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1991

### G91-1031 How to Hire a Crop Consultant

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Witkowski, J. F.; Shapiro, Charles A.; Kranz, William L.; and Wright, Robert J., "G91-1031 How to Hire a Crop Consultant" (1991). *Historical Materials from University of Nebraska-Lincoln Extension*. 663.

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## How to Hire a Crop Consultant

**This NebGuide reviews factors to consider when choosing a crop consultant.**

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- [Weed Disease and Insect Scouting](#)
- [Fertility Management](#)
- [Irrigation Management](#)

Efficient management of a profitable crop production system includes estimating pest populations, determining fertilizer needs, and, in the case of irrigation, monitoring soil/water conditions.

Decisions regarding pest management should include information from recurring field visits that estimate pest populations, potential plant damage and crop growth. Regular visits to the field are necessary to monitor soil/water conditions by the use of soil probes, soil moisture blocks, tensiometers, or other methods to assure efficient application and use of irrigation water.

Fertility decisions may require fewer visits to the field, but crops should be inspected for deficiencies throughout the season and soil samples taken between growing seasons.

Many producers have neither the time nor the labor to collect all the necessary field scouting information to make appropriate crop management decisions. Nonetheless, these are prerequisites to better-informed decision-making and can be obtained by employing competent crop consultants.

The agricultural chemical industry, including manufacturers, distributors and local retailers, do an excellent job responding to producers' questions throughout the growing season. Often they commit people to field scouting for customers, especially for insect scouting and taking soil samples.

If, however, the scouting visit is in response to a grower inquiry because plant damage is already significant, optimal treatment timing already may have passed. Also, a potential conflict of interest may exist in situations where individuals recommend the use of a product and at the same time sell the product and/or the application.

Both these potential problems can be avoided by using an independent professional consultant for crop

management recommendations. Most independent management consulting firms do not sell or receive a commission on any product they recommend, thereby avoiding a potential conflict of interest.

Typically the independent crop consultant has an annual contract with the grower and is paid on a per acre basis. This contract requires that the grower's interests be of primary importance to the consultant.

The crop consulting industry is a valuable and expanding service in Nebraska. A representative organization is the [Nebraska Independent Crop Consultant Association \(NICCA\)](http://www.nebraskacropconsultants.org) whose members provide professional technical advice to growers of agricultural crops in Nebraska. This group includes agronomists, entomologists, crop and soil scientists, weed scientists and plant pathologists, along with others experienced in cultural practices and tillage, seed variety selection, and irrigation management. For further information, the organization can be contacted at:

*Nebraska Independent Crop Consultant Association*

*Box 412*

*Kearney, NE 68848 Web: <http://www.nebraskacropconsultants.org>*

A list of companies that provide a crop consultant service in your area may be obtained at your Cooperative Extension office, or write directly to:

*Integrated Pest Management*

*Department of Entomology*

*210 Plant Industry, East Campus*

*University of Nebraska-Lincoln*

*Lincoln, NE 68583-0816.*

Key in selecting a crop consultant is the individual's technical qualifications. Look for experience and competency in the services you are seeking.

College level training in crop disciplines such as irrigation engineering, agronomy (seed science, crop production or soil fertility), plant physiology, entomology, plant pathology and agricultural economics is highly desirable. A bachelor of science or higher degree in one or more of these disciplines is preferable. Experience in computer technology is helpful. Field experience is essential for the consultant and/or their staff, and a farming background is a valuable asset. Prospective consultants should be willing to share their backgrounds and provide documentation of training received.

The Nebraska Independent Crop Consultant Association has a certification process available to their membership that requires proof of competency in the services the consultant wishes to provide. Some academic disciplines also have certification programs.

The cost of consulting services is highly variable and depends on the level and types of services furnished. Ask existing clients of the firm you are contemplating hiring about their degree of satisfaction with the firm and its pricing. If possible, talk to more than one consultant and evaluate the services provided, costs and your needs before making a final decision. When selecting a crop consulting service insist on a written contract detailing the types of services to be provided and the fees for these services.

In general, a consultant always should use current technology in the services offered. For example, computer technology is widely available and usable, i.e., 1) the European corn borer computerized decision-making model, and 2) evapotranspiration models used in irrigation scheduling. Sampling methodology continually is improving, as is the use and applicability of economic thresholds when insects and weeds are involved. The use of proven alternative insecticide management strategies includes using summer rootworm beetle counts to predict the need for rootworm larval control measures the following spring in continuous corn. For assessing fertility needs, deep soil sampling for nitrate-nitrogen

is highly recommended.

A producer interviewing a prospective consultant should initiate a free exchange of one another's management styles and philosophies, attitudes toward risk, attitudes toward general crop production practices, and attitudes toward making changes and adopting innovation. All are important areas that should be discussed.

A solid initial understanding of expectations and attitudes is important and will help promote a strong and successful relationship.

