FIELD & FEEDLOT



NORTHWEST AREA EXTENSION MARCH 2007 ISSUE

Planning is Important if Planting Corn After Corn

By Mark Licht, ISU Extension Crop Field Specialist

With planting just around the corner, seed has been selected, residue management has been considered and fertility has been accounted for, but have you planned for planting? I mean have you thought about target planting dates or considered seeding rates. Increased amounts of residue will be encountered when planting corn after corn and making adjustments prior to and during planting can help insure good early season stands.

Planning for planting could be one of the most crucial management decisions to make. The optimal planting window is from April 20 to May 5, making it tough for corn planting if a substantial increase in corn acres is planned. Last year fifty percent of the Iowa corn crop was planted by April 25. How can the planting window be widened to accommodate more corn acres? When choosing planting dates take into consideration crop insurance dates, hybrid characteristics, soil temperature, soil moisture and weather forecasts. Corn yields may be reduced with early planting, but late planting can result in severe yield losses. Consider these tips to get an early season jump:

- Plant hybrids with cold-stress tolerance and seedling vigor first. Also, consider hybrid maturity to maximize the harvest window come fall.
- Plant corn following soybean acres before corn following corn acres to allow for warmer soil temperature and dryer seedbed conditions.
- Avoid wet conditions during planting to eliminate sidewall compaction and the seed furrow opening as the surface soil dries out.
- Plant in anticipation of warm and dry weather forecasts, maybe even in anticipation of the soil temperature reaching 50^{o}F. Emergence can take a hit if cool, wet conditions occur during germination and emergence.

Seeding rate should also be considered. Generally speaking, seedling germination is lower for corn after corn compared to corn following soybean. There could be several reasons for this including cool, wet soil conditions and allelopathy. Iowa State University recommendations in the Corn Planting Guide (PM-1885) calls for a plant population of 32,000 plants per acre. More current data being collected by Roger Elmore, ISU corn specialist, suggests that populations of 34,000 plants per acre result in optimal yields. Corn hybrids continue to be bred for improved performance at higher populations. However, it should be noted that for corn after corn acres germination typically suffers due to cooler, wetter conditions. Therefore, shifting to higher planting populations will ensure an intended final stand.

More information on planting dates and populations can be found at: http://www.agronext.iastate.edu/corn/. The February 12, 2007 special edition of the ISU Integrated Crop Management newsletter has many helpful management tips for planting date, planting population and other aspects of corn following corn production. These articles can be found on-line at: http://www.ipm.iastate.edu/ipm/icm/.

Beef Breeding Software

By Dennis DeWitt, ISU Extension Livestock Field Specialist

The beef sale catalogs and A.I. Stud magazines are coming daily it seems this spring. How do you select your next herd sire is extremely important to beef cow producers. The Beef Sire Selection Emphasis Index (SEI) software program puts objective information into the selection process. The producer utilizes the Expected Progeny Differences (EPDs) for the traits the producer determines to be the most important for their breeding herd and ranks the bulls on the SEI.

Many beef producers are planning on estrus synchronization of their heifers and cows to take advantage of the many benefits. The Estrus Synchronization Planner will list the daily activities on a calendar and give a budgeted cost analysis for the different systems.

Both of the spreadsheet programs can be ordered and purchased from the Iowa Beef Center at www.iowabeefcenter.org and then downloaded onto your personal computer. For further information contact ISU Extension Beef Field Specialists Beth Doran at doranb@iastate.edu or Dennis DeWitt at dewitt@iastate.edu.

Nitrogen Rates for Corn Following Corn

By Joel Dejong, ISU Extension Crop Field Specialist

The corn market has been very interesting in the past few months, and looks to stay interesting into the near future, at least. Because of this recent increase in corn price there is a lot of discussion about increasing corn acres, at the expense of soybeans. This means that our expectations and management must be altered because to some extent, managing corn after corn is like managing a different crop than corn after beans. One example of the difference between the two is in nitrogen management.

