DISCUSSION: RESEARCH AND EXTENSION ISSUES IN PRODUCTION ECONOMICS

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The authors share their excitement that "we are in center stage and people are listening." Their excitement stems from seeing immediate applications of research, of software packages, or of decision-making tips extended in meetings. They, and I, would convey a sense of urgency that, in these uncertain times, agricultural economists magnify efforts to help our clientele improve their decision-making ability. As Lacewell-McGrann put it: Nowadays, "the impact of an error in judgment . . . is often swift."

They are enthusiastic about the expanded demand for production economics expertise and project it to continue. The burgeoning demand was brought on by the instability of the times: inflation on inputs has been rampant: product prices have lagged and cannot be predicted with accuracy (Ikerd and Darnell; Just and Rausser), energy-based new technology has dried up; and so, it seems, has the weather. Farmers badly need: guides for adjusting input levels; means for massaging their records; and decision-making aids to help them decipher the complexities of an agriculture now more characterized by a think tank than a mule team.

Just when farmers would most appreciate a miracle, along comes the microcomputer. We cognoscenti know there are no miracles that must be plugged in; but not everyone connected with microcomputers is that discerning, because so much debunking and much education will be required before microcomputers settle into their rightful place in decision makers' tool kits. The authors gave us a useful set of conditions for an effective computer application effort, the central part of which is providing for "software distribution and maintenance support." Such a vehicle, they argue, is necessary to permit economists to be economists, rather than software servicemen.

There are at least two sharply different foci for developing microcomputer educational efforts. The first would concentrate developmental efforts on decision aids for important decisions that may be infrequently made, but that are made by virtually all producers of a commodity, say, figuring how much to pay for land rent. The other would develop software for programs repetitiously used by an individual, but not by all individuals; for example, record-keeping programs. Clearly, records require more service than the first option: the professionally intriguing question is, Which route makes for more teachable moments? The authors do not specify whether they believe specialization in decision aids would be healthy, or if, practically speaking, it is even possible, once producers know that someone at the university could develop the packages they want. Such a discussion would have been welcome.

"Application of the computer will increase the demand for economics education," the authors argue, and surely they are right. Think of it—an audience out there that can retrieve or assemble information, analyze it, and project marketing, production, and finance plans to "test" recommendations or research results before implementing them. We will have to do some things differently. My gut feeling is that we will wind up teaching more *principles* to these audiences, by helping them to supply the applications and analyze alternatives. The authors point out, too, that more interdisciplinary, integrated extension and research efforts will be necessary in order to develop appropriate decision-making aids. This may very well offer land-grant schools the potential to develop some classy "cases" with which to teach decision making to these sophisticated audiences. Harvard has long since demonstrated the ability to draw top agribusiness people to case-oriented seminars. Among the land-grant schools, Cornell has taken a similar approach.

The authors repeatedly express concern about where and how farmers are going to be able to get farm management assistance. Considering the current bind farmers are in, I share that concern. But only for the near term. Our long-term prescriptions appear to differ. Nowhere in their paper is there even a mention of teaching principles or decision-making or long-term, short-term or strategic planning to the farmers themselves. I thought that was the primary job of extension farm management specialists, and we in Florida do not intend to relinquish that role.

Lacewell-McGrann suggest training county agents in economics, and different approaches have been used to accomplish this over the years (Wells, et al.; Abbitt, et al.). They further bemoan the inability of most physical scientists to

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help farmers with farm management problems, and suggest training consultants, because they can "stay with" farmers and solve their problems. Certainly, consultants have a place, and probably they will play larger roles in the future, and we can, have, and will, train them also. But our preferred priorities for educating audiences will be:

(1) Farmers themselves. Increasing their skills will either cut down on the need for management consultants, or make for more effective use of them.
(2) Scientists in the other disciplines. Some of our old-time specialists in the other disciplines are a long way from being barefoot when it comes to giving sound management advice. Maybe we can train the younger specialists in these skills, and improve on the quality of the contact time that these important university representatives have with producers. The interdisciplinary research and extension work recommended by Lacewell-McGrann should go a long way to accomplish this.
(3) County agents. Theirs is the toughest job in the world, and so long as they are forced to try to be all things to all people, they simply cannot, themselves, do much farm management work. Economics training can, however, and does, improve on their ability to know when a specialist's help is needed, and what that specialist can be expected to provide.
(4) Consultants. Paradoxically, this is probably the easiest audience to reach. Since their livelihood is, for the most part, tied to their ability to offer a full spectrum of management services, they are an eager, but small, audience.

The potpourri of research issues posed by the authors both excites and frustrates. Clearly, the economist's role is more central in agriculture now than in the past, and Lacewell and McGrann provide an interesting and exciting mix of simple and sophisticated research, all of which was put to immediate use. The frustration? Where, or perhaps how, can we attract enough warm bodies to do the immense amount of important work that is obviously needed? The authors make it plain that a variety of skills is required: "Production economics is requiring a closer integration with marketing, finance and policy." And, they insist, there needs to be more work done with production functions. Some on-job-training is going to be necessary, it would seem. The neophyte in production functions might find something to please his palate in Dillon's little book, which cites 426 references. Enough finance can be gleaned from Barry, et al., to permit one to pass for an expert in most circles, and every economist knows enough policy. Right? But only the Good Lord knows where marketing expertise can be obtained: the whole agricultural world awaits a marketing guru.

The authors attempted a difficult task—to interest more of our profession in doing more of the pressing research and extension work that can help U.S. agriculture remain the world leader it has become.

Lacewell, McGrann and I challenge the casual bystander—You may work in production economics "if you enjoy challenges and being relevant. . . ."

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