**The following paragraphs describe some of the services available within the subject matter areas of pest scouting, fertility management, irrigation scheduling and machinery management. *Services will vary with each individual producers' need and training of the consultant.* A worksheet is included on the back page of this NebGuide to help compare services.**

### **Weed, Disease and Insect Scouting**

1. Complete a weekly comprehensive scouting of each field site during the growing season. Pest population level, kind and/or value of crop may dictate more frequent field visits.
2. Provide a written report detailing the field survey after each visit. A pest population approaching or exceeding the economic threshold should be reported to the producer within 24 hours. Field survey report forms may vary but should include the following minimal information:
  - a. Sampling date and sampling locations in the field.
  - b. Stage of crop development.
  - c. Comments and/or counts of natural enemy populations.
  - d. A quantitative population estimate and identification of each pest.
  - e. Estimate of plant damage level (percentage defoliation, number of damaged plants/row feet, and etc.).
  - f. The appropriate economic threshold for the pest or pests in question.
  - g. Management recommendations and options. If management options include chemical usage, handling and application precautions, re-entry information, etc., regarding the recommended pesticide should be included and emphasized.
3. Provide a field map of weed species noted during a minimum of one early season field visit, with a second weed map noting weed species observed later in the season but prior to harvest.
4. Provide assistance and/or counsel in making sure pesticide application equipment is calibrated correctly.
5. Provide the grower with a summary of observations noted during the season following the last field visit.

### **Fertility Management**

1. Prior to soil sampling, conduct complete field histories with special emphasis on field uniqueness such as manure history, cropping history, land levelings, or other factors that might influence fertility and/or sampling plans.
2. Construct and conduct a soil sampling plan appropriate to the field and the needs of the producer. (A soil survey map is often necessary to properly design a soil sampling plan.) The recommended depth of a soil core is 36 inches in separate increments as follows: 0-8, 8-24, and 24-36 inches. Provide options for types of nutrient analysis and where the samples might be sent.
3. Provide an interpretation of the soil sample analysis and discuss options such as kinds and amount of nutrients, source of nutrients, timing of applications, application placement methods, costs, and other items requested by the client.

4. If irrigationd, recommend the nitrogen in the water be tested and credited.
5. Manure should be tested and credited toward nutrient needs.
6. Provide assistance and/or counsel in making sure fertilizer application equipment is calibrated correctly.

### **Irrigation Management**

1. Provide a written report detailing the field survey after each visit. Field survey report forms may vary but should minimally include the following information:
  - a. Sampling date and location of sites where soil water content was monitored with a soil probe, soil moisture blocks, tensiometers or other method. Record weekly available soil water levels.
  - b. Recommend dates for irrigation and the amount of water needed. Scheduling should be supported by soil, climatic, plant and irrigation system data. Recommendations should also consider the management scheme of the owner/operator.
2. Evaluate the pumping plant and distribution system to verify gross and net irrigation application depths and fuel use rates.
3. For furrow irrigation systems, recommend proper furrow stream size, irrigation set time and length of run. For sprinkler systems recommend appropriate operating pressure, sprinkler selection and application depths.
4. Provide a year-end summary report which may include:
  - a. sampling dates and field locations,
  - b. available soil water at each visit,
  - c. rainfall and irrigation water applied,
  - d. estimated crop water use,
  - e. estimated fuel use.

**Worksheet to compare services and prices of consultant services****General background**

Years experience  
 College degree and major field of study  
 Certification  
 References available

**Consulting Service #1****Consulting Service #2**


**Weed, disease and insect scouting****Does the consultant provide this service?**

Weekly field visits  
 Weekly written reports that include:  
   sampling sites and dates  
   beneficial and damaging insect counts  
   plant damage estimates  
   crop development stage  
   economic threshold analysis  
   management options  
 Scouts for weeds with field map  
   mid-season and preharvest  
 End of season summary

Yes	No	Cost \$	Yes	No	Cost \$

**Fertility management**

Field history completed on each field including  
   manure applications, previous crops, land leveling  
 Soil sampling conducted per each 20-40 acres  
 Uses soil survey and field history when choosing  
   where to sample  
 Takes soil samples to 24-36 inches in continuous corn  
   fields for residual nitrate  
 Provides options as to where samples can be sent to be  
   analyzed, and which interpretations to use in  
   making recommendations  
 Samples irrigation water for nitrate levels and adjusts  
   recommendations if necessary  
 Credits any manure or previous crop in making  
   recommendations  
 End of season summary


**Irrigation management**

Evaluates water distribution system  
 Monitors  
   Soil water content by:  
     soil probe  
     soil moisture blocks  
     tensiometers  
 Provides weekly written report  
 Includes: sampling location  
   available water  
   irrigation recommendations  
 End of season summary


**Equipment adjustment/calibration**

Pesticide applicators  
 Injection pumps  
 Fertilizer applicators  
 Irrigation pumps  
 Planters  
 Combines


**Acknowledgment**

The authors would like to thank Dr. Earle Raun, a member of the Nebraska Independent Crop Consultants Association, for his assistance in preparing this NebGuide.

**File G1031 under: FARM MANAGEMENT****N-5, Miscellaneous**

*Issued June 1991; 7,500, printed.*

*Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Elbert C. Dickey, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.*

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