Research on how corn responds to nitrogen fertilizer application is on-going, and will be for a long time. You would think that we should know all of those answers by now, but we do not. For example, we used to make N recommendations for corn following corn by taking a reasonable yield goal, and multiplying that yield by a factor – which was 1.1 for this part of Iowa. As you can see, if you expected higher yields, a greater amount of N was perceived to be needed. But, continued research has shown that this is **not** true. Yield and optimum N rate are not that closely related. Recent data collected from many plots around Iowa show that optimum N rates in particular fields are not yield related – the sites where corn after corn yielded over 220 bushels per acre (there were 4) only had an average optimum N rate of 146 pounds N per acre (ranging from 123 to 196). Of all the sites where this work was done, for corn after corn acres, the optimum N rate average was 179# per acre when the price of N was 10% of the price of corn. As N price gets higher relative to the corn price, then the optimum N rate goes down somewhat.

When calculating these average returns to N expense, rates from 163# to 198# per acre were within $1 per acre of that maximum return to N spending. So, if you ask me what rate of N to apply to corn acres following corn in 2007, I would suggest a range based on this data – somewhere between about 165# N/acre to about 195# N per acre. I suggest that this is information that can help get you in the range that is adequate, but will note that fields do indeed respond differently – and the exact number for your field might vary somewhat from that range. However based on the data base, this is an appropriate range for the majority of fields. One additional note – the optimum rate for corn following corn does not change with a longer amount of time the previous crop has been in corn. The recommendation would be the same if it is second year corn or if it is the 30th consecutive year of corn.

ISU Extension does have a web page that allows you to put in your expected corn sales price, and the price you pay for nitrogen. This program will then calculate the optimum N rate average based on the research lot results, and give you that range where rates still are probably within $1 of maximum return to the N applied. It can be found at this web site: http://extension.agron.iastate.edu/soilfertility/nrate.aspx, or just use Google and type in "N Rate Calculator," and this will be the first one to appear on that list.

Iowa isn't the only state using this system to determine nitrogen rate recommendations. Illinois, Wisconsin and Minnesota now are using this system to make nitrogen rate recommendations, but they are basing their numbers on research from their own state. Therefore, their answers will be different for these other states. If you would like to learn more about this entire process, you can get a copy of the 28 page publication titled "Concepts and Rationale for Regional Nitrogen Recommendations for Corn" at this web site: http://www.extension.iastate.edu/Publications/PM2015.pdf, or your local Extension office.

Note that the N Rate Calculator page also has a different calculation for corn following soybeans. As before, yield levels are no longer a part of the recommendation process, and "credits" based on soybean yield are not a part of this process, either. However, the optimum N rate for corn following soybeans is about 55# per acre less than when corn follows corn.

The ISU Integrated Crop Management Newsletter recently developed a special edition with many articles on corn production after corn. To see these articles, go to the ISU ICM Newsletter site at: http://www.ipm.iastate.edu/ipm/icm/ .

Swine Seminars

By Jerry Weiss, ISU Extension Swine Field Specialist

Two separate swine seminars to be held at the Marina Inn in South Sioux City, Nebraska. A separate registration is needed for each of these seminars. The sponsors are Iowa State University Extension, University of Nebraska Extension, Iowa Pork Industry Center, and Iowa Pork Producers Association.

- March 22 - Advanced Swine Reproduction Seminar. Marina Inn, South Sioux City, Neb., 9:30 a.m. to 3:30 p.m. The cost is $50, if pre-registered by March 16. Featured speakers include George R. Foxcroft, Canada Research Chair in Swine Reproductive Physiology; Butch Baker, senior clinician at ISU Vet Med College; and Don Levis, reproductive specialist from the University of Nebraska. There is a second day option for farrowing caretakers on March 23. Contact Dave Stender at (712)225-6196 for more information.

- March 23 - Farrowing Basics for Conventional Farrowers program. Marina Inn, South Sioux City, Neb., 9 a.m. to 5 p.m. Cost is $25 with pre-registration deadline of March 19. It is designed for people who work in the farrowing area of any conventional pork producing operation. Speakers are Dave Stender and Alex Ramirez of Iowa State, and Don Levis and Duane Reese from the University of Nebraska. Contact Dave Stender at (712)225-6196 for more information.

