Online, Accredited Continuing Education Classes on Proper Sampling and Application of Nitrogen/Crop Nutrients

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**Statement of Project Objectives:**
The objective of this project was to develop a free online training program that would allow all users of fertilizers opportunities to increase their knowledge of when to use fertilizers and how to apply them properly and to earn continuing education credits for CCAs and all DPR licensees at the same time.

**Abstract:**
The problem results from an aging agricultural work force and the growing need to recruit new California pest control and crop advisers to fill this void in the years ahead. Toward this goal, an online educational course in the nutrient management in key California crops was necessary in order to allow interested parties to accumulate valuable education credits. This was accomplished by providing a course that provided the following information:

**Section 1 – Major and Minor Elements**
Major Elements – Roles of Nitrogen, Phosphorus and Potassium (N-P-K)
Minor Elements

**Section 2 – Nutrient Requirements of Various Crops**
Tree Nuts, Stone fruit, Grapes, Canopy development, Vine balance, Brix, Cotton (Lint quality – affect of nutrients on strength, length, micronaire, uniformity, Alfalfa, Rice

**Section 3 - Types of Fertilizers**

**Section 4 - Nutrition and Plant Health**

**Section 5 - Nutrition and Pest Management**

**Section 6 - Environmental Concerns**
Groundwater Runoff
Section 6 - Transportation/Handling
   Homeland Security: Safety and Storage

Section 7 – Factors Affecting Nutrient Uptake by Plants

Section 8 – Soil Sampling

Section 9 – Tissue Sampling

Section 10 – Applications

The results were astounding. Since the course was launched in mid-October 2008, 140 licensees completed the course for credit by Dec. 31, 2008. This number is expected to exceed 800 participants in 2009 – a true testimonial to the viability, acceptance and success of this new online continuing education program for CCA and DPR licensees. The entire online work course can be viewed by visiting http://continuinged.penton.com/nutrient/

Introduction
This report will outline the successful development and launch of the above mentioned course which directed toward teaching nutrient management techniques for credits for California certified crop advisers and California Department licensees, including licensed pest control advisers, qualified applicators, private applicators and aerial applications.

Work description
A complete listing of the online class material is mentioned in the “Abstract” section above.

Results
A database identifying each person who completed the course has been provided to the Western Plant Health Association and CDFA/FREP. It provides extensive demographics on the people who completed the course. Similar databases will be provided for 2009 completions, which are likely to total 800 student participants.

Discussion/Conclusion
With almost 150 completions in less than three months this participation confirms the viability, acceptance and success of the new online education/continuing program for CCA and DPR licensees, and will go a long way in filling the void in recruiting new CCAs and PCAs into the ranks of California agriculture.

Outreach Activities Summary
In October 2008, a news release was developed and distributed to 133 newspapers and trade magazines in Hawaii, Arizona and California, announcing the new online course. It was also announced in the Western Plant Health Association’s bi-weekly electronic bulletin to 1,000 of its members, as well as appearing in the pages of the Western Farm Press newspaper. Furthermore, the course has been posted on the Web sites of Western
Farm Press, the Western Plant Health Association and the California Association of Pest Control Advisers. The 140 successful student participants in a short three-month period speaks well of this marketing outreach effectiveness.

Sincerely yours,

Richard Cornett
WPHA Communications Director