University of Wisconsin · Agronomy Department
1575 Linden Drive · Madison, WI · 53706 · (608) 262-1390
Agronomy Advice
http://corn.agronomy.wisc.edu

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Proven Corn Management Practices And Practical Tips When Prices Are Down

Joe Lauer, *Corn Agronomist*

Farmers need to manage nutrients and pesticides carefully to both avoid adverse effects on the environment and to reduce costs of purchased inputs. But growers also must maintain a production level that will result in profitable returns. Successful farm operations involve more than balance sheets of "input vs. output". There are many relatively "cost- and environment-neutral", sometimes "invisible", management techniques that can have substantial impacts on output and return per acre. These include: rotating crops, selecting high performing hybrids, early planting, optimum plant density, narrow row spacing, and cultivating. You may want to consider the option of leaving corn growing to someone else! Below is a list of ideas gleaned from many sources.

There are no secrets. The guidelines listed below have been gleaned from many sources. They are timeless kernels of advice because most of our advice for crop production efficiencies is the same old advice we've been handing out for years! But, the current economic climate creates "teachable moments." Use common sense … don't make drastic changes in farming operations for next year. Remember Mother Nature holds the ace. The key to high corn yield is spring weather dry enough for early planting, but wet enough to activate herbicides and promote good stands with uniform emergence, summers with timely rain (1-inch per week), lots of sunshine, and temperatures in mid-80's (day) and low 60's (night), and falls with sunny, dry weather to speed dry-down & allow harvest of "22% moisture corn" by November 1.

How many farmers know what their inputs are, let alone their costs per acre or per bushel? It is hard to trim costs if you don't know your inputs. More and more, it's the dealer who best knows the details.

Variety Selection

Select "Low-Cost" Hybrids. A direct relationship between seed price and hybrid performance does not exist. Farmers might be able to find top-yielding hybrids at a relatively low price. Hybrids should never be purchased without consulting performance data. Comparative yield potential between hybrids must be known to realistically assess the relative value of hybrids differing in seed price. Within maturities, grain yield potential of "average" hybrids is consistently 10-15% lower than for the highest-yielding group of hybrids on the market.

Hybrid selection should be based on PROVEN performance using averages from multiple locations and/or years. Further selection should include traits important for field or farm situation

Is Bt corn profitable? It is an example of an "insurance premium" trait. Bt, in and of itself, does not increase yield

Seed corn sold for $50 or less is easy to find. Corn hybrids are readily available as "brownbag" varieties, Sam's Club hybrids, as well as direct telemarketing and World Wide Web marketing. Are they a good deal or not? Who knows! PROVEN yield performance data often not available.

What about grain quality traits (e.g., high oil)? If market is available, go for it. They require good grain handling skills and identity preservation of product. Ask for comparative yield performance with near-isolines or elite varieties. Compare with best hybrids adapted to farm. Don't compromise the beneficial effect of premium with the potential yield drag of specialty trait hybrid

Recommendations when prices are down:

1. Plant more mid-season hybrids and fewer full-season hybrids. Less risk due to reduced drying costs. However, yield potential is also reduced.
2. Plant disease-resistant hybrids. Typically no extra costs associated with these traits and they significantly reduce production risks.
3. Base selection on yield potential and stability, maturity, disease resistance, and lodging. Look for transgenic pest-management traits. Carefully compare the benefits of pest- and herbicide-resistant crops with other herbicide programs.
4. Calibrate your planter and plant at the correct plant populations. Increase seeding rates by 10 percent when planting in adverse conditions or late in the season.

Plant Early

Corn planting should be as early in April as soil conditions permit and, if possible, complete planting by May 10 in order to avoid yield reductions. For row widths greater than 30 inches, use tall hybrids to maximize sunlight interception. Adjust seeding rate based on soil productivity and available soil water holding capacity. Reduce the seeding rate on fields with reduced production potential. Conversely, increase seeding rate on fields with high yield potential. This will maximize the return on each seed dollar.