Crop Insurance Decisions for 2007

By Ron Hook, ISU Extension Farm Management Field Specialist

Corn and soybean producers need to make decisions about crop insurance by March 15 each year. If you don't advise your agent to make any changes, your coverage will be the same as last year. However, changing market conditions make it advisable to review your policy specifications each year.

What's New

- Indemnity prices will be much higher this year.
- Available guarantees will be much higher this year.
- Premiums will be much higher this year.

Implications

- Revenue insurance is more attractive than yield insurance, to lock in high dollars.
- You can get the same $ per acre guarantee at a lower % guarantee (and save premium $).
- GRIP (group revenue) insurance is more attractive in years of high prices, since a price decline affects everyone equally (unlike yield declines, which can be very localized).
- Forward pricing looks attractive—revenue insurance with the harvest price option will guarantee the bushels you contract.

Indemnity Prices

Even if you don't alter your coverage from year to year, the dollar value of your guarantee will change according to market prices. The price used to calculate your guarantee and determine your payment in case of a loss is called the "indemnity price." Traditional yield insurance, MPCI or APH (actual production history), uses a projected harvest cash price set by the USDA. For 2007 these prices have been fixed at $3.50 for corn and $7.00 for soybeans up from $2.20 and $5.15 in 2006.

Revenue insurance, both RA (Revenue Assurance) and CRC (Crop Revenue Coverage), set their indemnity prices equal to the average Chicago Board of Trade prices during the month of February. Prices for November soybean contracts and December corn contracts are used. While the final average prices won't be known until March 1, the average through February 20 was $4 for corn and $7.99 for soybeans.

Group Insurance

Still another type of crop insurance, the Group Risk Income Protection (GRIP) policy, also uses the average futures prices during February. Only 8 percent of corn and soybean acres in Iowa were insured with group policies last year. This can be attributed to the fact that protection is based on average county yields instead of individual farm yields. However, producers who have land in several locations within a county or who can safely carry more financial risk may find group insurance to be a low cost alternative with a significant chance of paying an indemnity.

Preharvest Pricing

Producers who like to forward price much of their production prior to harvest can utilize CRC or RA insurance with the harvest price option to protect themselves against harvesting fewer bushels than they contract. As long as they don't commit more bushels than they have insured, they can rely on the insurance indemnity payment to cover the cost of any shortfall.

For additional crop insurance related information check out these websites:
ISU Ag Decision Maker: *www.extension.iastate.edu/agdm/* has various crop insurance fact sheets and University of Illinois Farmdoc: *www.farmdoc.uiuc.edu/cropins/* has crop insurance calculators and premium tables.

March 13 Drainage Workshop Planned

By Kris Kohl, ISU Extension Ag Engineer Field Specialist

Tile drainage has changed much of Iowa creating fertile farmland, reducing soil erosion, and improving farmability. Weather patterns have shifted over the past 20 years to provide more rainfall in Northwest Iowa, increasing the need for tile drainage.

Tile removes the excess water and improves the root zone for the crop actually increasing the amount of plant available water. Managing the water table with controlled drainage can pay off in dry years. The pay off of adding more tile is often in a few years. As producers continue to add tile to existing systems, mains can be overloaded reducing productivity.

The amount of rented farmland is increasing causing questions on how to improve drainage when both the landowner and tenant have a short time horizon.

ISU Extension is planning a drainage workshop to answer many of the questions from producers with drainage issues. The workshop will provide the basics of how to use the "Iowa Drainage Guide" to determine the capacity of tiles, proper layout, and overall goals of the systems. Participants will also be able to determine where to add tile to optimize their cropping system, and what the consequences of those decisions will be on the remaining system.

The workshop is scheduled for March 13, 2006, in West Bend from 9:30 a.m. to 3:00 p.m. The cost is $30 which includes lunch and all workshop materials. Bring your calculator and tile maps so we can optimize your drainage system and develop a long range plan to achieve it. For more details and to register for the workshop call 712-732-5056.