

FIELD & FEEDLOT



NORTHWEST AREA EXTENSION

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Extension Web Sites

Ag Decision Maker

<http://www.extension.iastate.edu/agdm/>

Beef Center

<http://www.iowabeefcenter.org/>

Manure Management

<http://www.agronext.iastate.edu/immag/>

Pork Center

<http://www.ipic.iastate.edu/>

ISU Extension Dairy Team

<http://www.extension.iastate.edu/DairyTeam/>

The NW Iowa Experiment Association Puts Research in the Field

By Joel Dejong, ISU Extension Field Agronomist

In Iowa, the land, climate, and agricultural enterprises vary considerably from one area of the state to another. To find solutions to problems in each area and to study the impacts of regional differences, the Iowa State University Experiment Station puts researchers from Iowa State University into the fields of research farms across Iowa. Of course, it might be easier to concentrate all research near the home location of the researchers, Ames. But, what works near Ames might not be right for NW Iowa!

Iowa has about 20 major soil associations, or combinations of soil types. Soil types are repeated from field to field within a geographic region. Soil types may differ in topography, texture, drainage, acidity, content of organic matter and nutrients and susceptibility to erosion. These characteristics partly determine the farm enterprises and management practices most suitable and profitable in a particular area.

Average annual rainfall in Iowa ranges from less than 26 inches in the Northwest to more than 34 inches in the Southeast. Annual mean temperatures range from about 46 degrees in the northern tier of counties to 52 degrees in the southern two tiers of counties. There are about 40 days more of frost-free weather in Southeast Iowa than in Northeast Iowa. These are all good reasons why the best research for the crop producers of Iowa should be spread out around the state, not limited to one area of Iowa.

Scientists assess the influence of soil differences and climate on agricultural practices by conducting similar experiments at several

research farms. Projects at outlying research farms often continue for many years to observe fluctuations in environmental conditions and long-term trends.

Markets and resources also vary across the state. At research farms, researchers determine the profitability of an agricultural enterprise in a given area. The research also yields clues to the potential of new crops and practices that may diversify the agricultural base.

How are these research farms organized around Iowa? Local nonprofit associations of farmers and business people own or lease 11 of the 15 outlying research farms. The state owns the other four. In Central Iowa, ISU affiliate organizations own land for research. In NW Iowa, the NW Iowa Experimental Association owns land in O'Brien and Lyon Counties, which supplies the base for a lot of research conducted here. Associations and affiliates lease the research farms to the Experiment Station. Income from farm product sales is used to offset research costs. The Experiment Station assumes the remaining costs of operating the farms. In addition to these local relationships, the ISU Experiment Station is also active in partnerships with ISU Extension, USDA National Resource and Conservation Service, USDA National Soil Tilth Laboratory and several Iowa community colleges.

Area producers suggest local problems that need to be studied and often offer suggestions for improving research at the farms. Producers make their suggestions as members of local advisory committees. These committees meet at least once each year with county and area extension staff and ISU researchers. The committee members also are liaisons between the university and other producers.

The Experiment Station publishes research results in annual reports. Extension specialists use the reports in meetings, pamphlets, news stories and newsletters. Local farmers can observe experiments firsthand and learn about the latest findings at field days that are held at the farms. Information from research farms across the state of Iowa is available on-line at this location: http://www.ag.iastate.edu/farms/progress_report.php. Although the data from 2008 is not yet posted on that web page, it should be soon. Go check it out!

As an ISU Extension Field Agronomist, I find the work done at these research farms critical to helping me do my job – helping farmers and agribusinesses make good decisions based on

research results. I answer a lot of questions, and having valid research results makes me more confident that my answers are likely repeatable on other farms.

Over fifty years ago farmers from NW Iowa had the vision to start this cooperative project by putting their money and ideas on the line to create this organization. I thank them for their vision – and all Iowans should, too!

What is ACRE all about?

By William Edwards, ISU Extension Economist

Submitted by Ron Hook, ISUE Farm Management Specialist

Under the new Food, Conservation, and Energy Act of 2008 producers of USDA program crops such as soybeans, wheat, and corn have the option to enroll in a new counter-cyclical revenue plan. The program is called Average Crop Revenue Election, or ACRE for short. It is being offered as an alternative to the counter-cyclical payment option under the previous farm bill.

