Preparing for the CCA Exam and Other Adventures

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The need for certification of crop advisors, agronomists, and others in agriculture has not been clearly established. However, in other industries, such as accounting (Certified Public Accountant), and medicine (AMA-certified), certification has become a consumer expectation. Given the complexities of the crop advising profession, it is logical that standards for practice be established by a certification program. In response to this need, the industry has developed certification programs aimed at reassuring the public that individuals involved in agriculture are technically competent, experienced, and committed to ethical production and business practices (Demaray 1994; Hall 1995; Peterson 1995).

In 1993, to provide a standard measure of knowledge for professionals in the crop advising industry, the American Society of Agronomy (ASA) developed the Certified Crop Adviser (CCA) program with the intent “to help agriculture as an industry meet its environmental stewardship challenge” (ASA 1993, p. 1). Although the original impetus was water quality concerns, the CCA program is now becoming broadly accepted as an approach to recognizing competence of those who advise crop producers. To be certified, an individual must pass national and state exams, sign a code of ethics, meet continuing education requirements, and document work and educational experiences. This article will provide a general overview of the CCA program, information on the certification and certification maintenance processes, and information on CCA exam preparation methods and resources.

History of the CCA Program

The CCA program was developed from a combination of two existing certification programs: the American Registry of Certified Professionals in Agronomy, Crops, and Soils (ARCPACS, established 1977) and the Nebraska Certified Crop Adviser Program (NCCAP). Since ARCPACS certification requires a four-year degree, many people involved in the crop advising industry were excluded from ARCPACS certification.
During the 1980's, a group of Nebraska agrichemical dealers banded together to form a certification program (NCCAP) to establish standards for crop advising in their profession. The base for the NCCAP was a water quality regulation program. With the support of the University of Nebraska and private industry, the NCCAP was established to provide standards for the state's crop advising industry, with strong consideration of environmental issues (Peterson 1995).

Some agrichemical dealers in Indiana, Iowa, and Illinois recognized the value of the NCCAP program and began certifying their dealers. With the program's success, the NCCAP board decided to make certification available nationally, and partnered with the ASA, who provided financial and professional support. The ASA also provided an established, centralized body through which public and private industry could become involved in a certification program.

In 1990, the ASA and the NCCAP established the basic structure for the CCA program. Anyone who wanted to practice in the crop advising profession could become certified in this voluntary program. The program was centered in each state to avoid problems that ARCPACS experienced with managing the certified program on a national level. The CCA program was structured to be progressive and changing -- mechanisms were incorporated to allow for alterations in the content and structure of the program on a regular basis. For example, each year a different competency area is evaluated and updated (Hall 1995).

The development of a certification program within the crop advising industry has not been without its growing pains. Those who have followed its progress from the start have seen the challenges this voluntary program has faced, but have also seen its exponential growth in size and interest. Since the inception of the CCA program, over 11,500 crop advisers have applied to become CCAs. Nearly 7,000 of those individuals have been successful on the both the national and state/regional exams, and 4,400 are CCA certified.

The CCA Program

The governing board for the CCA program, which oversees the national exam and the CCA program in general, is based at the ASA headquarters in Madison, WI. Each participating state has a board that oversees the state portion of the program. To date, 27 individual states have CCA boards and 14 other states are part of one of three regional CCA boards. The state or regional CCA boards are the information contact for those interested in the program. The contact in Iowa is the Agribusiness Association in Des Moines.

To become a CCA, individuals must document their educational and work experience on the application materials. There is no education degree requirement, however, the higher the level of education of the participant, the less crop advising experience required for certification. The following points summarize the educational and work experience requirements:

- No degree. To be qualified for CCA certification, this applicant must have four years of crop advising experience.
- Associates degree (AA). If the AA degree emphasis is production agriculture, this applicant
  must have at least three years of crop advising experience. If the emphasis is other than
  production agriculture, four years of crop advising experience are required.

