# Online Tools for Asynchronous Learning

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## Knowledge Jobs and Lifelong Learning

In today's information rich environment, knowledge jobs and lifelong learning go hand in hand. In the broad and interactive science of agronomy crop advisers have knowledge jobs. Farmers and others in the crop production system rely on crop advisers to answer a variety of questions throughout the crop production season. Crop advisers need to provide help ranging from nutrients, pest management, soil and water, and general crop management. To do this, a crop adviser needs a solid knowledge base in all aspects of producing a variety of crops.

Being an expert for a number of crops and the decisions inherent in each crop production season demands a lot of information. We are developing an online system for lifelong learning tuned to the needs of certified crop advisers.

The system organizes assets by the performance objectives outlined by the ICCA program. With the trend to more and more use of self-study continuing education units and resources available through multiple platforms, we are designing our system to fill the just in time learning needs of CCAs.

## Just-In-Time Learning

Just-in-time learning occurs at or very near the point of need. Just-in-time learning systems deliver training to advisers when and where they need it. As an alternative to sitting through hours of traditional classroom training, users can tap into web-based tutorials, interactive modules, and other tools to zero in on just the information they need to solve problems, perform specific tasks or quickly update their skills. The goal is that just-in-time learning cuts time by letting users grab only the chunks of information they need from the convenience of their desk or mobile device.

Used as a part of a blended training program, just-in-time learning can provide an economical link to lifelong learning. Companies save travel and education costs and advisers like the just-in-time approach because they can train at their own pace, wherever and whenever they like.

Just-in-time learning isn't just for professional training and support. Some companies are using this platform and learning style as a customer service tool.

### Module Details

**Atrazine Use Strategies To Protect Surface Water Quality**
Janssen, Cheri, Whitford, Fred

Today's farmers are asked to produce high quality, low-cost food, fiber, and meat without disrupting the environment. In some areas, EPA, USDA, and state agricultural and environmental agencies are asking the agricultural community to reduce off-site movement of atrazine into surface water to ensure its continued availability.

Current Status: Approved
Take this Module for Free | Review This Module | Edit this Module

| | |
|---|---|
| CourseNumber | SW130 |
| Time To Complete (hours) | 1 |
| Fee | $0.00 |

Objectives
1. Describe why atrazine is a threat to water quality.
2. List products that contain atrazine.
3. Outline the EPA's atrazine monitoring program.
4. Describe factors that affect atrazine movement.
5. Describe atrazine label requirements that relate to environmental protection.
6. Describe weed management strategies to minimize the amount of atrazine leaving a field.
7. List programs that offer assistance to farmers in meeting environmental goals.

