1. A recent soil test that includes surface (0-6") and sub-surface (6-24") nitrate nitrogen levels. Whatever soil N is present can be subtracted from the approximate fall nitrogen requirements listed on the previous page.
2. A nitrogen-rich strip (a.k.a. N-Rich Strip, RAMP Strip, or Greenseeker Strip). An N-rich strip is simply an area where N is not limiting, and having an N-rich strip is essential to accurately gauge if the pre-plant application was "enough" or if it is "running out". Gauging the difference (or lack thereof) in color between the N-rich strip and the rest of the field will let the producer know if supplemental N is needed and how early it is needed.

Hand-held Greenseeker sensor readings taken in February from the N Rich Strip and the farmer practice will let the producer know how much additional topdress N is needed. For more information contact your local extension office and ask for publication # PT 2005-3 Get your nitrogen-rich strips out early or visit www.nue.okstate.edu for a downloadable copy.

The latest method to take advantage of Sensor Based In-Season Nitrogen Management is the Ramped Calibration Strip (RCS). OSU's Biosystems and Agricultural Engineering and Plant and Soil Sciences Departments have built two applicators that will change nitrogen rates every 10 feet to create the pattern shown to the upper right. The advantage of the RCS is the visual aspect of nitrogen needs. Producers should be able to walk the strip and see the response to nitrogen. The multiple rates along the RCS should also improve the predictive capabilities of sensors.

3. The third and final component is commitment on the part of the farmer. Similar to providing mineral supplementation to beef cattle, the easy approach to N fertility is to "put plenty out there". This is, however, not the most economical nor environmentally-friendly approach. Just like a good herd manager, a well-trained agronomist will use the tools available to them to determine what the crop needs and how to supply that need. Whether we are talking about cattle or wheat, this takes commitment, dedication and perseverance.

NO-TILL OKLAHOMA CONFERENCE

February 11 and 12, 2008
Clarion Hotel and Conference Center
Oklahoma City, OK

Time Topic

February 11th
10:30-11:30 No-Till Philosophy
11:30-1:00 Lunch
1:00-2:30 Key Consideration for Crop Rotation
2:30-3:00 Break
3:00-4:30 Disease, Weed, and Insect Management

February 12th
8:00-930 Equipment-Essentials for No-till
9:30-10:00 Break
10:00-11:30 No-till Wheat, Cotton, and Grazing Systems
11:30-1:00 Lunch
1:00-2:30 Overcoming Obstacles
2:30-3:00 Break
3:00-4:30 Closing Session

Topics are subject to change

The cost for attending the conference is $75 per person, if reservations are made before January 21. After January 21, the cost will be $100 per person. Reservation information can be found online at: http; oces.okstate.edu/notill or contact the Beaver County OSU Extension Office for a form. Conference cost does not include hotel accommodations.

This newsletter is published monthly by the Beaver County OSU Extension Office, PO Box 339, Courthouse, Beaver, OK 73932 (580) 625-3464, and is one way of communicating educational information. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement is implied.

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OKLAHOMA STATE UNIVERSITY EXTENSION

AG NEWS

Division of Agricultural Sciences & Natural Resources
Oklahoma State University

*Beaver County Extension Office * Courthouse * Box 339 * Beaver OK 73932 * (580)625-3464*

November 2007

COOKING GROUND MEAT

Source: fightbac.org

Cook ground meat, where bacteria can spread during grinding, to at least 160°F. Information from the Centers for Disease Control and Prevention links eating undercooked ground beef with a higher risk of illness. Remember, color is not a reliable indicator of doneness. Use a food thermometer to check the internal temperature of your burgers.

Thorough cooking to an internal temperature of 160 °F throughout kills E. coli O157:H7.

WHY IS E. COLI MAKING A COMEBACK?

USDA plans to expand its testing program to check the raw components of ground beef for bacterial contamination. Hamburger is made from a number of ingredients, such as lean muscle meat and the trimmings that are cut off steaks and roasts.

The most significant change in agency policy lowers the threshold for action when problem meat is discovered.

Until now, USDA would not ask for a recall (it doesn't have the authority to order one) if E. coli or some other harmful bacteria was found in an *opened* package in a consumer's refrigerator or freezer. The assumption has been that the consumer somehow contaminated the meat.

Now, unless USDA has specific evidence that strongly suggests the bacterial contamination took place in the home, it will assume the product was already contaminated prior to purchase. And it will use those samples to build a case for a recall.

