

Editorial

Computers and Electronics in Agriculture was founded in 1985. The editorial statement describing the mission of the journal made use of the metaphor of silicon, noting that this fundamental soil element is ubiquitous in agricultural production. The editorial noted that silicon was also a fundamental component of the chips that powered the then emerging computer technology. At the time of the founding of the journal, sensors and other hardware were becoming widely available but had yet to have much impact in agriculture, and similarly computer software was moving from the domain of the computer science specialists to the general scientific arena, but had yet to be widely used in agricultural research. Accordingly, the journal adopted as its mission promoting the adoption of electronic hardware and computer software in agricultural research and production. The scope of the journal was deliberately broad, including not only papers describing the development of new hardware and software for agriculture but also papers reporting applications of existing computer technology in agriculture, studying the adoption of computer technology by agriculturalists, and examining social impacts of computer technology in agriculture.

After a little over two decades, the landscape has changed dramatically. To continue the metaphor, computer silicon is now as ubiquitous in agriculture as is soil silicon. Virtually every scientific study in agriculture or forestry makes use of computers in some way. A wide array of computer models for agricultural processes has been developed and these models are being applied to diverse problems in crop production, animal science, and landscape management. Software packages are commercially available implementing artificial neural networks, database management systems, nonlinear optimization, data mining, and finite element analysis, and so forth, and these are widely used in agricultural research. Sensors and other forms of instrumentation are also commercially available and widely used in research.

The landscape of scientific literature in agricultural research has also changed dramatically. New journals have appeared whose focus is on the integration of technologies in the solution of problems in agriculture and forestry. Other journals have appeared that emphasize the application of remote sensing and other technologies to environmental problems. Moreover, the mainstream agricultural journals now routinely include papers describing the application of sensors hardware and computer software to questions in agricultural research. Accordingly, we the editors of *Computers and Electronics in Agriculture* have seen the need to refine the scope of our journal.

The new statement of the scope of the journal is only subtly different from the old one. It reads “Computers and Electronics in Agriculture provides international coverage of advances in the development and application of computer hardware, software and electronic instrumentation and control systems for solving problems in agriculture, forestry and related industries.” The key change is the inclusion of the word *development*. The ideal paper will clearly articulate the novelty and justify the design of the computer hardware, software or other electronic systems created. It follows that the journal will under most circumstances no longer publish papers that simply apply existing hardware

or software technology to agricultural problems. However, we envisage that occasionally existing hardware or software technology is adapted in a novel manner and such papers will continue to be considered for publication.

We feel that this revised scope will permit the journal to focus more precisely on the area in which it can have the greatest impact, providing scientists and engineers with a more precisely defined coverage of this particular domain. We appreciate that this will exclude certain articles that would have been published in the past, but with the evolution of technology these are no longer appropriate for a primary research journal. We look forward to a lively and productive dissemination of the results of research on the development of hardware and software for computers and electronics in agriculture.