

**SARE Sustainable Agriculture Curriculum and Continuing Education Program for  
Cooperative Extension Faculty and other Ag Professionals**

**3<sup>rd</sup> Conference Call: May 5, 2004**

**Next conference call:** June 7<sup>th</sup>, 11 Pacific-Arizona, 1 p.m. Central, 2 p.m. Eastern

**To do:**

Dave rework sub-topics into Competency 2 framework. Write some initial learning outcomes.

Design team work on Competency 3 feedback. DUE TO DAVE BY MAY 20<sup>TH</sup>.

Review Competency 1 sub-topics and learning outcomes draft at

<http://www.sare.org/pdpcurriculum/corecomp1.htm> [see my email on this task]

**Participants:** David Chaney, Kim Kroll, Vern Grubinger, Deborah Cavanaugh-Grant, Andy McGuire, Julie Sexton

**Agenda**

1. Competency 2 outline overview (Vern, Dave)
2. Discuss overall approach, organization for Competency 2
3. Specific points of discussion under each sub-topic
4. Next steps
5. Follow-up on Competency 1 [Draft framework with outcomes ready for design team to work on]

The main objective for this meeting was to develop / refine the list of sub-topics that should be addressed under the second core competency: AGROECOLOGY.

Dave will take feedback, input, decisions from this meeting and re-work Competency 2 topics into the framework format previously discussed, and as outlined on the project Web site, in order to facilitate the next step—writing the learning outcomes for this competency (skills, behaviors, attitudes).

**Competency 2 Outline Overview**

Vern's original outline had six major sub-topics:

1. Ecological Principles
2. Diversity among Ecosystems
3. Ecology and Management of Disturbed Systems
4. Applying Ecological Principles to Agriculture
5. Agroecology on the Farm - Practical Applications: Examples of 'Whole System Approaches' on real farms to address real problems
6. Specific systems and how they utilize 'Agro-Ecology' principles
7. Resources

Dave combined and edited the above into a revised outline as follows:

1. Ecological Principles
2. Ecology of Crop/Livestock Systems (Ag in Ecological Context)
3. Applying Ecological Principles to Agriculture (Specific Practices)
  - a. Crops
  - b. Livestock

4. Natural Resources, Wildlife and Agriculture

[5, 6, 7 from Vern's outline would be incorporated into above as teaching/learning tools and strategies, and as glossary terms or sidebars]

## Discussion

1. Ecological Principles

*In addition to key concepts already submitted from design team (included in Comp 2 feedback summary)--*

- Combine Sub-Topics 1 and 2.
- Ecological principles should be presented, explained in an agricultural context from the start. Without ag context it would be too academic and dry.
- Professionals need to know how ecological principles are at work in and affect agricultural environments. Need to be grounded in systems approach. This section should build that foundation.
- Explain yield from an ecological standpoint: productivity of an ecosystem, stability vs. sustainability. Primary goal is sustained productivity.
- Be careful of use of term 'evolution'. Some participants may object.

2. Ecology of Crop/Livestock Systems

*In addition to key concepts already submitted from design team (included in Comp 2 feedback summary)--*

- Combined with #1 above.
- **Systems** (including various cycles and flows) can be presented pictorially and graphically. Identify inputs, outputs, fluctuations, factors, impacts.
- Professionals should see how natural processes can reduce reliance on synthetic inputs and reduce risk for the farmer/manager.
- Note how outside forces (not just environmental, but economic and social as well) affect what can and can't be done to manage ag systems in an ecological way.
- Identify ecological approaches as alternatives to 'conventional' style crop and livestock management.
- To convey principles and concepts most effectively we should emphasize problem solving approach. Some agroecological design is involved, but mostly farmers (and professionals) are responding to problems. Stay grounded in that reality.
- Present big picture concepts. Weave in economics at this stage, too. Compare systems from both an ecological and economic standpoint.
- Acknowledge sociological component and how that affects people's willingness to change.

- Convey how ecological principles can be brought to bear on existing systems. Concept of transition??
- Example of corn ground in mid-West that some farmers are converting to management intensive grazing. Note possibilities and leverage points with new or entry level farmers.
- Another example would be corn studies in northeast PA, where alternative systems are showing greater profit. Note significance of focusing on net income vs. gross income.
- Water is major issue in crop/livestock systems, but at national level it would need to be addressed generally in terms of water cycle, ag impacts on quantity and quality, and importance of soil factors in relation to infiltration, water holding capacity, water use efficiency, erosion, etc... Specifics of irrigation etc... would need to be left to regional/state-specific training.
- Human factor in a general sense (preview of Competency 3). Decision making in complex systems (draw from holistic mgmt.) and importance of monitoring ecological effects.
- Highlight some ways/methods to analyze and evaluate crop/livestock systems. The “assume you’re wrong” approach and then monitor to check progress, effects, and impacts.
- Diversity is significant concept, make sure we’re very clear and accurate in discussing this. Present diversity as continuum, e.g. within crop systems— within livestock systems— integrating crop and livestock.

### 3. Applying Ecological Principles to Agriculture (Specific Practices)—

*In addition to key concepts already submitted from design team (included in Comp 2 feedback summary)--*

- Separate tracks for Crop and Livestock Systems
- General crop topics are pretty well covered in expertise of our design team. We need some help on livestock outline. Possible contacts: Ron Morrow, Vivian Allen (Texas Tech), Anne Clark (Guelph), Anne Wells (ATTRA).
- Include poultry, pork, dairy in framing key topics/concepts.
- Soil health and soil quality are roughly interchangeable terms, but there seems to be a preference for soil health among farmers.

### 4. Natural Resources, Wildlife and Agriculture

*In addition to key concepts already submitted from design team (included in Comp 2 feedback summary)--*

- Yes, include as separate sub-topic.
- Agroforestry is important component and professionals should have some background understanding in this area.

### Miscellaneous:

- Overview of specific nature of organic production would be included in #3 above when discussing specific practices. We want to present organic production clearly, concisely, accurately, so professionals have a better understanding; but don’t overemphasize or make separate unit. Direct to other training and education resources.
- GMOs: discuss as issue, but present only briefly and be even-handed. Identify possible ecological factors and effects, pros and cons.

*Summarized by David Chaney*