Early planting usually does not cost more than planting late, but corn planted early produces greatest yields, reaches maturity earlier, and can be harvested sooner and/or at lower kernel moisture contents than late-planted corn. Without changing production costs, early planting increases return per acre and lowers production cost per bushel. Corn planted after May 20 returns $45 to $85 less per acre and costs $0.20 to $0.50 more per bushel to produce than corn planted early May. Reduced drying costs with early planting could further lower cost per bushel.

Corn planting can begin April 20-25 in southern Wisconsin and by May 1-10 throughout the state. However, greater than half the corn in Wisconsin is planted after mid-May lowering yields and increasing cost per bushel.

Major risks of early planting include 1) decreased, delayed, or uneven emergence and 2) frost damage. Emergence problems can be at least partially overcome by planting at higher rates with early planting. Frost damage seldom kills corn seedlings, since the growing point is protected below the soil surface until 4-5 weeks after planting.

The primary benefit of early planting is increased overall yield and earlier harvest of drier grain on a larger portion of the total acreage. Also more of the acreage can be planted to full-season hybrids, which have greatest yield potential. Growers should strive to have as much corn as possible planted by early May. Those with lots of corn to plant need to begin early in order to accomplish this goal.

A few key points to consider with "ultra-early" corn planting:

1. Don't "mud-in" corn just to plant early. Soil compaction from working soils too wet will outweigh benefits of early planting.
2. Start with full-season hybrids for your area. These hybrids benefit most from early planting, and suffer greatest yield losses with delayed planting.
3. Increase planting rates 5-15% compared to early-mid May planting.
4. Use starter fertilizers-cool soils reduce nutrient uptake.
5. Use only high-quality seed. Don't plant last year's leftovers until later.

Optimize Plant Density

Many Wisconsin corn producers are too cautious about increasing plant densities, due to fears of disaster due to dry weather or standability problems. The extreme 1988 growing season provided a range of yield environments to evaluate the influence of plant density on corn yields and economic return. The data indicate that in both "medium" and "high" yield environments the optimum harvest density was 30,000 plants/acre. Although the optimum density in "low" yield (due to drought stress) environments was only 18,000 plants/acre, high plant densities did not decrease yields as much as many agronomists and corn producers would have expected. Although the

optimum plant density with adequate rainfall in the 1988 studies in 30-inch rows was 30,000 plants/A, the best density for particular fields depends on factors such as the normal rainfall, soil-moisture storage capacity, soil fertility, and row spacing. The corn hybrids planted and their stalk strength, and interaction with plant density should also be considered.

Corn producers and agronomists can observe the growing crop before harvest for visible indications of whether or not plant density is optimum. The following factors indicate that plant density is probably too low for the growing environment:

1. If ears are consistently filled to the tip each year, plant densities may be too low. About an inch of underdeveloped kernels should remain at the ear tip, unless growing conditions are unusually favorable.
2. If less than 3-4% of stalks are barren, (no developed ear) plant densities are probably too low. But if barrenness gets much above 5%, plant densities may be reaching excessive levels.
3. Many "impressive" big ears, or double ears indicate plant densities could be higher.
4. Extensive "suckers" (tillers) indicates lower than optimum plant densities.

Cautious corn producers, practicing top management on highly productive soils but worried about boosting plant densities, should consider setting aside a small acreage for observation of results with a planting rate to obtain final stands approaching 30,000 plants/acre. In the initial stages, hybrids with better-than-average stalk strength should be used to help relieve lodging concerns.

Narrow Row Spacing

Theoretically, narrowing rows should improve corn yields, because spacing plants equidistant results in more efficient use of light, moisture, and nutrients. Also, high plant densities in narrow rows provide increased crop competition with weeds. In Wisconsin studies, yield changes in 30-inch compared to 36-inch or wider rows have ranged from 3% decreases to 10% increases. Row spacing of 15- or 20-inches only increased yields 1 to 2% compared to 30-inch spacing.

