Farm Financial Planning Program

Farm Financial Planning is Iowa State University Extension's farm financial analysis program. It consists of one-on-one financial counseling, a computerized analysis of the farm business, and referral to other extension programs or outside services that may be useful.

Who is it for?
Farm Financial Planning is for anyone who wants to understand a complete picture of their farm financial situation. It helps take the guesswork out of whether or not a change would increase profitability and improve cash flow. A FINPACK analysis may provide a more in-depth evaluation of the farm business, which many lenders are requiring before they will extend further credit.

What does it do?
Farm Financial Planning helps you evaluate your farm business and determine whether or not a change is desirable. It provides an in-depth plan for the farm business so the operator and the lender can make decisions for the future. Farm Financial Planning helps answer three basic questions of sound business management.

- Where am I today?
- Where do I want to be in the future?
- How do I get there?

The computer analysis looks at profitability, liquidity, solvency, and risk-bearing ability. This information is provided for three or more alternative plans at a time. Examples of alternative plans could be the addition, expansion, or phasing out of a livestock operation, or buying, selling, or renting land. Farm Financial Planning can help evaluate ways to correct negative cash flow and profitability problems.

A trained extension associate meets with the family to discuss the results of the analysis and the possible effects if changes are made. The extension worker may introduce other farm and family financial materials or information about outside sources of help.

How much does it cost?
This service is offered at no charge. It is funded by the Agricultural Credit School, a program of Iowa State University Extension and Outreach and the Iowa Bankers Association. Who performs the analysis? The Farm Financial Management associates are part-time extension employees with college degrees and special training in farm budgeting and financial analysis. They have farm backgrounds so they understand the current farm situation.

For more information, contact your ISU Extension farm management field specialist.
Managing Crop Residue Removal and Soil Quality Changes
Mahdi Al-Kaisi, professor of soil management/environment, and Jose Guzman, former graduate research assistant, Department of Agronomy, Iowa State University

The implementation of conservation systems to sustain soil and improve environmental quality has to be considered when shifting acreage to continuous corn, as well as when removing corn residue for livestock uses, cellulosic ethanol production, or other industrial uses. Continuous corn production can increase the use of more intensive tillage systems to manage corn residue. The increase in tillage intensity coupled with high use of nitrogen (N) fertilizer in continuous corn present significant soil and water quality challenges, which can lead to economic and environmental concerns that need to be considered. The removal of corn residue for any purpose should be weighed against the potential impact on soil quality and productivity.

Summary
Significant short-term effects of residue removal on soil physical properties can take place with residue management or removal. Bulk density can be affected by residue removal and tillage system, especially when low amounts of residue remain after harvest. Furthermore, soil aggregation and size decreased with increased residue removal rates. These changes in soil physical properties led to reductions in water infiltration rate regardless of tillage system. In general, the adoption of no-till can offset, to some degree, some of the negative effects of residue removal, but potential losses of soil organic carbon and deterioration of soil physical properties were still observed. Download the full article at: https://store.extension.iastate.edu/Product/Managing-Crop-Residue-Removal-and-Soil-Quality-Changes

Using Manure Nutrients for Crop Production
John E. Sawyer and Antonio P. Mallarino, professors of agronomy and extension soil fertility specialists, Iowa State University

The manure nutrient concentration varies considerably between animal species; dietary options; animal genetics; animal performance; production management and facility type; and collection, bedding, storage, handling, and agitation for land application. Use of average or “book” nutrient values can be helpful for designing a new facility and creating manure management plans but is not very helpful in determining specific manure nutrient supply or application rates due to wide variation in nutrient concentrations between production facilities. For example, a recent sampling across swine finishing facilities found a range in total N from 32 to 79 lb N/1,000 gal, P from 17 to 54 lb P2O5/1,000 gal, and K from 23 to 48 lb K2O/1,000 gal. A similar or larger range can be found with other manure types. Nutrient analyses often vary greatly as storage facilities are emptied or manure is stockpiled, and also among multiple samples collected from loads during land application. Therefore, collecting multiple manure samples and maintaining a history of analysis results will improve use of manure nutrients.

Summary
Carefully manage the nutrients in animal manure as you would manage fertilizer. Have representative manure samples analyzed to determine nutrient concentration. At a minimum, samples should be analyzed for moisture (dry matter) and total N, P, and K. For additional information on N composition, samples can be analyzed for ammonium. Maintain a manure analysis history for production facilities. Set the manure application rate according to crop fertilization requirements and for the crop availability of manure N, P, and K. Adjust manure rates for estimated N volatilization.