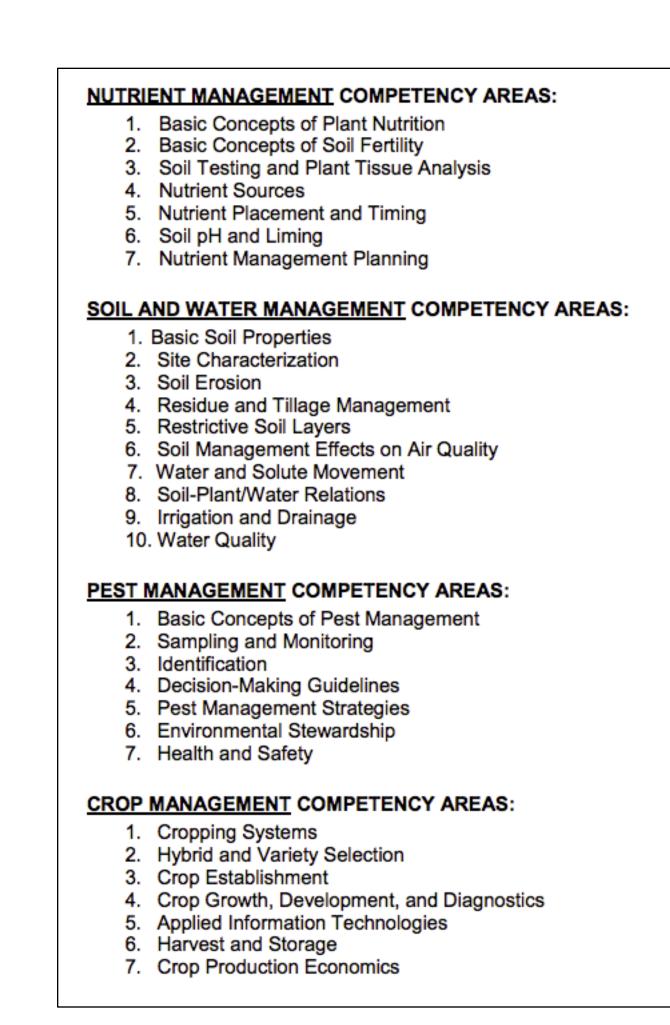Education Area Soil and Water Management

## Abstract

Creating a learning management system that is smartphone and tablet friendly will help Certified Crop Advisers get the learning they need when they need it. In addition to using the performance objectives of CCAs as a cataloging tool for content, this system will allow learners to create their own study guides and build their own personal library of preferred references. This online Learning Management System (LMS) hosts self-study lessons and other resources for CCAs and is designed to work well with mobile technology, providing just-in-time learning wherever and whenever it is needed.

## Search and Find by Educational Areas

The content at AgronomyU is organized by the CCA performance objectives. In addition to the main categories, there are dozens of sub-categories to help learners structure their learning and organize their own learning library.

**NUTRIENT MANAGEMENT COMPETENCY AREAS:**
1. Basic Concepts of Plant Nutrition
2. Basic Concepts of Soil Fertility
3. Soil Testing and Plant Tissue Analysis
4. Nutrient Sources
5. Nutrient Placement and Timing
6. Soil pH and Liming
7. Nutrient Management Planning

**SOIL AND WATER MANAGEMENT COMPETENCY AREAS:**
1. Basic Soil Properties
2. Site Characterization
3. Soil Erosion
4. Residue and Tillage Management
5. Restrictive Soil Layers
6. Soil Management Effects on Air Quality
7. Water and Solute Movement
8. Soil-Plant/Water Relations
9. Irrigation and Drainage
10. Water Quality

**PEST MANAGEMENT COMPETENCY AREAS:**
1. Basic Concepts of Pest Management
2. Sampling and Monitoring
3. Identification
4. Decision-Making Guidelines
5. Pest Management Strategies
6. Environmental Stewardship
7. Health and Safety

**CROP MANAGEMENT COMPETENCY AREAS:**
1. Cropping Systems
2. Hybrid and Variety Selection
3. Crop Establishment
4. Crop Growth, Development, and Diagnostics
5. Applied Information Technologies
6. Harvest and Storage
7. Crop Production Economics

## Resources for Multiple Learning Styles

While some learners may enjoy listening to a podcast or watching videos at their desk, others may prefer a more interactive approach such as an online learning module, game, or simulation. Whatever the learning style, the LMS can handle the content.

Assets can be stored in the system or linked to their original home. Each asset is tagged to match it to the relevant performance objective. It is also categorized by source, type, and availability.

Authors can submit content for inclusion in the site and will receive tracking reports on how many learners access the content and how it's rated. Resources can be included as-is, or PAQ can assist in the repurposing of slide sets, videos, papers, and other resources for a more engaging learning asset. While currently an off-line activity, we are working on a set of online tools to help authors repurpose existing content to work in the system.

## MyLibrary

As learners work through the system, they can tag materials for future reference. While the learner is free to create their own tag system for resources, the system's pre-defined categories based on performance objectives and resource type along with the date last accessed give learners a built-in method of organizing materials they find valuable which eases future use.

The MyLibrary portion of the site provides incentive for learners to complete assignments and dig into the materials. Being able to catalog and call up favorite resources is a key benefit to using the site.