Based on these data, and those from other states, a 5 to 7% advantage for 30- vs. 36-to 40-inch rows can be expected if other factors are not limiting (optimum planting date, high soil fertility, excellent weed and pest control), and plant densities are relatively high. Producers meeting the following criteria are most likely to benefit from switching to 30-inch rows:

1. Average corn yields (whole farm) in recent years have been greater than 150 bu/acre in central and southern Wisconsin or 125 Bu/acre in northern Wisconsin.
2. The producer already completes planting by close to May 10, supplies high soil fertility, and provides excellent weed control.
3. Present planting equipment is worn, and needs replacement.
4. Corn acreage is relatively large.

Often the switch to 30-inch from wider rows means a change from 4-row to 6-row or wider planting and harvest equipment. It is easier to pay for bigger and/or newer equipment if yield levels are high, and corn acreage is large. A 6% yield increase from 150 Bu/acre with 300 acres adds 9 Bu/acre and 2700 bushels, or $6,750 (with a corn price of $2.50/Bu) over the entire acreage. With 100 acres, at the same yield level and corn price, the added return with 30-inch rows is only $2,250.

Currently, about half of the Wisconsin corn acreage is planted in 30-inch rows. Increased availability of used, 6-row, 30-inch planting and harvesting equipment in good condition from the central Corn-Belt may encourage adoption of rows narrower than 36- to 38-inches on farms with fairly small corn acreages.

Fertilizer/Nutrient Management

A sound fertility program is most important during financially distressed times. Obtain a soil analysis and develop a soil fertility program based on this analysis. Fertilizer needs vary from field to field and within fields. Fertilize each field based on need. Fertilize low fertility fields first and then fields with high fertility. Fields high in phosphorus and potassium may not require additional nutrients for a year or more. This practice will give a greater return for each fertilizer dollar than reducing fertilizer rate on all fields uniformly.

Apply only those nutrients that are determined to be limiting yield. As yet, many micronutrients are not recommended for most soils by agronomists. Something applied when not needed is an additional production cost and reduces profit.

Banding phosphorus and potassium with the planter has proven to be more efficient at low soil test levels than broadcast applications. To insure efficient uptake of phosphorus and potassium, place them beneath the soil surface. Roots, nutrients and moisture must be in the same area for nutrient uptake to occur.

Set realistic yield expectations based on previous history and the relative productivity of your field. In fields where the previous crop was a legume or another crop other than corn, reduce nitrogen rate to take advantage of nitrogen left from the previous crop. Manure commonly contains appreciable amounts of nitrogen, phosphorus and potassium. Incorporation of manure greatly reduces nitrogen loss. Adjust fertilizer requirements based on amounts of nutrients available from previous crop and/or manure application.

On soils with less than adequate drainage, consider the side dress application of most of the nitrogen. This will reduce the potential for nitrogen loss due to denitrification. To insure vigorous early growth, be sure to add some starter nitrogen. When side dressing or knifing in anhydrous ammonia close to planting, add some starter nitrogen.

Minimize surface volatilization losses of urea in reduced tillage by either surface banding or injecting to reduce contact of urea with surface litter.

To obtain optimum Nitrogen use efficiency one must Balance the logistics of N application with the need to minimize N loss potential e.g., the ease of "weed 'n feed" vs. opportunity for volatization or trash tie-up. Remember to consider denitrification and leaching potential of the soil.

Starter fertilizer issues include 1) High soil P & K levels = don't use P & K starters; 2) High soil P & K + early planting and/or no-till = Nitrogen most important; 3) High soil P & K + warm seedbed = don't use any starter; and 4) 2x2 placement versus "popup" = Higher "safe" rates w/ 2x2 and greater response

Under high soil P & K, the recommendations is replacement. Little, if any, effect on yield if no additional P & K applied for several years

Lime application can be a profit-maker, especially at pH levels less than 6.0. One of few opportunities for VR technology to return profit to farmer

With micronutrients, the profit margin to dealer is much greater than N-P-K fertilizers. The profit margin to most farmers is much more questionable. MOST cropland does not respond to application of micronutrients. Use both soil test and plant tissue analysis to develop recommendations

With root "enhancers", the profit margin to dealer is very attractive. The profit margin to most farmers is much more questionable. There is little factual evidence for crop benefit.

