April 20, 2009

Managing Seed-Placed Fertilizers

The importance of fertilizers for sustaining crop production is well recognized. To ensure fertilizers are used efficiently, proper amounts must be applied.

"One way producers can improve fertilizer efficiency is to ensure proper amounts are being placed with the seed," says Mark Cutts, crop specialist at Alberta Agriculture and Rural Development's Ag-Info Centre, Stettler. "Applying too much fertilizer with the seed can reduce or delay crop emergence and result in inefficient fertilizer use. In order to ensure seed-placed fertilizers are being managed properly, an understanding of the factors that influence their use is required."

The fertilizer product most commonly evaluated for seed-placed safety is urea (46-0-0). Seed-placed urea can reduce crop emergence through ammonia toxicity. A number of factors impact the amount of urea that can be seed-placed. Factors to consider include: seedbed utilization (calculated as the spread of seed and fertilizer divided by the row spacing), soil conditions (soil texture, organic matter content and soil moisture), and seed characteristics (seed size). It is important to recognize that an interaction exists between these factors and as a result the amount of urea that can be seed-placed varies considerably. Higher seedbed utilization (50 per cent versus 5 per cent), finer textured soils (clay verses sand) and a larger seed size (cereal versus canola) allow more urea to be placed with the seed.

It should be noted, that for seed-placed urea, moisture conditions at the time of seeding and moisture received shortly after seeding (up to seven days post-seeding) can minimize the toxic effects of urea in the seed-row. However, to minimize the risk associated with urea, the amount to be seed-placed should reflect moisture conditions present at the time of seeding.

"Many producers seed-place phosphate fertilizers in order to ensure seedling plants have early access to this nutrient," says Cutts. "The main phosphate fertilizer used in Alberta, monoammonium phosphate (11-52-0, 12-51-0), generally has low seedling toxicity. However, there is a distinct difference in maximum amounts of seed-placed phosphate based on crop type. In general, cereal crops can tolerate the amount of phosphate that is typically seed-placed, while crops such as

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oilseeds and pulses are more sensitive. For example, under good to excellent moisture conditions, maximum rates of seed-placed phosphate for cereal, canola and pea are 50, 25 and 15 pounds per acre, respectively. This is equivalent to approximately 100, 50 and 30 lbs of 12-51-0 fertilizer per acre."

A third fertilizer product that is commonly seed-placed is potassium chloride (0-0-60). Seed-placed potassium fertilizer can impact crop stand establishment through a salt effect. The safe level of potassium that can be applied with the seed depends on crop type. In general, tolerance is higher for cereal crops as compared to a smaller seeded crop such as canola. Pulse crops are sensitive to seed-placed potassium fertilizer and producers may need to consider alternative fertilizer placement approaches such as banding.

"To ensure efficient fertilizer use and proper stand establishment, several factors must be considered when seed-placement of fertilizer occurs," says Cutts. "An understanding of these factors and how they interact will allow the maximum benefit of these fertilizers to be achieved."

For more information on seed-placing fertilizers, please refer to the ***Alberta Fertilizer Guide*** which is available on Alberta Agriculture and Rural Development's website, Ropin' the Web, at www.agriculture.alberta.ca or contact the Ag Info Centre at 310-FARM (3276).

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Improvements Made to Crop Risk Management Tool

***CropChoice$,*** the popular risk management decision-making tool has new information for the 2009 crop year. Agriculture Financial Services Corporation (AFSC) has provided current crop insurance options, including updated risk coverage levels and insurance premiums. In addition, the economics unit of Alberta Agriculture and Rural Development has updated the 2009 cropping alternatives, which are forecasted regional crop budgets that are part of the **AgriProfit$ Business Analysis and Research** program.

"***CropChoice$*** is a crop planning software tool from Alberta Agriculture and Rural Development that helps grain, oilseed, pulse and special crop producers make better crop planning decisions," says Jeff Millang, livestock economist with Alberta Agriculture and Rural Development, Olds. "It helps forecast revenues and margins for the crop enterprise, and calculates the probabilities of achieving those results. ***CropChoice$*** helps producers make better management decisions about cropping enterprises because it identifies, measures and manages risk. It also helps producers evaluate risk management strategies such as changing the crop mix, buying crop insurance and negotiating land rental arrangements. Significantly, ***CropChoice$*** measures the risk involved in the plan and evaluates the effects of potential risk management strategies."

Traditional crop planning tools use only single estimates of yields and prices. ***CropChoice$*** recognizes that future crop yields and prices cannot be known precisely. To reflect this, producers are required to enter yields and prices as three different values: worst possible, best possible and most likely. These varying inputs produce varying outputs, which in turn give a clearer and more accurate forecast than traditional linear budgets. ***CropChoice$*** helps to forecast expected yields and prices that lead to overall gross margins and profitability expectations.