In addition to bookmarking favorite content, the learners continuing education units can be tracked in the system. If the learner takes a course that is eligible for CEUs, the system adds the resources in their library.

MODULES | ABOUT | AUTHORS | RESOURCES | MyCEUs | LOGOUT (Quentin Rund)

**MyCEUs for Quentin Rund**

**Currently Open Courses**
Below is a list of courses you are currently taking.

| Course Name | CEU Credits | Quiz |
|---|---|---|
| SW110 Using Yield Maps in Making Drainage Decisions | SW - 1 | Take Quiz |
| NM271 The Micronutrients (slideshow) | NM - 1 | Take Quiz |
| SW110 Using Yield Maps in Making Drainage Decisions | SW - 1 | Take Quiz |
| SW110 Using Yield Maps in Making Drainage Decisions | SW - 1 | Take Quiz |
| CM130 The Economics of Insecticide Seed Treatments in Protecting Corn Stands | CM - 1 | Take Quiz |
| NM285 Soil Sampling | NM - 1 | Take Quiz |
| NM210x Concepts of Soil Fertility and Productivity | NM - 1 | Take Quiz |
| NM210x Concepts of Soil Fertility and Productivity | NM - 1 | Take Quiz |
| NM210x Concepts of Soil Fertility and Productivity | NM - 1 | Take Quiz |
| PM130 Weed Management Issues In Continuous Corn | PM - 1 | Take Quiz |
| SW130 Atrazine Use Strategies To Protect Surface Water Quality | SW - 1 | Take Quiz |
| NM130 The Presidedress Soil Nitrate Test for Improving N Management in Corn | NM - 1 | Take Quiz |
| CM130 The Economics of Insecticide Seed Treatments in Protecting Corn Stands | CM - 1 | Take Quiz |
| CM130 The Economics of Insecticide Seed Treatments in Protecting Corn Stands | CM - 1 | Take Quiz |
| PM130 Weed Management Issues In Continuous Corn | PM - 1 | Take Quiz |
| SW130 Atrazine Use Strategies To Protect Surface Water Quality | SW - 1 | Take Quiz |
| SW110 Using Yield Maps in Making Drainage Decisions | SW - 1 | Take Quiz |
| SW130 Atrazine Use Strategies To Protect Surface Water Quality | SW - 1 | Take Quiz |
| SW110 Using Yield Maps in Making Drainage Decisions | SW - 1 | Take Quiz |

## Study Guides

Mobile learning doesn't have to mean unplanned learning. With our system we provide four pre-planned study guides to help learners approach each of the main performance objectives. The study guides provide a list of resources and modules to help a learner get a better understanding of the subject area. Make no mistake, it is still the responsibility of the learner to complete the study guide, but with the guide in hand, this process becomes more of a game of "treasure hunt" than a dreary session of read and repeat.

And, learners can create their own study guides or personal development plans. Learners select the performance objectives they want to prep for and the system will create a fill in the blank study guide with references for where and how to learn the material.

## Warm Up Assignments

These short, web-based assignments are designed for learners to complete before getting into a specific module set or topic. The Warm Up asks a few simple questions designed to prepare learners to better absorb the material. Use of warm up assignments can help reveal misconceptions and prior knowledge and help focus learning activities on the elements that need the most thought.

## Puzzles

Puzzles are short web-based assignments designed to review materials covered in a module, set, or topic. They vary in type and scope, but each one challenges the learner to apply what they learned to solving a puzzle.

## Badges

To enhance the learning environment and build on the gaming theme of many new websites, learners can earn badges for completing lessons, modules, sets, topics and other assets at AgronomyU.

## Ratings, Comments, and Community

Learners are encouraged to provide feedback on the resources they have explored. A simple five-star rating system that allows comments provides a simple, yet potent feedback system for other learners and content authors.

While still under-development, we are also looking a ways for sharing content through social media outlets such as Facebook and LinkedIn. Helping learners connect to other learners and content experts will help build the community of learners at AgronomyU.