For manure application rates, consider the crop N, P, and K fertilization requirements and field P-Index ratings, but do not exceed the crop N fertilization need. Consider the nutrient needs of crop rotations rather than just individual crops, which is especially important for P and K management. Allocate manure to fields based on soil tests and crops to be grown. Fall applications of manure should not be made until the soil temperature is 50° F and cooling, especially for manure sources that have a large portion of N as ammonium. Do not apply manure to snowcovered, frozen, or water-saturated sloping ground to reduce risk of nutrient loss and water quality impairment. Download the full article at: https://store.extension.iastate.edu/Product/12874
Achieving Full-season Waterhemp Control in Soybean

Dr. Bob Hartzler is a professor of agronomy and an extension weed specialist
Meaghan Anderson is a field agronomist in central Iowa and an extension field specialist at ISU Extension and Outreach

Although there are many ways weeds escape control in crop fields, one of the leading causes of waterhemp control failures is emergence of plants following postemergence herbicide (POST) treatments. Waterhemp requires more than twice as many growing degree days to reach 50% emergence as giant foxtail or velvetleaf resulting in much of the population emerging after mid-June.

The layered residual system is one of the best ways to reduce late-season waterhemp escapes in soybean. It involves a split application of herbicides with residual activity – the first application is made at or near planting, and then additional residual is included with the POST application. The additional residual herbicide extends activity later into the season than a single application, and is especially beneficial in years with heavy rains following planting.

Numerous products are available for the first application, but it is important to select a product that is highly effective on waterhemp. For fields with heavy waterhemp pressure, the Group 14 and 15 herbicides will provide the most consistent control. Group 15 herbicides are the only products with sufficient residual activity to be included with the POST application.

Since the goal is to extend control later into the season than typically achieved with preemergence products, the layered residual approach requires the maximum labeled rate for the soil type. Typically 60 to 70% of the preemergence herbicide is applied at planting, and the remainder in the second application. The University of Minnesota has published information comparing the effectiveness of several layered programs.

Timing of the second application is critical for consistent results, this application should be made at least a week earlier than the typical timing for POST applications. Rather than delaying the application to allow more weeds to emerge, the second application should be made while the initial preemergence application is still active. Three weeks after planting is a good timeframe for the second application in most situations. Even if few weeds are present at the time of this application it is critical to include an effective POST product to control any emerged weeds.

Layered residuals help reduce selection pressure placed on POST products by reducing the percentage of the weed population controlled by the POST herbicide. This transfers the risk to the residual herbicide, so layered residuals are not a long-term solution to manage herbicide resistance. If the strategy can result in cleaner fields than currently achieved, the reduction in the seedbank will reduce the threat of new resistances. Not every field may require this aggressive approach to manage weed problems, but fields with consistent late-season waterhemp problems will likely benefit from a full rate of residual split between the PRE and POST applications.
Estimating costs of crop production vital for 2019 farm businesses
By Alejandro Plastina, extension economist, 515-294-6160, plastina@iastate.edu

Estimating costs of crop production for 2019 will be extremely important. With a market outlook for 2019 similar to 2018, there are challenges ahead from a marketing perspective. Marketing strategies for farmers include forward pricing, setting a quantity-only marketing plan, or using the spot market. The price consequences of these decisions are substantial. Having a firm handle on one’s cost of production provides a key piece of information in any strong marketing plan. The latest issue of the Iowa State University Extension and Outreach “Estimated Costs of Crop Production” reports average cost estimates for Iowa farms in 2019, and provides guidelines to help farmers calculate their own costs of production. The estimated costs of production for continuous corn are $3.93, $3.91, and $3.88 per bushel for expected yields of 164, 182, and 200 bushels per acre, respectively. The estimated costs of production per bushel for corn following soybeans are $3.39, $3.39, and $3.38 assuming 178, 198, and 218 bushels per acre, respectively. Recent projections for the 2019 marketing year average price for corn are near $3.90 per bushel, showing the potential for a slight profit for most yield levels. Cost of production estimates, per bushel, for herbicide tolerant soybeans are $9.21, $9.04 and $8.86 assuming 50, 56, and 62 bushels per acre, respectively. The total cost per bushel of soybeans is projected at $9.13 for nonherbicide-tolerant beans at 56 bushels per acre, according to the report. Recent projections for the 2019 marketing year average price for soybeans give a more negative outlook at $8.75 per bushel.

Very large or small farms may have lower or higher fixed costs per acre. “Our annual estimates are to be used as guidelines to help you compare and figure your own costs for your farming operation. For example, if you own the land and you are interested in calculating your accounting cost of production rather than your economic cost of production (which includes the opportunity cost of not renting out your land), then your land cost will likely be much smaller than the cash rent equivalent included in the report. Alternatively, if you are producing crops on leased acres and your cost structure is similar to the one used for the report but your expected yield is much higher, then your projected cost per bushel will be lower than the published one,” says Plastina.

