IPM Educational Challenges in Crop Consulting

8th International IPM Symposium
Salt Lake City, Utah

W.M. "Billy" McLawhorn, Jr. - CPCC-I, CPAg, CCA
McLawhorn Crop Services, Inc.
211 S. Main Street
Cove City, NC 28523

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

NORTH CAROLINA NCACA AGRICULTURAL CONSULTANTS ASSOCIATION

AICC

NAICC

Iowa Independent Crop Consultants Association

LACA

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

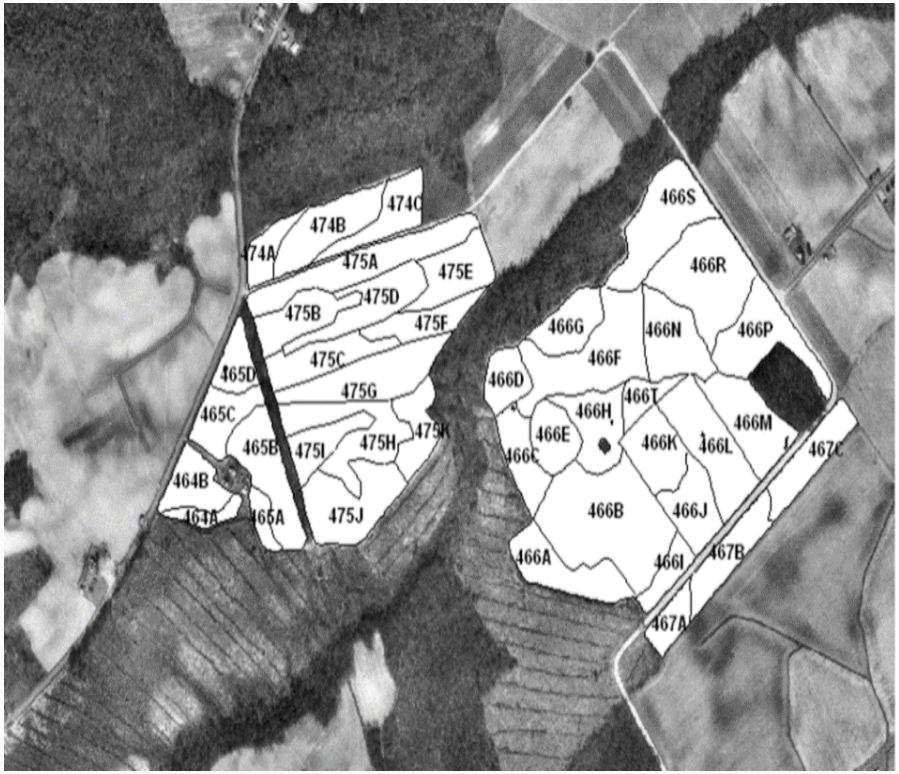
Activities Include:

- 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.

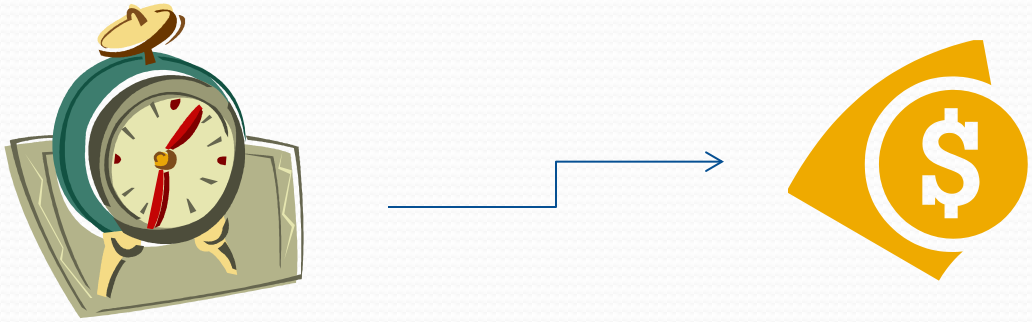
MCSI

- 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 inter-dependent relationships that will lead to a brighter future in agriculture.

Consultants Challenges

- More young people into business

  Students don't understand opportunities

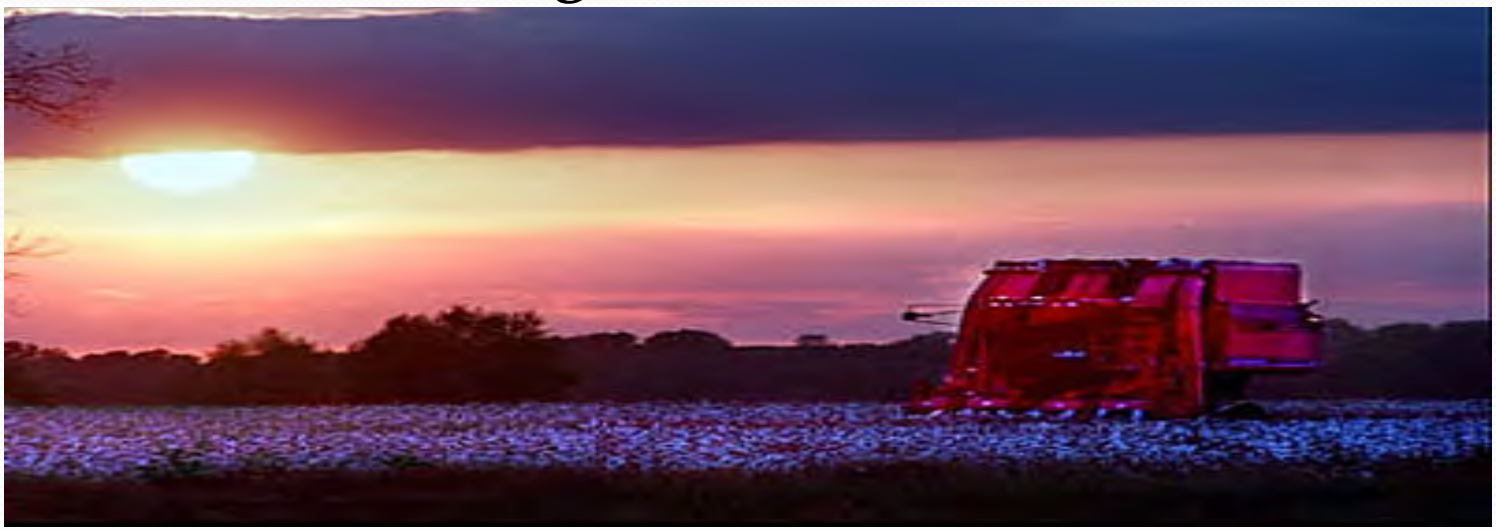
- Support Extension Land Grant educational programs, such as DPM, DPH, etc.

- 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

Acknowledgements

- Rich Wildman – Agrinetix
- Orvin Bontrager – Servitech
- Dennis Berglund – Centrol
- Madeline Mellinger – Glades Crop Care
- Lee West – RD4AG
- Don Jameson - Agrimanagement