ACRE uses a combination of state average yields, farm level yields, and the national marketing year price to determine levels of revenue guarantees and payments for each covered commodity. There are two revenue triggers that have to be met before any ACRE payments are generated, one at the state level and one at the farm level. Farms correspond to FSA units, just as for the current commodity programs. The price component of both of these is the average of the two most recent USDA marketing year prices. For corn and soybeans the marketing year runs from September through August. Marketing year prices are based on cash prices (not futures) paid throughout the country. The marketing year prices for the 2007 crops are \$4.20 for corn and \$10.10 for soybeans. The projected marketing year prices for 2008 crops are \$4.10 for corn and \$9.35 for soybeans.

For the state revenue guarantee, an “Olympic” average of the state average yields for the past five years is used. The highest and lowest values during this period are thrown out, and the values for the three remaining years are averaged. Average yields are adjusted to bushels per planted acre rather than per harvested acre. Based on the most recent USDA yield forecasts, the 2004-2008 Iowa average yields for ACRE will be about 167 bushels for corn and 50 bushels for soybeans.

The state revenue guarantee is 90 percent of the average state yield multiplied by the two-year average marketing price. For the farm level revenue guarantee, the same two-year average price is used, multiplied by the Olympic average of the last five years of yields for the farm. The value of the farmer paid crop insurance premiums also is added to the farm level guarantee. Both the state and farm guarantees will be recalculated each year using prices from the past two years and yields from the past five years.

To trigger a payment under ACRE the “actual” revenue for both the state and the farm must be less than their corresponding guarantees. The actual revenues are the current marketing year price multiplied by the state average yield and the actual farm level yield, respectively. If both triggers are reached, the payment to the farm will be the difference between the state guarantee and the state actual revenue. The payment level cannot exceed 25 percent of the state guarantee, however. It also will be adjusted up or down by the ratio of the farm Olympic average yield to the state Olympic average yield. For example, if the farm average yield is 10 percent above the state average yield, the ACRE payment will be increased by 10 percent for that farm.

The payment will be made on 83.3 percent of the farm acres planted to the crop (85 percent in 2012). However, the planted acres that receive a payment cannot exceed the total base acres established for the counter-cyclical payments in the signup for the previous farm bill program. Producers who sign up for ACRE will continue to receive 80 percent of the direct payments that have been paid, regardless of actual prices or yields each year.

Producers who sign up for ACRE will forfeit 20 percent of their current direct payments through 2012, so that is a fixed cost. They also will give up any potential counter-cyclical payments, and the loan rate used to calculate their loan deficiency payments or marketing loans will be lowered by 30 percent. The loss of potential CCPs and LDPs may not be too critical, because if market prices fall enough to trigger those payments it is likely that the ACRE payment would be at least as large. The only situation where that would not be true is a year in which prices were low but yields were high enough to keep revenue above the ACRE guarantees.

Although the ACRE program may resemble crop revenue insurance, there are some important differences. The ACRE guarantees are based on longer term average prices and yields, so they will not fluctuate as much from year to year as crop insurance guarantees. In fact, ACRE regulations state that the guarantees cannot increase or decrease more than 10 percent each year. This helps accomplish the fundamental goal of ACRE, which is to stabilize gross revenues over the next 4 years.

On the other hand, one of the two ACRE guarantees and the size of the payment are based on state level yields, not farm yields like most crop insurance policies. ACRE does not protect a farmer who has a poor production year when the state as a whole does not. In addition, ACRE revenue uses the marketing year cash price to calculate actual revenue while crop revenue insurance uses futures prices at harvest time. So, while ACRE payments can be a useful risk management tool for sharply falling prices or widespread yield losses, they do not replace farm level crop insurance protection.

Producers can sign up for the ACRE program beginning in any crop year from 2009 through 2012. Once enrolled, they must remain in the program through 2012. All program crops on the farm must be enrolled. The decision of whether or not to enroll is a classic insurance decision. Producers will give up a fixed amount of revenue, 20 percent of their direct payment, in exchange for a possible ACRE payment in a year when gross revenue is low. Payments could be zero in all four years, or they could be sizable.

One key factor is the level of guarantee established for the 2009 crop. The 2008 marketing year price will not be known until September 2009. However, it seems likely that the beginning guarantees will be quite high by historical standards, and they cannot decline by more than 10 percent each year afterward. This would make the ACRE program attractive, especially since target prices and loan rates are essentially frozen at the levels established in the 2003 farm bill.