Recommendations when prices are down:

1. Sample soil and follow soil test recommendations. Accurate soil tests let you reduce fertilizer costs by taking advantage of nutrients supplied by the soil. If you don't soil sample, you're losing money - either by applying more fertilizer than your crop needs or not enough for it to reach its yield potential.
2. Environment and soil characteristics influence yield more than fertilizer rate. Fertilize for realistic yield goals. A reasonable yield goal is the average of the three highest yields for the past five production years for that crop in a given field.
3. Apply most of the nitrogen as a sidedress and base your rates on the pre-side dress nitrate test.
4. Reduce or eliminate phosphorus fertilizer applications. Additional phosphorus isn't required when soil test levels are above a certain level. Most farm fields in WI have adequate phosphorus levels.
5. Utilize manure nutrients whenever possible. Test manure, calibrate your spreader and apply manure based on soil test recommendations. Pre-side dress nitrate testing has also been used to measure the amount of N available to corn from fall manure applications.
6. Apply ag lime as needed. Applying lime when needed will increase nutrient availability and improve yields. Select liming materials based on their neutralizing value; mesh size and magnesium content (if magnesium is recommended). Check into local sources of byproduct liming materials.
7. Apply micronutrients only where a response is predicted and likely to occur. Highly responsive crops will show a yield response to a specific micronutrient if the soil test level for that nutrient is low. Zinc (corn), manganese (soybeans and wheat) and boron (alfalfa) are the only micronutrients that should be applied on mineral soils.
8. Take advantage of rotating crops. Soybeans contribute 30 pounds of actual N per acre to the following corn crop.

Rotate Crops

Fertility, pest management and soil conservation benefits of crop rotations are important. Sometimes the yield benefits of rotation crops are overlooked. Crop rotation usually results in greater yields, beyond the increase that can be explained by enhanced soil nutrient availability or pest control. The 5 to 45% yield increases following a crop other than corn are those that occurred despite best attempts of researchers to provide adequate fertility and pest control under continuous corn. In these studies the previous crop was most often a legume (soybeans or alfalfa), but in one study, growing winter wheat before corn also resulted in 10 to 25% increases in grain yield.

The "unexplained" yield increase when crops are rotated is often called the "rotation effect", and has been attributed to differences in soil nutrient availability, soil tilth, soil moisture, diseases, insects, and weed control. Some scientists propose that soil microbes might produce "antibody-like" reactions to roots of a crop when grown continuously. Other researchers speculate that natural organic residues from the previous crop might contain compounds that either inhibit or stimulate the following crop.

The magnitude of the "rotation effect" varies from year to year, and is poorly understood by scientists, but this should not keep farmers from exploiting crop rotation, whenever possible. Research evidence indicates that, although decreased, the positive effect may persist two or more years. In cropping systems that do not allow annual rotation of crops, some benefits can still be obtained by limiting continuous cropping to two growing seasons.

<u>If the practice of crop rotation is so great, why is there so much continuous corn in Wisconsin</u>? Although the reasons for the relatively large proportion of continuous vs. rotated corn in Wisconsin have not been clearly delineated, there are several possible explanations:

1. Some continuous corn land may be used for manure disposal in dairy/livestock operations.
2. Relatively flat land may be relegated to continuous row crops including corn production, while more erodible steep land is in pasture or corn-hay rotation.
3. In many other corn-producing states, corn is rotated every year or two years with soybean, and to a lesser extent, small grain crops. In Wisconsin, soybean and small grain crops are grown on relatively few acres and other readily adaptable and marketable alternative feed or cash grain crops do not exist.
4. Current federal farm commodity programs discourage crop rotation, by favoring "program crops", such as corn. Obtaining program benefits depends on establishing and keeping a corn "base" by growing the crop continuously. Although a large proportion of Wisconsin farmers are dairy producers, there is a significant cash grain market, with nearly 50% of the corn sold from the farm it was produced. Nearly all the corn in Wisconsin is enrolled in the federal farm program, due to the economic benefits for both dairy and cash crop producers.
5. There have been few attempts by U.S. and Wisconsin research and extension personnel to apply economic analysis to crop rotation studies to provide farmers the information needed to assess benefits of alternative crop sequences and systems. Currently, most research and extension publications dealing with crop rotations detail crop growth and yield responses, often separately crop-by-crop without considering productivity, efficiency, profitability, or off-farm costs of the entire cropping system.

Although yields are enhanced in crop rotations, high yields can be maintained with continuous corn, if adequate fertility is supplied through manure or commercial fertilizer and pests are controlled by chemical or other means. The world record corn yield of 394 bu/acre was produced following many years of continuous corn!

Pest Management

Insects

Soil insecticides are usually needed the year following corn to control corn rootworm. Soil insecticides are not a good IPM practice for insects that arrive by air from the south

Weeds

Choose cost-effective chemicals. There is often a wide range of costs among chemicals that are rated fairly equal in effectiveness. This requires much homework!

Healthy crops compete well with weeds i.e. use solid agronomic practices. Common sense =

Timely weed control: “Big weeds were once small weeds!” Avoid crop injury potential: O.P. insecticides & SU herbicides. Application during periods of rapid crop growth, i.e., warm temperatures with plenty of soil moisture

Plan your weed control program based on weed history, crop rotation and soil type. While weed control is necessary for profitable crop production, absolute weed control is not required to maximize profits. In developing weed control programs, consider crop competition, rotation, cultivation, tillage systems and planting dates as factors other than herbicides that contribute to weed control. Many of these factors are low cost and effective in weed suppression.

Diseases

Weather is important: Need susceptible host crop, presence of pest and right environment for pest problems to occur.

Cultural practices such as crop rotation, tillage, planting date, and hybrid selection for resistance or tolerance versus susceptibility

Recommendations when prices are down:

1. Scout fields on a regular basis and treat for insects and diseases only when it looks like damage will exceed the cost of treatment.
2. Use reduced rate applications of soil insecticides. Often efficacy and consistency ratings of pesticides applied at reduced rates are similar to full rates. Beware that while using lower application rates than recommended on the label is legal, it exempts the user from the right to make claims of poor performance to the chemical manufacturers.
3. Calibrate your sprayer to avoid over applying pesticides.
4. Consider reduced rate application for post emergence herbicides. The reduced rate should be applied in a split application at early post to weeds less than an inch tall and two weeks later when the weeds are less than an inch tall. Catching the weeds when they are extremely small is the key to success with this strategy. Keep adjuvants at full rates. Don’t reduce herbicide rates when weeds are under moisture stress. Beware that while using lower application rates than recommended on the label is legal, it exempts the user from the right to make claims of poor performance to the chemical manufacturers.
5. Shop around for the best weed control program. Identify and map weeds in the fall and put some time and effort into selecting the least expensive herbicides.
6. Consider band applications of herbicides followed by cultivation. Applying herbicides in a 10-inch band over 30-inch rows reduced herbicides by 67%. Make sure you have enough time to cultivate on a timely basis.
7. Plan to rotary hoe if you haven’t gotten a half-inch of rain within seven days of pre-emergence herbicide applications. This will control small weeds that escape the herbicide and reduce the need for costly post-emergence applications. Rotary hoe again in five days if at least a half-inch of rain hasn’t fallen.
8. Perform tillage only when necessary and under proper soil conditions. Deep tillage should be done when a compacted zone has been identified and the soil is relatively dry. Late summer and fall are best times for deep tillage. Perform secondary tillage only as needed for a decent seedbed.