This change is a direct result of the agency's handling last month's huge Topps Meat Co. recall. Eleven days before the recall, tests confirmed that a box of frozen hamburger patties had E. coli. But because that contamination was found in an open box of burgers in a family's freezer, no action was taken.

SQUASH AND PUMPKIN HARVEST

Summer and winter squash differ in how they grow and in what stage they are harvested. Summer squash tends to grow on compact, bushy plants and produce fruit that is harvested while immature. Zucchini, yellow straightneck or crookneck squash and bush scallop are examples of summer squash.

Winter squash such as Butternut, Turban, Acorn, and Hubbard, are produced on large, trailing vines. Pumpkins are also classified as winter squash and share the same basic characteristics. Winter squash are harvested when mature and those that are eaten are peeled. You can tell that a winter squash is mature by using the thumbnail test. Mature fruit will have a hardened rind and will not be easily punctured with a thumbnail.

Pumpkins should be cured by placing them in a warm, dry location for about 10 days. Choose an area where the temperature will not drop below 50 degrees as cold temperatures can shorten storage life. Best curing is achieved at 80 to 85 degrees F and 80 to 85 percent relative humidity.

However, such conditions are difficult for a homeowner to produce, so do the best you can. Butternut, Acorn, Turban, Hubbard and other squash types should be moved directly into storage without curing.

Acorn squash stores best at a temperature of 50 degrees F and 50 to 75 percent relative humidity. However, it has the shortest storage time of 5 to 8 weeks even if these recommendations are followed. These conditions are also best for Butternut and Turban squash as well as pumpkins but these are more stable and will last from 2 to 3 months.

Hubbards are the storage kings (5 to 6 months) but prefer a range that is a bit warmer (50 to 55 degrees F) and more humid (70 to 75 percent) than other types.

UNWANTED PESTICIDE DISPOSAL

Unwanted Pesticide Disposal is scheduled for November 15, 2007, 8:00am-1:00 pm at Hooker Equity Co-op in Hooker, 200 E Highway 54. This is for people in production agriculture (farmers, ranchers, greenhouses, and nurseries), certified applicators, and pesticide dealers. Please no homeowners at this time. **No questions asked all farmers/ranchers and other participants will remain anonymous**. This collection will take **only pesticides** no other hazardous waste will be accepted such as oil, paint, antifreeze etc. All pesticides will be taken no matter the size. **There is no cost for the first 2,500 pounds** of pesticides brought by a participant. Anything over 2,500 pounds will be charged to the participant at a $1/pound for all pesticides except mercury based pesticides, wherein participants will be charged $2.22/pound for disposal. Clean Harbors will accept payment in the form of check or credit card at the disposal site. No cash will be accepted! For more information please see website http://pested.okstate.edu/unwanted.htm.

DO BIOFUELS MEAN INEXPENSIVE FOOD IS A THING OF THE PAST?

Helen H. Jensen *Bruce A. Babcock*
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Concern is growing that expanded biofuels production means the end of inexpensive food. After all, the prices of corn, soybeans, and wheat have dramatically increased and are likely to stay high. The line of thinking that expects expensive grains and oilseeds to lead to dramatically higher food costs follows the logic often used by proponents of U.S. farm programs. Many proponents justify subsidies by claiming that farm payments work to keep food plentiful and inexpensive by artificially keeping the price of commodities lower than production costs. For this justification to be valid, farm subsidies would have to expand commodity production, thereby lowering commodity market prices. Lower prices would then, in turn, lead to an expansion in the production of the food that all of us actually eat (pork chops instead of no. 2 yellow corn), which would cause food prices to be lower than they would be otherwise. Thus, according to the argument, we do not need to spend as much of our income on food. By the same logic, high commodity prices caused by subsidized biofuels should result in a reduction in the production of food and higher food prices.

There is enough economics behind this logic to make it plausible, even though it is largely false. In the case of farm programs, it is easy to demonstrate that feed grain and oilseed prices are largely unaffected by U.S. farm subsidies, particularly since 1996 when Congress removed USDA's authority to increase commodity prices through acreage set-asides and subsidized storage. It is also easy to demonstrate that the small share of the final consumer food dollar that goes to the farmer means that even a doubling of feed grain and oilseed prices from expanded biofuels production will lead to relatively modest increases in the prices of meat and dairy products. Food prices are largely determined by costs and profits after commodities leave the farm.

How Much for Food?

In the United States, consumers spend a relatively small amount of their disposable incomes on food. However, diverting a large share of U.S. feed grain production to biofuels will affect the price of food. Knowing how U.S. consumers spend their food dollars and how higher commodity prices influence food prices will give us a better understanding of whether we'll be spending more or less on food in the future.