- Bachelors degree (BS). The BS requirement is divided into two components: Component 1 is
  course work in the basic sciences; Component 2 is course work in production agriculture. If
  the applicant has both components, two years of crop advising experience are required. If
  one of the components is missing, three years experience are required. If the degree is not
  related to agriculture, four years experience are required.

The CCA board recognizes years of experience by the following measure: “A year of experience
may be credited if the applicant indicates that approximately one-third (at least 25% to 35%) of
their time” is spent advising farmers on crop production, educating crop advisers about CCA
performance objectives, and advising or working with farmers on soil conservation or
conservation compliance (ASA 1995, p. 41). Time spent on these areas less than the required
one-third earn partial work experience credit. Farming experience may count up to one year of
the total work experience requirement. Additionally, applicants for CCA certification must
submit two references, one from a supervisor and one from a client. If the CCA applicant is self-
employed, the references can be from two clients.

**Code of Ethics**

Participants must also commit to the CCA Code of Ethics. The code of ethics addresses such
issues as the crop adviser's relationships with the public, his or her employers and clients, and
other crop advising professionals. “The code of ethics requires that nutrient, resource
management and pest control recommendations be based on information obtained through the
use of field scouting, soil testing, field history reviews, economic evaluations, and environmental
considerations,” states Ron Farrell, Chairman, National CCA Board. The CCA Code of Ethics
can be found inside the back cover of the “CCA Certification Application.”

**Competency Areas**

Participants must prove a level of competency on the national and state/regional exams in four
agronomic areas: soil fertility, soil and water management, crop production, and integrated pest
management. More specific information on each of these agronomic areas can be found in both
the national and state booklets entitled “Performance Objectives.”

**National and State/Regional Exams**

The February 2, 1996 national and state/regional CCA exams will be offered in 35 states. The
registration forms and fees for the exam must be to the ASA in Madison, WI by December 15,
1995. Registration forms received after the deadline are processed for the next exam date
(August 4, 1996). The location of the exam often changes for each test date. The February
locations in Iowa are Mason City, Atlantic, and Iowa City. The cost to take the National exam is
$100 ($50 retake fee), and the Iowa exam is $70 ($35 retake fee).
On the day of the exam, participants will be required to show some form of identification before they are given the exam. Participants are allowed three hours to complete the national exam, and three hours to complete the state/regional exam. The exams are multiple choice, and participants must answer the questions on a fill-in-the-bubble type answer sheet. Calculators are permitted, but not provided.

Scores will be mailed to the participant within six weeks of taking the exam. Scores will not be given over the phone. However, following the reporting of the scores, participants are permitted to contact the ASA to find out their scores on each of the four exam areas. After participants pass both the national and state/regional exams and their credentials are approved, they are sent a certificate of CCA Certification. If certification is denied, a letter of explanation is sent.

**Continuing Education Units**

According to the July, 1995 ASA CCA Program Manual (p. 16), the primary purpose for continuing education is to further enhance the skills of CCAs and routinely update their knowledge as new information and technologies become available. A CEU is defined as “one hour of quality contact time in training or other qualifying activity addressing national or state/regional performance objectives.” To maintain certification, a CCA must complete 40 hours of CEUs every two years (one CEU = one hour of classroom training), in accordance with the following:

- a minimum of five of the 40 hours must be in each competency areas
- a minimum of 10 CEUs are required per year
- a minimum of 20 of the 40 CEUs must be pre- or post-approved by the state/regional board.
  The remaining 20 CEUs are classified as self-directed (participant’s choice), but can be audited by the CCA board at any time.

Additionally, each state/region may have in-state standards for CEUs, such as a limit on out-of-state CEUs that qualify towards that state’s certification maintenance.