The other key factor is the likely price trend over the next four years. If production is stable and prices either trend upward or are steady, no ACRE payments are likely, and the producer will simply lose part of the direct payment. However, if prices trend downward from present levels, ACRE will provide an important safety net for gross revenues. Each individual producer will have to assess his or her expectations for the future and need for financial risk protection before making the ACRE decision.

A decision tool is available to estimate payments under the ACRE program at the Ag Decision Maker website: <http://www.extension.iastate.edu/agdm>, click on "Farm Bill Information."

Maximizing Corn and Soybean Returns

By Mark Licht, ISU Extension Field Agronomist

Yes, I said maximize corn and soybean returns! So often I hear farmers say they want maximum yields. Truth-be-told that maximum yields come at a price that does not give optimal return on investment. Protecting corn and soybean yields are important to getting a maximum return on investment.

For example, planting 140,000 soybean seeds per acre may yield slightly less compared to a seeding rate of 175,000, but does the extra cost of 35,000 seeds offset yield loss? Another example, maximum corn following soybean yields can be achieved with 150 pounds of nitrogen while optimum yields may be attained with 135 pounds, but are the extra bushels worth the extra \$0.60 per pound for nitrogen?

There is tremendous value in conducting on-farm trials. There are new products, new genetics, new technologies, and new practices talked about or available each year. How do these **NEW** things perform on **YOUR** farm, under **YOUR** management?

All farmers manage farms differently. How products, technologies and practices perform under each individual management, on each individual farm makes a tremendous amount of difference. Even under the same management different farms perform differently due to soil characteristics and topography.

Last fall I read an article written by Fred Below from the Department of Crop Sciences at the University of Illinois titled, "Seven Wonders – A Ranking of the Top Seven Factors that Determine Corn Yields." In this article, Fred mentions that there are important factors that he does not consider "wonders" because they are one-time improvements, they protect rather than increase yields, or involve non-yearly decisions. Those seven wonders and attributed yield impacts are:

- 1) weather, 70-plus bu/ac;
- 2) nitrogen fertilization, 70 bu/ac;
- 3) hybrid selection, ~50 bu/ac;
- 4) previous crop, 20 bu/ac;
- 5) plant population, 20 bu/ac;
- 6) tillage, 15 bu/ac; and
- 7) chemicals, 10 bu/ac.

This list does a good job of illustrating where emphasis needs to be placed, where time, dollars, and other resources might be more effective. Of the seven wonders, six can be altered to some extent by individual farm management decisions that are made. The only true factor that you cannot influence is weather. Weather can influence, either directly or indirectly, nearly all other crop production factors.

Your yield goals are 100% attainable before decisions and field work start for the growing season. **You retain 100% yield potential until the seed goes into the ground.** This 100% yield potential does not necessarily mean 100% yield goal because seed selection, fertilization, tillage, and other management decisions may have already reduced the yield goal. After planting, only you and nature can impact yield potential. Your job and #1 goal is to protect that yield potential with economically based management.

In the past fertilizer was cheap and there was no question of being able to afford applications, often times soil test levels were being built up to a high or very high level. Now with more expensive commercial fertilizer and a potentially tight year ahead, the question is "how low can I go?" Using a banking analogy might best address this question; **with deposits and interest, withdrawals can safely be taken.** The key is determining realistic yield goals, calculating crop nutrient removal, and then using an adjusted removal rate as the application rate. Adjust the application rate based on soil test levels. For fields or areas that have high or very high soil test levels, reduce the application rate and use some of the "banked" nutrients. For fields or areas with low or very low soil test levels, increase the application rate to build soil test levels to the optimal level.

Is farming a business or a hobby? In business the decision making process is extremely critical. Successful businesses are always looking for profit efficiency. Profit efficiency is making sure every dollar spent is making greater profit. The last dollar spent is not the most efficient dollar spent. In farming this means we need to continually evaluate nitrogen rates, seeding rates, insect thresholds, and chemical effectiveness. Times have changed, prices have changed, and so have the products we use.

Be an INNOVATOR! Try new things, experiment on your farm. Every year new genetics, new products, new practices, and new technologies are being touted. Some are good, some are bad and many need you to test them. How do they respond on your farm, under your management? On-farm trials help YOU make better decisions for YOUR farm.

Remember that maximum yield does not equal maximum profit.