Tillage

Tillage is performed to control weeds, bury residue and assist in seed-soil contact of the planted crop. Untilled fields with soybean stubble should have the crop that follows planted using no-tillage or reduced tillage techniques. Research indicates no yield reduction and considerable cost saving when using this practice. Drastic changes in tillage programs over large acreages without previous experience or a thorough understanding of the system is risky. Delay tillage and field traffic until satisfactory soil conditions exist. Yield losses due to compaction are usually greater than those due to delayed planting.

Cultivate

Weed control benefits of cultivation are obvious. However, similar to crop rotation, research indicates yield increases sometimes occur due to cultivation, even when there are not enough weeds to justify cultivation for weed control. Research in Illinois and Indiana has shown average corn yield increases of 10 to 20 bu/A due to cultivation. In a recent Wisconsin study, cultivation increased yield 7 bu/acre for one hybrid, but did not change yield for another hybrid.

It appears that cultivation is most beneficial on soils that tend to crust or lack adequate aeration. Cultivation eliminates surface crusting on these soils and allows water to enter the soil more rapidly than on non-cultivated land.

Machinery

Cut tillage trips where possible. Expand no-till on well-drained soils. Deep fall tillage may not be justified if compaction is not present. Maintenance and calibration of machinery is important. If not performed it can lead to misapplication of chemicals and fertilizer, incorrect seeding rates, and excessive harvest loss.

To date increased profits due to precision farming primarily related to one-time correction of yield limiting factors such as soil pH variability and field drainage. In short, “There’s nothing precise about precision farming!”

Reducing Harvest Costs

1. Back-haul on the return trip whenever delivering grain to a distant elevator or terminal.
2. Compare the drop charges, drying costs and discount schedules from all of your grain buyers and deliver to those that yield the most net income. One approach to doing this is to develop a scenario that closely resembles your corn crop and provide that same scenario to all of your delivery points. Ask for the amount of the check after all drying costs, shrink losses, test weight and BCFM discounts have been assessed.
3. Adjust your combine to reduce harvest losses.

Reduce Overhead Costs

1. Look for ways to reduce “hidden” overhead costs. Direct crop inputs like seed, fertilizer and chemicals represent less than 40 percent of total costs of production on most farms. The difference between high-cost and low-cost producers generally isn’t in these areas. Look at other costs like repairs, fuel, machinery, labor (including family draws), debt servicing, depreciation, and land expenses.
2. Develop a short-term goal for the next two years to get all farm and family costs under control. Mentally rate every expenditure to determine if its really needed, or just something you desire. Say no to “wanted or desired” expenditures.
3. Take advantage of discounts by coordinating with neighbors to buy your inputs collectively in order to get volume discounts. Buy inputs early and pay cash to maximize discounts. Work with your lender to secure enough operating money to do this if need be. Weigh the interest your paying against the discounts realized for buying early and using cash.
4. Share equipment with neighbors or family members. Joint purchasing or cash renting can greatly reduce your farm’s cash cost of equipment ownership. Be sure to work out details on scheduling use, maintenance and repairs before sharing equipment in order to avoid conflicts.
5. Renegotiate your rental rates with landlords. If your potential income is reduced by 25 percent, then your rental rates should be reduced by a similar percentage. Be creative in coming up with rental agreements that let you and your landlord share risks and profits.
6. Re-size your farm to fit the current economic realities. Lease or sub-lease any land that may not be in your economic plan. Sell mature timber with the help of a consulting forester. You may need to sell other assets including land to get debt structure in balance.
7. Consider taking advantage of currently low interest rates to refinance some of your long-term debt. Consider moving short-term and intermediate debt to long-term. This helps cash flow and you should be able to get better interest rates on land versus short-term or intermediate loans. Pay off all high-interest credit card debt with lower interest rate money.