The issue of continuing education has been a controversial aspect of the CCA program. Many crop advisers feel that the requirement of 40 CEUs in two years is too time-consuming. State-to-state CEU reciprocity is also an issue for crop advisers who practice in more than one state. Some states only recognize CEUs offered within the state borders, which can double (or triple) the CEU requirement for an adviser. The national board has been working to gain more CEU reciprocity among states, but progress has been slow.

CEU reciprocity among all states does not exist for the simple reason that cropping systems vary across the U. S. In areas where cropping systems are less variable, states are more likely to recognize other states’ CEUs. Currently, Iowa accepts National CCA Board approved CEUs from Illinois, Minnesota, Missouri, Nebraska, South Dakota, and Wisconsin, with an out-of-state limit of 16 hours (the remaining 24 hours must be obtained from Iowa Board approved programs).
A third CEU issue is CEU-qualified course notification. It is up to the state boards to advertise when courses are available, but if vendors do not have their courses pre-approved for CEUs, then they cannot advertise the courses as such. Additionally state boards may be slow to post courses that are available.

**Maintenance of Certification**

CCA certification may be maintained by completing the required continuing education units (CEU) and paying the appropriate fees. July 1 is the renewal date each year. After one year of non-renewal, participants must reapply for certification.

**Preparation for the Exam: A Study in Iowa**

Informal evaluation has revealed criticism related to the difficulty of the Iowa CCA exam. The overall success rate on these first three test administrations was 44.2 percent. To this date, because of a lack of specific research related to the Iowa CCA exam, we do not know enough about what factors are associated with success on the exam. What type of exam preparation, professional experiences, or education are associated with success on the Iowa CCA exam? Can the success or failure of a participant be predicted based on their exam preparation, professional experiences, and/or education?

To address these concerns, a recent study conducted by Iowa State University surveyed everyone who had taken the Iowa CCA exam in August 1993, February 1994, and/or August 1994. Five hundred of the 714 Iowa CCA exam participants completed and returned the questionnaire for a response rate of 70.0%. This study focused on the Iowa CCA exam, but the general conclusions may prove useful for CCA administrators and prospective participants in other states as well (Warshaw 1995).

Participants ranged in age from 23 to 64 years. The average age of participants who passed the exam was slightly over 37 years, and of those who failed was just under 40 years. Most (98.4%) of the participants were male. Females tended to pass the exam at a higher rate than males.

**Education**

Those participants with a BS degree or higher level of education tended to do better on the Iowa exam than those who had less education. This does not mean a BS is required to be successful on the Iowa exam, but rather indicates that additional agronomic knowledge and experience in preparing for and taking tests is a result of education.

**Work Experience**

Those participants who were successful on the Iowa CCA exam tended to advise an average of 51 more producers than those who failed the exam. This may be due to the increased number of problem-solving situations that crop advisers experience with more field visits. A recommendation, then, would be to practice for the exam by using problems that mimic those found in
the field, such as case studies or field scenarios. There was little difference between the number of years a participant who passed or failed had been advising farmers about crop production.

Exam Preparation

A lower success rate occurred on the Iowa CCA exam when participants used employer-sponsored educational programs. The differences here may be that employer-sponsored educational programs often have objectives other than CCA exam preparation, or that the exam reflects mostly university-derived information. Information found in programs and materials offered by ISU and ISU extension may prove more useful. Many Iowa CCA exam participants felt that the Soil and Water Management exam questions were their weakest area. This may be due to a shortage of Soil and Water Management research and extension publications, since it is a newer discipline. The methods that participants selected for studying and time they devoted to studying for the exam were not related to exam outcome.

A Model for Predicting Exam Success or Failure

Stepwise discriminant analysis was used to determine the linear combination of variables (i.e., develop a model) that most accurately predicted whether or not participants passed the Iowa CCA exam. Using the model developed in this study resulted in correctly predicting how 71% of the participants fared on the Iowa CCA exam. Flipping a coin to decide how participants would do on the exam would result in a correct prediction 50% of the time. The model developed in this study could be used by educators to advise participants as to the likelihood of their success on the Iowa CCA exam, and to identify people who may benefit from additional education.