The updated software can be downloaded from the Alberta Agriculture and Rural Development's website at www.agriculture.alberta.ca/cropchoices

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Crop Insurance and Uncertain Global Economy

Alberta farmers are facing a lot of uncertainty as they prepare to seed their crops in the coming weeks amid a global recession.

"The game has changed completely from this time last year," says Charlie Pearson, provincial crop analyst with Alberta Agriculture and Rural Development, Edmonton. "The collapse of world financial markets is affecting everything, including agriculture here in Alberta. The credit crunch is making it tougher for grain buyers to finance shipments of grain from farms to world markets. And grain prices have plunged more than 30 per cent from record highs last summer.

"Input costs such as fertilizer have fallen, but not far enough, creating a potential cost-price squeeze that is adding more risk and worry as producers struggle to budget for a profit this year."

Where crop and input prices may end up between now and harvest is impossible to predict. "The best guess is that grain prices will fall a bit lower," says Pearson. "While no major drops or increases in price are anticipated, there is no absolute certainty for what lies ahead.

"A drought in western Canada or somewhere else in the world that impacts grain supplies, or a spike in energy prices that reignites demand for ethanol, could push grain prices higher. On the other hand, perfect weather and bumper crops

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worldwide, or a deepening of the recession that drives consumer demand lower and makes credit harder to access, could chew away at prices even more.

"The challenge for farmers is to avoid getting bogged down in all the negativity. We can't control the world economy. All we can do is accept that we're in risky times, and then get down to the business of managing that risk and focus on being profitable."

Producers who are disciplined with their budgets and keeping costs low stand a good chance of turning a profit this year. "I think there's room for cautious optimism. After all, $9 per bushel for canola is still pretty decent compared to the $6 per bushel often seen over the last 10 years. Of course, Mother Nature will have to cooperate. Weather is always the biggest risk when it comes to farming," says Pearson.

Pearson advises producers to consider locking in some profit margins this spring by signing forward contracts that offer locked-in prices for grain delivered in the fall.

"It's also important to look at ways of managing risk like crop insurance," adds Pearson, reminding producers of the April 30 deadline to purchase crop insurance in Alberta. "Each producer has to assess the risk that's out there this year and decide whether they can handle it themselves – or if they'd sleep better by offsetting some of that risk with insurance."

"With so much uncertainty around grain prices, many producers are paying attention to a crop insurance option called the Spring Price Endorsement (SPE). It protects against price drops of 10-to-50 per cent between the spring and fall," explains Chris Dyck, senior manager of insurance operations for Agriculture Financial Services Corporation (AFSC), the provincial crown corporation that administers crop insurance in Alberta. "The SPE is based on a spring insurance price set for each crop in January. We've seen a lot of volatility since then, and producers are realizing the price on many crops won't have to drop much further to trigger an SPE payment this fall. Barley has already dropped so low, it would trigger a payment unless the price rebounds by the fall."

If crop prices bounce back and climb 10-to-50 per cent above the spring price by fall, a built-in feature called the Variable Price Benefit automatically insures producers at those higher prices if their crops fail. "That's especially important if you're forward contracting because if you don't get a crop, ou may still have to honour those contracts at the higher fall price," says Dyck.

In addition to price risk, many producers are crossing their fingers for a healthy dose of spring rain as soil conditions are dry across much of the province. A growing number of people are requesting hail endorsement coverage with crop insurance as a result of record hail that has battered Alberta crops for three years straight. "You never really know what problems will arise each year," says Dyck, explaining crop insurance covers a wide range of weather risks, plant disease, insects, and wildlife damage.

Some important changes have been made to crop insurance for 2009, including that there are two new crops are now insurable: canary seed and camelina. And, due to high seed, fuel and fertilizer costs, payments under the Reseeding Benefit and Unseeded Acreage Benefit will increase.

Producers with questions about crop insurance can contact an AFSC insurance office or the call centre at 1-888-786-7475 before the **April 30, 2009** deadline.

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Crop Land Rental in 2009

Questions concerning crop land rental seem to be on many producers' minds this spring. At this time last year, markets were forecasting strong grain and oilseed prices, which prompted landlords to renegotiate land leasing arrangements, especially those involving cash rents. It is understandable that with increased returns, higher cash rents were justifiable. The unfortunate reality was that those high returns disappeared by harvest time. It was understandable that tenants would then want to know how to renegotiate their leases to reflect diminished returns and drastically shrunken margins. With last year's experience fresh in their minds, many producers are wondering what's in store for them this year.

