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Department of Agronomy

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NEW OPPORTUNITIES FOR SCIENCE STUDENTS IN AGRONOMY

W. W. Frye

High school students interested in science and looking for a field of study that will prepare them for a rewarding career will like the proposed new agronomy programs. The Agronomy Department at the University of Kentucky is preparing to offer undergraduate students three future-oriented options--Plant and Soil Management, Plant Science, and Soil Science. In designing these options, we tried to determine what agronomy students need to be prepared to do in a rapidly changing and highly competitive world of the 1990s.

Why a New Curriculum?

Society is changing at an astounding pace, and agronomy, like other professions, must adapt or be left behind in a state of antiquity. Much of what was state-of-the-art a few years ago is outmoded today, and what is heralded as today's high technology will be tomorrow's obsolescence. Historically, higher education has sent professionals into the field with knowledge and skills in the latest technological developments; and, in the past, we have emphasized technical preparation of our students. That will not be sufficient in the future.

Future jobs will demand individuals who have a firm foundation of basic knowledge and skills and current technology for entry into a career, as was true in the past, but they also must be prepared to be life-long learners. Students must be prepared to develop in their careers and keep abreast of rapidly changing technology and skill requirements.

In agronomy, the biological and physical sciences are applied to areas such as plant nutrition and growth, plant protection, crop production, plant genetics, natural resource management, and environmental protection. These are areas of great importance to the future welfare of our society and are areas with expanding career opportunities. They are areas that students can emphasize in the three new options described below.

Plant and Soil Management

The Plant and Soil Management option emphasizes a broad, general background in agronomy, economics, entomology, plant pathology, computer science, and communication. It is designed for those students who want a practical, applied program of study that

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prepares them for the traditional careers in agronomy, such as farmer, farm manager, Extension agent, soil and water conservationist, plant protection specialist, turfgrass specialist, technical representative, sales representative, and many others. These students will also be well-prepared for graduate study in applied agronomy.

Plant Science

The Plant Science option emphasizes scientific aspects of agronomy, especially the biological sciences. It will prepare students for present and future jobs in plant genetic engineering, plant biotechnology, plant protection, developing new plant varieties, and plant research support, in addition to preparing them for graduate study in these and other biological science fields.

Soil Science

The Soil Science option also is based on science in agronomy, but it has more of a physical science orientation than does the Plant Science option. Soil Science will prepare students for careers in natural resource conservation, urban soil use and interpretation, environmental quality control, soil management and problem-solving, and soil research support. Students in this program will be well-prepared for graduate study in soil science and environmental science.

Summary

Agronomy must change to meet the challenges brought about by a society in a continuous state of transformation. To prepare our students to adapt, we must teach them three things--basic principles and skills, current technologies, and how to be life-long learners. The proposed new options in agronomy--Plant and Soil Management, Plant Science, and Soil Science--were designed with these goals in mind. These programs will lead to many rewarding careers, provide the background for graduate study, and prepare students to be life-long learners.

For more information about the undergraduate programs in agronomy or other areas of agriculture, prospective students should contact Dr. John Robertson, Associate Dean for Instruction, College of Agriculture, University of Kentucky, Lexington, KY 40546-0091, phone (606) 257-3468, or your county Extension agent. For information about admission to the University of Kentucky, contact Director of Admissions, University of Kentucky, Lexington, KY 40506.



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