So How Do I Prepare for the Exam?

From the results of the study in Iowa, some recommendations for exam preparation are:

1. Choose CCA exam preparation programs that are similar in design to those offered by ISU extension. Contact extension about short courses that might be offered for exam preparation; such programs may be more likely offered if this kind of help is requested. Recently, because of increased interest, ISU Agronomy Extension added distance education sites and videos for an upcoming CCA preparation course.

2. Choose CCA exam preparation materials that are similar to those offered by ISU, such as ISU Extension publications and the ISU Extension ICM Newsletter. Choose publications that deal specifically with the CCA exam performance objectives for Iowa. Emphasis should be placed on studying Soil and Water Management materials.

3. Practice test taking skills. This is especially important for those participants who have been out of school for longer periods of time. Practice answering multiple choice questions. The CCA exams are fairly long, so prepare for what it feels like to take a 125 to 200 question exam.

4. Brush-up on basic agronomy. An excellent outline to follow is located in the Iowa CCA Exam “Performance Objectives.”
5. Practice for the exam by using problems that simulate those most likely encountered during field visits. Better yet, seek more actual field problem-solving situations.

Where Do We Go from Here?

Creators of the CCA program realized that for a certification program to be successful, it would have to change with changes in the industry. Incorporating program evaluation at regular intervals is one method to provide the necessary feedback for positive changes to occur. A questionnaire such as the one used in this study is one way to establish program evaluation. It can be used after each administration of the Iowa CCA exam to keep the feedback loop complete between the Iowa CCA Board and members of the crop advising industry. Additionally, the Iowa CCA board may wish to explore any differences in work performance that CCAs have experienced as a result of their certification. A study of the CCA programs in other states may provide further insight into the crop advising industry’s certification program.

Impact of CCA on the Crop Advising Industry

Participants have mixed feelings about the need for a certification program and the purpose of the exam. As one Iowa CCA exam participant stated, “Please explain why we need to pass this CCA test to look at someone’s crops. No one memorizes all the specific problems for crops . . . learn the basics - apply [the basics] to problems and how to solve them. [That] is what the test should be over.” Without proper advertising or notification to consumers and crop advisors of what a certification program can mean to them, a certification program will likely go unnoticed and lose the interest of participants. Because of its newness, it may take some time before the words “Certified Crop Adviser” take on the feeling and meaning that the program creators and supporters intended. The program is just now gaining momentum as a prestigious honor in the crop advising industry. Several participants commented that the CCA program needs more publicity. One way that a certification program becomes established is with the support of the public and private individuals and companies in the profession. Additionally, awareness of other successful certification programs in similar industry is needed to ensure that the methods used for the Iowa CCA program and exam are the most appropriate.

The CCA program is important to many people in the crop advising industry because it offers the industry opportunity for a turnaround to a more positive public image (Whitford 1993; Henley 1993). Just as the purpose of pesticide regulation is to provide protection for the public, as well as wildlife and the environment, one of the purposes of certification is the protection of the public through the goods and services offered by that industry (Allison 1994; Posner 1974). With the crop advising industry becoming an increasingly service-oriented profession (Wolf & Nowak in press), people such as farmers can use the CCA certification to ensure they are receiving quality services. Ideally, additional benefits from CCA certification include increased profits for both crop advisers and users of their services (farmers), and increased environmental awareness and protection (Wolf & Nowak in press).

As the most likely candidates for ‘agricultural information messengers,’ Certified Crop Advisors may be empowered with the responsibility to teach agriculture and non-agriculture audiences about
innovations in agriculture. As Whitford (1993) forewarns, the challenge in this job will be to work with often conflicting perceptions of the public. Should the CCA program become widely accepted and respected in the eyes of not only the agriculture industry but the general public, then CCA certified individuals might command as much attention as those who find opposition to many aspects of the agriculture industry.

References


