

Certified Crop Adviser Program Developed for South Asia

ASA has partnered with the Cereal System Initiative for South Asia (CSISA) to implement a certification program for agronomic professionals to deliver higher quality production recommendations. These recommendations are expected to result in more efficient use of resources, better protection of the environment, and a higher quality of life for producers in India and other countries in the region. The goal for ASA is to develop and implement a highly qualified workforce program for private- and public-sector extension by establishing a Certified Crop Adviser (CCA) program in South Asia. The main target for this program will be the frontline agronomists employed by private companies, non-government organizations, and public-sector agencies.

The partnership between ASA and CSISA brings together a range of public- and private-sector organizations to enable sustainable cereal production in India, Pakistan, Bangladesh, and Nepal. CSISA is led by the International Rice Research Institute (IRRI) and three other centers with support from the Bill & Melinda Gates Foundation, the United States Agency for International Development (USAID), and the World Bank during the first three years of the program.

High Quality Standards Needed for Sustainable Development

Many private companies in Asia are investing in new agribusiness and services infrastructure, including a substantial workforce of crop advisers who directly work with farmers, providing inputs, crop advice, and market information. High quality standards are vital for providing new technologies to farmers and developing sustainable production practices. This responsibility requires a proficient understanding of crop production science, food safety, economics,

and the environment. Certification by ASA will ensure that the crop advisers are competent in all aspects of crop production and provide services in an ethical manner.

"The private sector in India and in other countries in South Asia is moving aggressively in the agricultural area, but they do not have a certified program for crop advisers to help transfer knowledge for improving crop productivity," says ASA-CSSA-SSSA member J.K. Ladha, an IRRI soil scientist and leader of one of CSISA's working groups. "Many technologies that we have on the shelf are not going efficiently and quickly to the farmer. About 25% of the overall CSISA program is funded for delivery of information to the farmer, and that is the key in making this program successful."

To address this emerging demand by the private sector and the continuing need of public-sector extension systems, CSISA will facilitate the implementation of a voluntary, self-sustained CCA program that establishes a base level of competency through testing, education, and experience requirements and maintains or raises that competency through continuing education or requirements for participants in the program.

This program comes at a crucial time for key nations in the region—home to 40% of the world's poor with

nearly half a billion people subsisting on less than US\$1 a day—as they struggle to boost grain supplies in the wake of growing demand and strained natural resources. The project, which builds on past cereal research achievements in the public and private sectors, aims to produce an additional 5 million tons of grain annually and increase the yearly incomes of six million poor rural households by at least \$350.

"This program is extremely important for the food supply of the most populous region of the world," says Mark Alley, ASA President and W.G. Wysor Professor of Agriculture at Virginia Tech. "We are honored to take part in this initiative with IRRI."

CSISA's 10-year goal is for 4 million farmers to achieve a yield increase of at least 0.5 Mg ha⁻¹ on 5 million ha and an additional 2 million farmers to achieve a yield increase of at least 1 Mg ha⁻¹ on 2.5 million ha. The CSISA initiative will focus initially on eight hubs in Bangladesh, India, Pakistan, and Nepal, which represent key intensive cereal production systems that play a major role in feeding close to a quarter of the world's population.

Collaborative Approach

Each local CCA board will be made up of a representative of the government agency responsible for agricul-



Background map image courtesy of Wikipedia. Upper left image courtesy of Arvind Shukla.

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ture; a representative of the government agency responsible for environmental quality; a farmer or a representative of a farmer organization; the agriculture college/university that could help with the exam development and continuing education process; the agriculture trade organization or major agriculture employers; the agriculturally oriented institutions/centers; and at least three practicing CCAs from the private sector.

This collaborative approach builds working relationships among the different sectors to support agricultural production, while minimizing environmental impact in India. The program is designed to supplement the current extension programs in India.

Although eventually targeted to all of South Asia, ASA's CCA program is currently being pilot-tested in two Indian states.

“The pilot project has already been launched in two Indian states, Punjab and Haryana,” Ladha says. “We will be working with both Haryana and Punjab Agricultural Universities.”

Both states have large agricultural sectors. Haryana is now a leading contributor to the country's production of food grains and milk. Agriculture is the largest industry in Punjab. It is the largest single provider of wheat to India.

Alley sees this initiative as an excellent opportunity to build relationships with ASA members who are scientific researchers in India and to promote Indian agriculture. He also believes the program could be an essential element in helping ASA meet one of its overall strategic goals of “proactively [addressing] emerging global issues.”

Certification and Licensing Exams

by Luther Smith

The certification exams are a tremendous measuring tool that separates those who know the fundamentals of their profession from those who do not, adding credibility and reliability to the ASA and SSSA certification and licensing programs. ASA's International Certified Crop Adviser (ICCA) and Certified Professional Agronomist (CPAg) programs both use the same ICCA exam. CCAs are then required to take a second exam for their state/province or region whereas CPAg does not require the second exam. SSSA's Certified Professional Soil Scientist (CPSS) and Certified Professional Soil Classifier (CPSC) programs require two exams—“Fundamentals of Soil Science” and “Professional Practices.” The soil science exams are also used by seven states for their licensing programs.



The crafting of the exam begins with the development of the performance objectives (POs). The POs are what those who are actively working in the profession believe someone should know to be minimally competent. A cross section of technical experts is assembled to draft the PO document or edit the version being used. Their draft is circulated to more than 400 practicing professionals who rank each PO based on its relative importance. The exam committees then edit the POs based on their input and finalize the draft. It is a long, deliberate process, but it must be done to ensure the exam truly measures the appropriate information. This process is repeated every two to three years so that the POs remain relevant for someone practicing the profession.

Each year, the ICCA Exam and Procedures Committee and the Council of Soil Science Examiners meet to edit their respective exams and POs. These are not the same groups that evaluate the POs. They are made up of content experts representing academia, government, and the private sector from across the United States and Canada. The goal is to have a group that reflects the certification programs. Working with exam consultants, 20 to 25% of the exam questions are replaced, and those questions that did not perform well are edited for improvement or replaced. The questions are changed to help maintain exam security and integrity, but efforts are taken through an equating process by our psychometrician to maintain the same level of difficulty from edition to edition. We do not want someone who entered the certification program 10 years ago to have passed an exam that was more difficult or easy than someone taking the exam today.

The ICCA exam and the soils fundamentals exam are potentially great evaluation tools for university agronomy or soil science programs as well. The certification exams provide statistical data that can be used to help evaluate the programs by offering the exams to senior level students. Several universities have used them for this purpose and to help students get started into professional certification, which is an employment advantage. To learn more, contact email lsmith@agronomy.org.

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