



PERSPECTIVES

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Entertaining Agriculture Colorado Farmer Uses Crops to Educate, Entertain

While Jim Anderson successfully raises cattle, barley, wheat, corn and sugar beets at his Longmont, Colo., farm, one of his most successful crops is entertainment.

Specifically, it's a blend of agriculture and entertainment, which he calls "agrotainment." Utilizing acreage and facilities to host fun-filled events isn't just a hobby for Anderson, it's a profitable business. In a 40-mile radius from Anderson's farm, nearly 2.1 million people live in the urban and suburban areas of Denver and Boulder, Colo.

The lifestyle of farming and the appeal of wide-open spaces brings city-dwellers to AMAIZEing Farm Events LLC. Anderson says he simply stumbled onto this niche when he renovated his farm's shop in the mid-1990s.

After completing the building, he had an open house and invited neighbors and friends for an evening of food and dancing. After a fun open house, people began calling to see if they could rent the shop for events.

In 1997, Anderson started a catering business and rented his shop on weekends to fill this need. Now, nearly half of his time is spent developing and maintaining his "agrotainment" business while the other half is spent operating the farm and feedlot.

AMAIZEing Farm Events employs a full crew to tend to the needs of the entertainment business. The company has its own "farm" for entertaining, which includes a dance hall, petting zoo, pumpkin patch, corn maze and handmade entertainment stations made by Anderson.

Peggy Shupe, Managing Partner of the company and Anderson's cousin, takes care of the day-to-day operation of the "agrotainment" business. Shupe joined the venture after selling her ownership in a technology-based consulting firm. She spent one year in retirement before Anderson asked her to help.

"I bring the business sense, and Jim brings the creativity," Shupe says. "We're great partners although we have a different way of doing things. We just get together and make sure we're moving in the same direction."

Shupe handles booking events, marketing and general details of the business. For most

of the year, she says the company handles about four events a week until the winter months set in.

Schools from the Denver, Boulder and Fort Collins area visit the farm for field trips in the spring and summer. The children receive agricultural lessons about subjects such as plant growth, then work their way through the corn maze and hop on a wagon ride to the pumpkin patch.

Both the corn maze and pumpkin patch cover nearly 30 acres each. Growing crops for entertainment has a special set of concerns and tending to the crops is a job all its own, Anderson says.

"We've used Crop Quest for years on the farm to help with seed selection, variety selection, scouting and soil testing," Anderson says. "It seemed natural to have them help us in this other side of our business."

Anderson says having a strong visual element is the top concern in the corn maze, rather than yield.

"We want the corn to look nice when people walk through it," he says. "But, we can't spray chemicals a certain time before an event for everyone's safety. We want the corn to grow tall and thick throughout the maze, but we can't irrigate before an event because the paths get muddy. It's a tricky situation."

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Q&A

By Stan Schield
Division Manager
Montezuma, Kan.

Q: Is it safe to apply nitrogen in the fall for next year's crop?

A. The decision to apply nitrogen – and the type of nitrogen to apply – depends on two important factors: the soil texture of the field and the soil temperature following application.

Fine textured soil types can generally accept nitrogen in the fall without too much potential for loss. Whereas coarse soil types, such as sands, generally lose too much nitrogen to make the application effective.

Just as important to the decision is the soil temperature following application. Temperatures above 50°F increase the rate of conversion of ammonium nitrogen to nitrates, which can be lost by leaching or gases if excessive moisture falls after the conversion.

Even though the High Plains is experiencing a warm streak right now, typical weather patterns of late October and early November should begin to allow ground temperatures to decrease to the point where applications would be safe.

If a producer is considering using sources of nitrogen other than anhydrous such as liquid UAN at 28% to 32%, he should remember that 25% of the nitrogen is already in nitrate form. Dry urea contains all nitrogen as ammonium. These options are more costly, but some farmers prefer using a liquid or dry form to allow simultaneous applications of potash or other nutrients, which can speed up fall field work.

Call your Crop Quest consultant for more information on alternatives to anhydrous and other least-cost methods of applying effective fertilizers with minimal losses of nitrogen.



Managing Entire Farm Provides More Benefits



By Dwight Koops
Regional Vice President
Ulysses, Kan.

More and more Crop Quest customers are utilizing their consultant to help make crop planning, technology and biotechnology choices, in addition to the traditional crop input decisions. With this shift in customer need, Crop Quest is changing as well.

We are adding services that will effectively shift the consulting focus from making recommendations on a particular *crop* in the field to consulting on the *field* that just happens to be planted to a specific crop, and developing that acreage to make the most profit for our customers.

This doesn't sound that earth shattering, but it is a fundamental change. Concentrating on obtaining the most profit from the field, instead of just the specific crop, is a great way of utilizing resources to improve the bottom line. Determining what pesticides or biotech traits to use depends not only on the crop in the ground, but also on subsequent crops.