Alberta Agriculture and Rural Development conducts a survey every year on crop rental rates. The preliminary 2008 survey came out in December. The report covers many of the municipalities in the province, however not all counties or municipal districts responded. The 2008 survey indicated an increase of approximately 10 per cent in the 2008 rental rates over the 2007 rates, certainly not the 20 to 30 per cent increases anticipated last spring. To find the survey, visit the department's website, Ropin' the Web, at www.agriculture.alberta.ca and enter crop and pastureland lease in the search engine on the site's main page.

"Market fundamentals for 2009 seem to indicate a rather uneventful year as far as grain and oilseed prices are concerned," says Ted Nibourg, farm business management specialist with Alberta Agriculture and Rural Development's Ag-Info Centre, Stettler. "Grain prices have been tied directly to bio-fuel initiatives for the last few years resulting in very strong prices. With the current global economic reset, this price relationship has all but disappeared. These factors point towards very little movement in cropland rental rates for the 2009 growing season."

For tenants and landlords who find that their municipality is not represented in the cropland lease survey and for those who

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would like a more definitive rate than the survey provides, a formula approach works the best. To arrive at a rental rate tied to the productivity of the land, take one-quarter of the average or long-term yield of a given crop and multiply this by an anticipated price. This result should be further discounted by 25 per cent to cover risk, uncertainty and timeliness of payment. An example would be an 80 bushel barley crop – 20 bushels represents one-quarter of the yield. Using a $3 per bushel price, one arrives at gross value of $60. Discounting the $60 by 25 per cent results in a rental rate of $45 per acre for cash rent.

"What was noticed last spring was a shift away from cash rent towards one-quarter/three-quarters crop share arrangements where the landlord receives one-quarter of the crop but does not contribute any production costs," says Nibourg. "Occasionally, this crop share arrangement moves towards a one-fifth/four-fifths share to reflect the higher cost of production for some crops. These shifts are based on a risk sharing arrangement between landlords and tenants. Landlords can take advantage of increasing commodity prices and tenants are sheltered somewhat from downside price risk.

"In a crop share arrangement, the tenant and landlord share risk in direct proportion to the crop share. Likewise, they share any rewards in price and production. One-third/two-thirds crop share arrangements, which constitute about 85 per cent of the crop share arrangements in the province, did not seem to have been affected by the volatility in crop prices. Indeed, these arrangements have always shared risk so nothing has changed. Over the long term, it is not uncommon for landlords to find crop share arrangements the most profitable."

A cautionary note for people shifting to a crop share arrangement from a cash basis or for those using the formula approach for calculating rent, is that both parties should agree on either a method or a date on which to price the crop and include this as a clause in their rental agreement. Price volatility is bound to result in some major disputes if price discovery is not considered.

At the end of the day any rental agreement, whether it is cash rent or crop share, is based on a negotiated settlement between a willing landlord and a willing tenant.

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Agri-News Briefs

Alberta Water Quality Awareness Day

This summer, thousands of Albertans will be working together to create a province-wide snapshot of water quality using free water testing kits provided by the Alberta Water Quality Awareness Day program. Interested Albertans need to register online at www.awqa.ca to receive their free kits. **Registration is required by April 30, 2009**. The test kits will be sent in early May to interested teachers, youth groups, farmers, ranchers, watershed groups and other individuals to test lakes, streams, rivers and wetlands for basic aquatic health. Alberta Water Quality Awareness Day is June 5, 2009, and is held in support of World Environment Day and Environment Week. People of all ages and backgrounds participate in the program, exploring their local streams, rivers, lakes and wetlands with their free water quality test kit from May 1 to August 31, 2009, and then posting their findings at www.awqa.ca. The findings are compiled annually to create a citizen-generated snapshot of water quality in our province. For more information, contact 780-702-ALMS (2567), e-mail info@awqa.ca or visit the Alberta Water Quality Awareness Day website at www.awqa.ca

Grazing School for Women

The 7th annual Grazing School for Women is being held in Smoky Lake on June 10 and 11, 2009. Presentations are a combination of indoor and outdoor activities. Participants are asked to bring appropriate clothing as sessions will run rain or shine. Topics on the agenda include:

- climate change and agriculture
- the secret life of cows – grazing and livestock behaviour
- steak challenge – making the grade
- winter grazing wetlands and Phillips farm tour
- get off the grid – alternative energy for the farm
- composting
- weed I.D. and control
- on-farm predator control
- Ag Elle – linking farm & ranch women

Early bird registration for the two-day school is $60 per person if received up until May 22, 2009. Registration costs after May 22, 2009, are $75 per person. Registration includes meals, materials, one night bunkhouse accommodation (bring your own bedding, towels, toiletries). Final registration deadline is June 1, 2009. For further information or to register, contact Jenifer Heyden at 780-582-7308; Evonne Wirstuk at 780-656-3730; or Kerri O'Shaughnessy at 780-427-7940.