Financial Records / Business Management

1. Keep accurate and current financial records - and use them - to fully understand your financial position. This will also improve working relations with your lender.
2. Evaluate risk management tools. How much risk can you really afford? Only by understanding your financial position will you understand your risk position. Risk management tools are crop insurance and various marketing strategies that help you transfer some of your production and price risk to others.
3. Develop projected income statements and cash flows to help you write a financial plan. Use monthly accounting records to monitor how closely you are able to follow the plan. Good financial records can do a lot more for your crop business than just help you prepare taxes.
4. Certify all your crop acreage with FSA. You will not be eligible for some government programs unless you certify. Keep abreast of government programs so you can use them to your maximum advantage.
5. Develop a marketing plan and follow it. Seventy percent of the grain is sold at the bottom 30 percent of prices. Know your actual cost for producing each crop.
6. Consider doing custom work to fully utilize your existing equipment. If you have surplus equipment and time, you can generate cash by doing custom work, or trade services with other farms. In some cases, you can rent the machinery to others rather than operating it yourself.

Stay On Top Of Things

Read University pest and crop newsletters. Identify and diagnose problems early to provide opportunity for corrective measures. Avoid post-mortems at harvest-time

Don't Grow Corn?

Profitability of farm enterprises depends on keeping abreast of information, and applying the information to each aspect of the operation in an appropriate and timely fashion. It might be appropriate on some Wisconsin farms, to leave grain production to "corn-growing specialists", purchase grain, and strive to become a better "forage- and milk-producing specialist". In many dairy operations, on-farm grain production is conducted profitably and provides an avenue to utilize nutrients from forage legumes and manure. In other situations, however, grain production costs per bushel are very high compared to market prices, and time spent producing grain detracts from the forage and livestock components. This is most likely to be the situation in northern Wisconsin, where short-growing seasons and/or wet soils limit grain production and increase harvest and storage difficulties. Production costs on these farms may be the same or even greater than for producers further south.

Besides considering whether to purchase rather than grow corn, alternate grain crops might be an option. Livestock growers may benefit by planting barley for feed purposes rather than attempt to raise corn. This is particularly true for 1) farmers located in northern parts of the state that have difficulty producing acceptable yield and quality corn or 2) farmers that run out of feed during July and August, and need to buy grain. In regions where barley yields are within 10 bu/acre of corn yields, it will likely be more profitable to grow barley, due to lower variable costs to produce barley than corn.

Regardless of the type of operation, cost per unit of production must be known in order to make decisions. Dairy producers must find out the real costs of growing feed in order to determine whether to "buy" or "grow". All grain producers need to know costs and returns in order to assess the value of adding or subtracting inputs and/or altering management approaches.

Develop a Profit Plan

Produce the crops that are best adapted to your soil and climatic conditions. Major changes in the crops grown or in crop production practices are hazardous. The reason someone in another location of the country is growing different crops or growing the same crops differently is because that person's soil and climatic conditions will not permit him to efficiently produce what you produce in the way you produce it. Switching to unfamiliar crops is usually a costly venture rather than a profitable one, and local markets for new crops are usually not available.

Consider reducing the total acres in crops and becoming more efficient in production on each acre. It is very possible that the total volume of production from less acres intensely managed would equal the total volume from a larger acreage. Evaluate soils and fields according to ownership or leasing arrangement, drainage, fertility, location, size and overall production potential. Profit is determined by efficiency per unit of production, not on total volume of production.

Do what you know how to do but "DO IT BETTER." Find the weak points in your production program, attempt to correct or strengthen them. This is much more prudent than making major change in production enterprises. If corn and soybeans are what you know how to produce and are equipped to produce, then become more efficient in producing them rather than changing to some other crop.

Be realistic in developing a production program relating to anticipated yield. If historically this field has never produced more than 120 bushels of corn per acre, it is not realistic to develop a production program for 200 bushels.

STICK TO BASICS: Avoid the temptation to buy unproven products. Stick with the proven, recommended practices. Often new miracle products result in no increased yields, only increased production costs.

Be prepared to perform tasks on time when they should and can be done. The one factor that stands out between successful and unsuccessful farmers is **TIMELINESS**.