An entire crop plan should be developed before the first tractor heads to the field. One crop input usually dictates subsequent inputs, and all the decisions are interrelated. Besides offering our traditional consulting services, Crop Quest is providing more planning and focusing on the overall goals of the farm. Crop-planning services – in addition to crop input recommendations – can enhance the overall value of the field by increasing profits and yields while decreasing costs.

These services allow producers to utilize their agronomist across their entire operation and provide an economical way for customers to receive recommendations from their Crop Quest consultant on more acres. These services stand out when farmers utilize conservation tillage practices, are dealing with high energy costs, lower water availability, planting nontraditional crops, are utilizing GIS technology, farming larger acreages or have fallow ground in the rotation.

The traditional “crop scout” is a thing of the past. You can bet we still walk fields very intensively, but farmers have never paid us for the number of miles we walk. Crop Quest is rewarded for helping producers make the best decisions for their operation based on field observations, knowledge and experience combined with farm-specific information.

If you are not utilizing your consultant to help you better manage all your acreage, call your agronomist to find out how Crop Quest can economically expand our services to your entire operation.



Entertaining Agriculture *Continued from page 1*

Kent Davis, division manager for Crop Quest, says the land the pumpkin patch and corn maze are grown on lends a natural advantage to the crops.

“The water tables in the area are high, so you don't have to irrigate as much,” Davis says. “Not everyone could do this at their farm. We also have to shut the water off earlier than normal to facilitate work in the maze and customers”

The corn from the maze is harvested once the season is over, and one of Davis' major concerns for the crop is spider mite infestations in late season. The crop remains in the ground for as long as possible in order to keep the entertainment going, which is a departure from typical farms. For the pumpkin patch, powdery mildew is a top worry as the disease can lead to less yield, early death, rotting and smaller fruits.

“Growing crops for entertainment rather than acreage is different,” Davis says. “We're concerned about the look of the corn when people walk through it. We don't want any weeds in the pathways. For the pumpkins, Jim wants a variety of sizes and bright colors. These factors aren't normally a consideration for your average crop. It's challenging to make it work, but rewarding when you accomplish the farmer's goals.”



Weigh Costs, Benefits Before Planting Bt Rootworm



By Jim Gleason
Regional Vice President
St. John, Kan.

Now that the corn crop is in the bin, it's time to think about what corn to plant next year. One of the new choices that may be offered by your seed dealer is YieldGard®

Rootworm insect-protected corn. This seed contains a Bt protein bred into the corn and expressed in the roots for activity on rootworms. Trials show this technology works well against rootworms.

As with the Bt corn used for corn borer control, there will be a required refuge. At least 20% of the corn on a farm needs to be a non-YieldGard Rootworm hybrid. These non-YieldGard acres should have a similar cropping history and can be on the same field or an adjacent field that you own or manage. These refuge acres can be treated for corn rootworm larvae and other soil pests with soil-, seed- or foliar-applied insecticides. The refuge acres can be treated with a non-Bt insecticide to control late season pests such as corn borer or rootworm adults. However, if the non-YieldGard acres are treated, the fields planted with YieldGard corn must also be treated.

If producers plant the refuge as strips within the field, split the planter to alternate at least six, and preferably 12, consecutive rows of refuge corn with the YieldGard Rootworm corn. Mixing non-Bt seed with YieldGard Rootworm seed for use in the refuge is not permitted.

Even while using the YieldGard Rootworm seed, producers will still have to consider how to handle the rootworm larvae on the refuge acres. The resistance management plan still allows for the use of soil insecticides. For example, if using a beetle spray program on the refuge acres, you must also spray the YieldGard Rootworm acres, which may be economically unrealistic.

The requirements for the strip refuge aren't very realistic. Farmers must have at least a 12-row planter or be willing to have more than the 20% to 25% refuge because of the six-row minimum width. If you choose to plant the refuge in a block, producers will need to change seed at least once per field unless you have two fields that are adjacent to each other. A neighbor's field cannot count as your refuge.

When considering YieldGard Rootworm seed, producers must weigh the advantages of using this technology against the restrictions of the refuge. To some, these requirements may be enough of a disincentive against this new corn trait.



Is It Time to Renegotiate Land Rent?



By Ron O'Hanlon
President
Member, National Alliance of Independent Crop
Consultants, CPCC-I Certified

Now may be the time to renegotiate your landlord/tenant arrangements. Many cash rent arrangements and crop share leases may have been made during times when fields had higher yield potential and the cost of production was much lower than it is today.

There have been few adjustments of these arrangements to reflect the changes in agriculture from lower yield potentials and new technology. In contrast, much has happened in production agriculture that has had serious implications on High Plains farmers during the past several years.

There have been advances in technology, new pesticides, redesigned equipment and improvements in crop genetics. Most importantly, the severe drought conditions of the past three years, or more depending on your location, has had the most serious short-term effect.

