IPM Educational Challenges in Crop Consulting

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Definitions/Assumptions

Crop Consultant
- Involved in Soil and Crop Management Decisions on Farms
- May work with product sales organizations
- May be Independent
Independent Crop Consultants

- Likely involved with the National Alliance of Independent Crop Consultants (NAICC)
- And/or one of 15-20 state associations
- These organizations typically provide 4-8 days/year of Continuing Education Opportunities.
Voting Membership

NAICC and Most State Groups Require

- Minimum of a Bachelor’s Degree in an Agricultural Field
- Several Years Experience
- Independence from Product Sales
- Code of Ethics
Crop Consultants Certification/Licensure

Uneven Requirements

- Some States – No Laws
- Many require license that includes a Bachelor’s degree and CEU’s
- In North Carolina, Pesticide Consultant License not only requires a Bachelor’s degree, but also requires 30 semester hours in Pest Management.
- California - highly regulated, unique standards
Evolving Consultant Roles

Historical

- 50’s and 60’s – Mostly Insect Control, development of thresholds.
- 70’s and 80’s – More Agronomy Included – Resistance Management becomes an issue. IPM Principles
- 90’s – Introduction of Bio-engineered crops
- Mid-2000’s – Resistant weeds, diseases, and insects becoming more prevalent.
- Mid-2000’s to 2010’s – More focus on Technology and Data Management
Crop Consultants

Activities Include:

- Soil Sampling, Likely Geo-referenced
- Fertility Management
- Crop Planning, Budgeting
- Hybrid/Variety Selection
- Equipment Management, Calibration
Crop Consultants

Activities Include

- Data Management and Analysis
  - Variable Seeding, Variable Rate Fertility Management
  - Yield Map Processing
  - Creation of management zones and grids
Crop Consultants

Activities Include

- Pest Management
  - Insects
  - Weeds
  - Disease
- Irrigation Management
- Record Keeping
- Contract Research
Crop Consultants

A few large firms can be found, particularly in the Midwest

- Servi-Tech
- Crop Quest
- Centrol
- Others...

Business Model may determine Division of Responsibility and Training Programs
Independent Crop Consultants

Small Firms are more typical in many areas.

- Typically 1-10 Employees
- Includes Support Staff
- May also rely on seasonal employees during peak times.

**MCSI**

- 3-4 Professionals dealing with Grower Consulting
- 1 Person for Farm and Research Activities
- 1 Person for Administration
- 1 Part-Time for IT Support
Educational Challenges for Consultants

- Time and Travel Expense Involved in Continuing Education
- Consultant, Industry, and Extension-sponsored meetings
Production Agriculture

Traditional Model *
Research Develops
Extension Demonstrates
Consultants Implement

* Richard Jensen, 1983
Historical Model..Product Development

Development and Regulatory Approval

Multiple Years of Efficacy/Performance work

Marketed to Growers
Current Model

Development and Regulatory Approval

Aggressive Marketing and Sales

Efficacy/Performance Work

Apologize? Move forward
Pressure on Consultants, Extension, others to have answers that are not always or readily available.
There are those who say *Extension* and applied Research Programs are no longer needed . . . . . that all the information needed by growers is available through the manufacturer’s website.
Although we have many excellent sales, technology representatives, and R & D reps. . . .

Production agriculture needs independent researchers training students and doing applied work more than ever.
Growers:

- Expanding;
- Very busy;
- Swamped with information;
- Desperate for quality solutions they can trust; and
- Market understands they will pay for convenience.

Sometimes convenience does not equal good stewardship, resistance management, etc.
Current Trends
Technology

Things that are most important to Growers’ livelihood are not usually the things that suppliers talk about the most.
A focus on profitability and long-term success requires a pro-active approach.
Growers Need

- Help to Evaluate Data, Is it:
  - Replicated?
  - Randomized?
  - Repeated?
- Know the scales of Graphs. What is being measured?

*The “Facts” are always a selection of “Facts”, and all of us are overwhelmed with data.*
Evolving Role of Crop Consultants

Pest Identification is becoming easier than ever.
- Most people now carry a vast electronic resource in their pocket – Smartphones

Major Producers do not need to pay substantial $$ for Pest Identification. This can be done by managers, on-farm scouts, suppliers, etc.

The Consultants role is shrinking in this area, Pest ID will not drive the business like it has in the past.
Evolving Role of Crop Consultants

Growers will pay for substantial help in
- Prioritizing
- Decision-Making
- Problem Solving
- Thoughtful analysis, perceptive interpretation of relevant data
- Very customized solutions
AND a new generation of consultants will be needed more than ever.
Current Trends

Universities

- University Budgets are closely aligned with grants.
  - Less Efficacy work is done on useful tools.

- University Specialists
  - Retiring
  - Diluted
  - Forced to work on Soft Money
There are serious challenges in getting the next generation prepared.
The Next Generation

- Need awareness of consultant career early on
- Lots of internships
- Concerted efforts in training
- Varied work experience from teens
Growers are becoming busier, more sophisticated and need convenience more than ever.

Consultants Should Understand Producers:
- Operation
- Equipment
- Labor
- Bottlenecks, Conflicts
- When/How to Communicate with Him/Her
Student Opportunities

*Students and New Graduates can prepare for a career in Crop Consulting.*

Needed Skills include:

- Communication Skills - Crucial
- An Understanding of Value
- A Strong Work Ethic/Business aptitude
- Decision Making Abilities
- Integration of New and Old Technology
Consultants Need

- Students prepared to work – technical skills
- Critical thinking skills
- Healthy Skepticism
- Recognizing Value of Networking
- Understanding Producers Needs
Current Trends
Technology

Consultants can Embrace Technology in a Thoughtful Way - Young Consultants and Students may be particularly adept in this area.

- **UAV’s** – Could Absolutely be a game changer – too little work has been done there up to now.

- **Other tools** – More limited in Scope, may get much more attention.
Moving Forward

Raise Awareness

- Consultants need to be on campuses more.
- University advisors and professors need to understand and communicate to students that Crop Consulting is a viable way to make a living.
Allies in Agriculture

- Consultants and Growers, along with their allies at Universities and industry, are involved in interdependent relationships that will lead to a brighter future in agriculture.
Consultants Challenges

- More young people into business
  Students don’t understand opportunities

- Support Extension Land Grant educational programs, such as DPM, DPH, etc.

- Continue work on relationships with those in the marketplace and on campus.
Moving Forward

The Future is Bright

• Agriculture has become increasingly sophisticated, with more players competing for Growers’ Attention.

• Consultants are needed more than ever to help Grower’s cut through the “Noise.”
Thank You

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