One indicator of a nation's standard of living is the proportion of income that its citizens spend on food. Typically, this share is measured using after-tax or disposable income. This share in the United States has fallen from 20 percent in the early 1950s to about 10 percent today. In contrast, Canadians today spend an average of about 14 percent of their disposable income on food, and Mexicans spend 26 percent.

The share of income that Americans spend on food would actually be smaller than 10 percent were it not for the large increase in expenditures away from home. Beginning in the mid-1960s, Americans began to increase the amount of money spent on dining out. Today Americans spend about half of their food dollar on food away from home. Part of this increase in expenditure patterns has been driven by the changing structure of the U.S. family, including more women entering the labor force, and part has been driven by changes in demand for food driven by income growth. USDA reports that expenditures on food total about $3,600 per person per year in 2006 dollars.

The primary reason why food prices have risen more slowly than incomes and other prices is rapid productivity growth on the farm and all along the food chain. Farmers and food companies have dramatically increased the efficiency with which they can produce food. There is no reason to believe that we have seen an end to this productivity growth. But expanded biofuels production may counter some of the impacts of this growth on future food prices.

Figuring Feed Costs into Food Expenditures

Increased ethanol production has driven the price of corn, other feed grains, and oilseeds much higher. Because corn and soybean meal prices largely determine the price of feeding hogs, poultry, and cattle, increased feed costs will eventually result in higher market prices for pork, beef, chicken, and dairy products. Corn is also used widely as an ingredient in many processed foods. Thus, higher corn prices will also affect the cost of soft drinks, snack foods, baked goods, and many other food items.

In general, the percentage by which the price of a particular food item increases because of higher corn prices depends on the value of corn embodied in the product relative to the price of the product. For example, if a $1.00 can of soda contains 2¢ worth of corn that is contained in high-fructose corn sweetener, then a doubling in the price of corn would increase the cost of producing the soda by at most 2¢. If all this increased cost were passed along to the consumer, then the doubling of corn prices would increase the price of soda by about 2 percent.

Corn makes up a relatively large share of the product prices of eggs, pork, and poultry. Beef and dairy products also contain significant amounts of corn, but the prices of processed foods are largely determined by the cost of other components. Thus, one would expect that the prices of eggs, pork, and poultry would go up by a larger percentage than the prices of beef and dairy products, which would go up by a larger percentage than processed foods.

Other things being equal, corn makes up a smaller share of the final price of food consumed away from home than it does for food consumed at home because the consumer must pay for additional costs incurred in preparing food away from home. This lower share acts to decrease the final impact of corn price increases on total food expenditures because half of average food expenditures are made away from home.

In a recent study, CARD researchers estimated that a 30 percent increase in the price of corn, and associated increases in the prices of wheat and soybeans, would increase egg prices by 8.1 percent, poultry prices by 5.1 percent, pork prices by 4.5 percent, beef prices by 4.1 percent, and milk prices by 2.7 percent. For all food consumed at home, average prices would increase by 1.3 percent. For food consumed away from home, average prices were estimated to increase by 0.9 percent. So, across all food consumed, 30 percent higher corn prices increase all average food prices by 1.1 percent, according to our estimates.

The CARD assessment of modest effects on food prices of increased corn prices seems to run counter to what is happening in the supermarket. Milk prices are at an all-time high, while meat and egg prices continue to remain at historically high levels. If high corn prices are not to blame, what is? The primary cause of high milk prices is that international demand for dairy products has outstripped international supply. The lack of supply is a result of drought in Australia, a drop in subsidized milk production in the European Union, and a lack of profits in the U.S. dairy industry in recent years. Strong world demand is a result of continued strong income growth in China, India, and other Asian countries, and continued strong U.S. demand for cheese. The excess world demand for dairy products has pulled U.S. products onto world markets, thereby raising U.S. prices. Instead of fighting foreign competition, U.S. milk producers are now benefiting from international markets.

A Bigger Impact for Some Consumers

With agriculture being asked to supply an increasing share of U.S. fuel, it follows that food prices will trend upward. For most Americans, though, the higher prices caused by ethanol will hardly be noticeable. However, low-income U.S. consumers spend a much greater proportion of their income on food than high-income consumers do. Their large share combined with less flexibility to adjust expenditures in other budget areas means that any increase in food prices will cause hardship.