Not only has the drought made it difficult to raise a profitable crop under dryland conditions, but it also has had a serious effect in depleting reservoirs and groundwater levels where many irrigation systems have had dramatic reductions in output – resulting in lower crop production. This situation does not appear to have a quick solution, as groundwater is slow to recharge. With a 10% to 40% reduction in water output, peak potential yields are a thing of the past. In many areas, farmers are switching to alternative crops due to the drop-off in water output.

The cost of inputs also is on the rise. For instance, the current price of natural gas is hovering around the \$6.00 per mcf level. Higher fertilizer costs are a direct result of the higher price of natural gas. All of this has had a powerful influence on the added cost of crop production under both dryland and irrigated conditions.

Genetically modified crops (GMOs) have had impressive results across the High Plains, but the results come with a premium price that, in turn, increases the cost of the seed. However, GMO crops do allow farmers to eliminate their use of certain pesticides or help lower their production costs while using less expensive pesticides. As an example, the use of Bt corn for corn borers has dramatically lowered the use of insecticides for treatment of the Lepidoptera pest, but the cost may actually be higher if treatments for other insect pests are required. Even with this year's introduction of Bt corn for rootworms, which should almost eliminate the use of rootworm insecticides on this modified crop, another pesticide is needed for treatment of other seedling insects.

Roundup Ready® technology has helped to lower the cost of herbicide usage on those crops that are glyphosate resistant. The generic glyphosates, and even Roundup, have been as low as \$0.13 to \$0.20 per ounce of product, which makes their usage inexpensive; but if other herbicides are required, the savings soon evaporate.

With decisions and costs like these, now might be the time to re-evaluate cash rent agreements. All cropping arrangements need to be fair to both landlord and tenant for either party to survive during these difficult times in agriculture.



Preparing Yield Data for Interpretation

By **Nathan Woydziak**
Precision Ag Specialist

With fall upon us, the growing season is winding down. Combines have been rolling and yield monitors have been collecting data. Now the question on some producers' minds is, "How do I turn the data into useful information?"

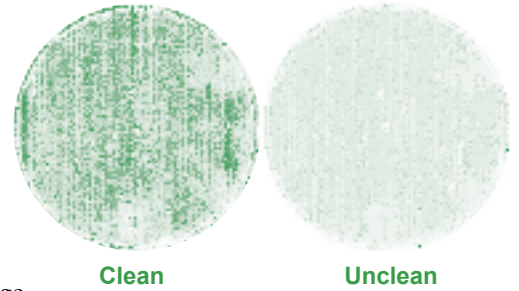
Before trying to draw conclusions from yield data, farmers should keep in mind the old saying, "garbage in, garbage out." Yield data straight from the combine always contains some erroneous points that need to be corrected before drawing conclusions. These points may come in the form of extremely high and/or extremely low yielding outliers. Another common error is the spatial outlier, those points that show up on the North Pole. Finally, it's a good idea to post-calibrate yield data back to scale tickets, especially if your yield monitor hasn't been calibrated recently.

Clean yield maps provide valuable insight into field variation. Once the variation is discovered, farmers can explore the question, "What is most limiting yield here?" The question is simple; finding the answer is not. This question can lead down many paths of analysis. Producers may decide to overlay elevation, soil type, grid sampling or other digital sources to help answer the question. In other cases, an agronomist with in-depth knowledge of a field can help find the answer. If a GPS is available, producers or agronomists may have marked features – such as a mud hole or a blowing sand hill – during the season to allow for measurement of the resulting gain or loss in yield for these areas.

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Some features do not occur every season. In these cases, it's beneficial to average years of yield data into one map called a Normalized Average Yield Map. From



these maps, analysts may find out during a three-year period a sand hill has 50% lower yields than the field average.

Using this type of information can identify troublesome areas and causes. The next step is to focus on how to fix the problem.

There are numerous solutions dependent on overall goals and abilities of an operation. Assuming limiting factors can be corrected for, the goal may be to increase yields in traditionally lower-yielding areas, or the goal may be to decrease inputs and associated costs in these areas if the limiting factor cannot be corrected.

Whatever goal is chosen, your agronomist can help you achieve those goals using the capabilities available on your operation. For example, if a producer has access to variable rate (VR) application, then varying nitrogen by using Normalized Average Yield Maps to set up VR yield goals will provide better fertilizer placement and potential use. On the other hand, if VR technology is not available, zone management using conventional equipment is an option.

In the end, diligent data collection leads to a plan customized to fit the needs of a particular farm. While the combines are being cleaned and put away, keep in mind the options opened by collecting, cleaning and analyzing yield data. Visit with a Crop Quest agronomist for details on how yield data can be put to use on your farm.



Mission Statement

Crop Quest is an employee-owned company dedicated to providing the highest quality agricultural services for each customer. The quest of our network of professionals is to practice integrity and innovation to ensure our services are economically and environmentally sound.

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