Breakdown of costs for 2019 For corn, land represents approximately 30 percent of the total costs of production. Values of $185, $223, and $258 per acre rent charges for the low, medium, and high quality land were assumed. The variable costs represent just over 50 percent of the costs of production. Of the variable costs, nitrogen and seed costs are almost half the costs for either continuous or rotated corn. Nitrogen increased 26 percent from 2018, at $.38 per pound and seed was assumed to cost approximately $256 per bag, a 2 percent decline.

Land represents just over 44 percent of the costs of production for soybeans while the variable costs represent 42 percent. Seed and fertilizer are almost half of the variable costs. Phosphorus was charged at $.42 per pound and potassium at $.31 per pound, an increase of seven and 14 percent, respectively. Machinery costs were two percent lower compared to 2018 primarily due to lower fuel costs.

Knowing the operation’s cost per acre is critical for creating solid marketing plans and making the necessary arrangements (such as securing operating loans, restructuring machinery or real estate loans, adding non-farm income) to cash flow an operation in 2019.

While total costs per bushel may look lower in the latest cost of crop production publication due to higher reference yields, total costs per acre are estimated higher than in 2018. Although there is variability across most input categories, increased fertilizer and chemical prices and lower seed and crop insurance costs were among the most variable. Producers need to have a strong grasp of their own production costs. Costs of production are not seeing the rapid fluctuations that were seen in recent years, but current prices still create a lot of uncertainty when it comes to profitability on individual operations. Knowing costs is key.

For the full report visit https://www.extension.iastate.edu/agdm/newsletters/2019/jan19.pdf or contact your local Extension office.
Caring for Fruit Trees
Richard Jauron, ISU Extension and Outreach Horticulturalist

With spring just around the corner, fruit tree owners should start to think about the care of their trees and this year’s fruit crop. The key to a good fruit set is to provide conditions favorable for flower bud formation, survival and pollination.

Horticulturists with Iowa State University Extension and Outreach share tips and practices that improve a tree’s ability to begin and continue to bear fruit. To have additional questions answered, contact the ISU Hortline at 515-294-3108 or at hortline@iastate.edu.

When should I prune my fruit trees?

Late February to early April is the best time to prune fruit trees in Iowa. Fruit trees should be pruned before they begin to leaf out in spring. Summer pruning of fruit trees is generally not recommended. However, water sprouts, rapidly growing shoots that often develop just below a pruning cut, can be removed in June or July.

How often should fruit trees be pruned?

Fruit trees should be pruned on an annual basis. Annual pruning of young (non-bearing) fruit trees develops a strong framework and desirable tree shape. Annual pruning of bearing trees maintains tree vigor, maximizes fruit yields, and improves fruit quality. Young trees require light annual pruning. Bearing trees require light to moderate annual pruning. Insufficient pruning of bearing trees may result in small, poorly colored fruit with a low sugar content and mediocre favor. Excessive pruning of bearing trees weakens trees and results in vigorous shoot growth with little or no flower bud formation for the following year’s crop.

When should I apply a dormant oil spray to my fruit trees?

Dormant oil sprays are highly refined petroleum products that are mixed with water and applied to trees and shrubs to control aphids, spider mites, and scale. Dormant oils destroy pests by suffocating them. When applied properly, the thin film of oil plugs the spiracles or pores through which the mite or insect breathe.

Proper timing is critical when using dormant oil sprays. Dormant oils should be applied in late March or early April in Iowa before the trees show signs of breaking dormancy (before bud break). Dormant oils applied in February or early March are not effective as insects are not actively respiring at this time and, therefore, not vulnerable to the oil’s suffocating effects. Dormant oil sprays should be applied as close to bud break as possible.

Rabbits have gnawed on the bark of my fruit trees. Have they been seriously damaged?

During the winter months when food is scare, rabbits often gnaw on the trunks of young, thin-barked, trees. Trees that have had their bark removed completely around their trunks have been girdled and essentially destroyed. Wrapping the trunks or applying pruning paint to the damaged areas will not save the trees. Most girdled trees will eventually sucker from their base. However, since most fruit trees are propagated by grafting, suckers which originate from the rootstock will not produce a desirable tree.
Calendar of Events

FEBRUARY
20 Confinement Site Manure Applicator Certification, Borlaug Learning Center, Nashua, 1:30 pm
26-28 Hawkeye Farm Show, UNI-Dome, Cedar Falls, 9 am - 4 pm
27 CIC: Seed Treatment, Butler County Extension Office, 9 - 11:30 am

MARCH
1 Fair Book Cover Contest Due
4 4-H Advisory Committee, Butler County Extension, 7 pm
6 CIC: Ornamental and Turfgrass Applicators, Butler County Extension, 9—11:30 am
6 Extension Council Meeting, Butler County Extension Office, 7 pm
9 4-H/FFA Swine Weigh In, Butler County Fairgrounds, 10 - 11 am
13 CIC: Certified Handlers, Butler County Extension, 9 - 11:30 am
17 4-H County Council Meeting, Butler County Extension, 4 pm