Low-income consumers in other countries will be hurt even more by more expensive food. For example, the average Mexican consumer spends 12 percent of his or her food budget (about 3 percent of disposable income) directly on corn products, primarily tortillas. This means that any increase in the price of corn will affect the standard of living of many in Mexico.

And finally, food price increases, from whatever source, will directly affect the cost of U.S. nutrition programs. Higher commodity prices combined with shrinking inventories mean that the U.S. government will be forced to pay high market prices for food for school lunch programs. And the automatic food price escalators built into the food stamp program mean rising expenditures there. The silver lining, as far as the federal budget is concerned, is that at least a portion of the higher costs of nutrition programs will be offset by lower support payments for farmers because of high commodity prices.

USDA BUYING EID TAGS

USDA has signed contracts with three manufacturers to produce 1.5 million radio frequency identification ear tags that are compliant with National Animal Identification System standards. The combined cost of the contracts is 1.7 million dollars. The ear tags will be used specifically for USDA state-federal cooperative disease control and eradication efforts, such as bovine tuberculosis and brucellosis and will be distributed in geographic areas which are determined to be of increased risk for disease outbreak or spread.

Under Secretary for Marketing and Regulatory Programs Bruce Knight, says - this marks another step in our efforts to reach our long-term goal to trace an animal within 48 hours during a disease outbreak. Knight says - production and distribution will make it easier for state and federal officials to trace production animals to their source in the event of a disease outbreak or animal health emergency.

The ear tags will use radio frequency identification device technology, which will allow producers and animal health officials to electronically identify and store information contained on a tag that is attached to an animal. This will greatly increase the efficiency of an animal disease investigation that involves tracing of exposed and potentially infected animals.

BEEF CATTLE DROP VALUE PER HEAD

One of the most underappreciated contributors to live cattle value, especially over the past year, is drop (ie, by-product) value. These non-carcass items sold for $9.97 per cwt. live recently. That compares to $9.90 a week ago and $8.58 a year ago. When multiplied by the corresponding live weights, drop added $129.61 per head last week versus $128.70 a week ago $110.77 a year ago.

Drop value per cwt made a new all time record of $10.45 on May 30 of this year. However, per-head drop value set a new record September 28 at $130.91 due to the combination of high per unit value and near-record live cattle weights.

For virtually all of 2007, drop values have been trading more than two standard deviations above the historical average and for most of the summer they were three standard deviations higher. The ability of drop values to hold so firm at the second and third standard deviations is a strong indication that something has dramatically changed and that the change is very likely to be permanent. So what has so radically changed to inflate drop values?

The first major change has been the value of edible and bleachable tallow due to the emergence of several sizable projects that make bio-diesel from animal fat. As of this week edible tallow was reported at $32.25 cwt up 17% over the same week a year ago. Inedible bleachable tallow, which is produced in about a 4 to 1 ratio to the quantity of edible tallow, was at $30.25 cwt or 86% higher than the price of $16.25 the same week a year ago.

In addition, meat and bone meal and blood meal have increased in value quite dramatically. MBM closed Friday at $248.50 per ton compared to just $116.50 a year ago. The price escalation has been driven by two factors. First, as feed grain and oil seed prices have escalated, poultry and pork producers have reformulated rations and meat and bone meal, which is roughly 50% protein, has benefited. In the EU, meat and bone meal is not only used for animal feed and pet food but is increasingly being used as a fuel source to generate electricity since it has an energy value that is roughly 2/3 or fossil fuels. Blood meal was quoted Friday at $655.00 per ton, up 54% over last year's price of $425.00. Blood meal is also used as an protein source in monogastric rations and pet foods and is a nitrogen-rich fertilizer for plants and gardens.

So, the run up in drop values is tied to the renewable energy boom. There is the direct impact of making bio-fuels from animal fats and substituting animal products for fossil fuel sources. Indirectly, values have been driven higher by ration reformulations using animal protein sources to replace the higher-prices grain and/or oilseed sources which have increased in price due to using grains as bio-fuel feedstocks.

This entire story applies to pork by-product values as well.

Source: *Daily Livestock Report, Chicago Mercantile Exchange, Inc.*

REDUCING NITROGEN COSTS

By: Jeff Edwards and Randy Taylor

Looking to cut nitrogen costs this year? Keep in mind that the ultimate goal is to provide "just enough" nitrogen for the crop. Short-change the crop and you will lose yield. Over-apply nitrogen and you incur unnecessary costs. The best way to determine the optimal nitrogen rate is to use a three-pronged offensive consisting of: