway and non-road vehicles, and locomotive and marine engines. EPA also set volume standards for specific fuels for the first time (see table).

The biodiesel industry was happy to see that EPA rolled the 2009 biomass diesel requirement into 2010, yielding a 1.15-bil. gal. target for this year. This should boost domestic demand for soybeans.

On the other hand, because cellulosic technology is in its infancy, the Administration drastically reduced its standard to 6.5 million ethanol-equivalent gallons versus the original proposal for 100 million, and will set the next year's standard by Nov. 30 each year as plants are built and capacity rises.

The rules are better for corn ethanol than some feared. EPA was applying "indirect land use" to determine whether biofuels are actually less polluting than gasoline. Using new production efficiency information in its calculations, EPA found that corn ethanol (at least from plants built since late 2007) met its required 20% reduction in greenhouse gases (GHGs).

Soy diesel; biodiesel made from waste grease, oils and fats; and sugarcane ethanol all met their GHG reduction standards as well. So-called advanced biofuels, including corn oil fractionation, corn oil extraction, membrane separation, raw starch hydrolysis and combined heat and power, must reduce GHGs by 50%, as must biomass-based diesel. Cellulosic biofuels must reduce GHGs by 60% compared with gasoline.

Renewable Fuel Requirements Almost	
TRIPLE BY 2022 (BIL. GAL)*	

<u>Year</u>	<u>Cellulosic</u>	<u>Biomass</u> <u>diesel</u>	Total advanced biofuels	Total renewable fuels
2010	0.1	0.65	0.95	12.95
2012	0.5	1.0	2.0	15.3
2014	1.75	а	3.75	18.15
2016	4.25	а	7.25	22.25
2018	7.0	а	11.0	26.0
2020	10.5	а	15.0	30.0
2022	16.0	а	21.0	36.0

* Required by the Energy Independence and Security Act of 2007; a = to be determined but not less than 1 bil. gal.

Advanced biofuels are those produced from something other than corn starch. Corn ethanol is part of total renewable fuels column.

Still, some in the existing biofuel industry aren't totally happy with the plan, charging that the indirect land use method doesn't give corn ethanol and soy biodiesel the credit they deserve as clean energy. Worse yet, it finds sugarcane has a cleaner footprint.

Money for start-ups: The Biomass Crop Assistance Program, administered by the Department of Agriculture, will provide grants and loans to increase the conversion of biomass to bioenergy. It has already begun providing matching payments to those delivering biomass for the collection, harvest, storage and transportation of biomass to eligible fuel plants.

SOURCE: EPA

There's also a payment available for up to 75% of the cost of establishing woody or nonwoody perennial crops on your land, paid annually for up to 15 years.

Implications: The increasing RFS2 standards will boost domestic sources of energy and reduce dependence on imports. By 2022, increased use of renewable fuels to meet the mandate will displace about 13.6 bil. gal. more gasoline and diesel fuel than without the mandate—about 7% of expected consumption, the Administration estimates. That may decrease oil imports by \$41.5 billion, at the same time reducing gasoline costs by 2.4¢/gal. and diesel by 12.1¢/gal.

It's estimated that agriculture will see an additional \$13 billion in net farm income or 36% more than without the RFS2 by 2022. There is no doubt that growing demand for crops for fuel as well as food will add value to farmland.



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