

Arizonans Benefit from Accomplishments of our College

In the Department of Agricultural Education students who are training to become future teachers are being recorded on closed circuit video tape for self analysis of their teaching techniques. Practice teaching evaluated by students was a valuable tool in training teachers in the past. But, now the teacher being evaluated can also see for himself with the playback

of the video tape how his good and bad points strike home and with what impact.

The young teacher plans what and how he will teach his lesson. He goes before the class which is equipped with a closed circuit television camera. The class listens, then critiques and grades the teaching effort. After the

teacher reviews the student critiques and the video tapes, he replans his lesson and returns to the same class to show how he has improved. Objectives of the program are to improve the students' methods in introducing a lesson, improve his technique in oral questioning, make the summarizing of the lesson more effective, and improve teaching mannerisms. We feel that the program is making some rather important contributions towards training teachers.

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Agricultural Educators have conducted a survey of the manpower needs for Arizona's agriculture in 34 of the 44 school districts which offer an agricultural program. For the first time we now have reliable data regarding those needs for manpower. Beginning next summer, a seminar will be conducted to construct a five year instructional program to dovetail curriculum in our high schools and junior colleges to the manpower needs of industries.

These manpower surveys revealed that 1,926 agricultural businesses and producers employ 17,370 people. These people require 114 competencies of knowledge and skills in agriculture.

The survival of agricultural industries as cotton, beef and lettuce is dependent upon the reorganization, reevaluation and restructuring of the industry try to be able to survive in an atmosphere of modern business competition. Our Agricultural Economists study such economic factors and find ways in which to disseminate better understanding among agricultural business leaders. During the year specific studies were performed for these commodity people.

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Arizonans Benefit

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The first class of Dietetic Interns has now graduated from the School of Home Economics. The graduate earned a Masters of Science degree while completing the internship program with four different cooperating hospitals: Good Samaritan and Indian Hospitals in Phoenix; and St. Joseph and the Veteran's Administration hospitals in Tucson. This hospital cooperation make the Arizona program unique.

Women in Contemporary Society is the title of another new Home Economics course. In this course women of today are examined from the perspectives of different disciplines, from the contributions women have made to society as well as from the standpoint of the attitudes society has toward women. Since women are a majority group it becomes increasingly necessary that conflict between value and roles be alleviated through an objective study of women as individuals as well as members of a group in society.

The University of Arizona School of Home Economics along with four other educational institutions offer with business firms a consumer education course. The program works cooperatively with the J. C. Penney Company of New York city. They set up contacts with business and financial people in New York's business centers. Each institution is able to send one faculty member and five students to each of the summer-time conducted courses.

Harold E. Myers

College of Agriculture, &
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Bacterial Decay & Blackleg in Potato

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Because soft rot bacteria are seed-borne, there is a maximum potential for disease development. The term potential is used since the development of seed-piece decay and/or blackleg was shown to be dependent upon activation of bacteria by an external stimulus. Known stimuli include high temperature and fungal colonization of the potato tuber (Table 1, Fig. 2-3). All fungi tested, both potato pathogens and non-pathogens, were capable of activating the bacterial flora within the seed-piece.

Since many stimuli probably exist in nature, one problem is to determine the major stimulus in any given potato growing region. In Arizona the fungus, *Fusarium roseum* cultivar 'Sambucinum' is apparently the major stimulus under field conditions. Although this fungus is a fairly widespread soil-borne organism, the primary source of the fungus appears to originate from dry rot tubers present within the certified seed lots. During cutting operations this fungus is undoubtedly spread to the freshly cut surface of many seed-pieces by the knives, thus assuring fungus inoculation and the stimulus for bacterial activation.

Laboratory and field studies show that the bacterial diseases can be controlled with fungicides active against *Fusarium* but which exhibited no bac-

tericidal activity against the soft-rotting bacteria (Table 1). Control of the bacterial diseases with fungicides is believed to be accomplished directly by eliminating fungal activation of the seed-borne bacteria.

High temperature activation of the seed-borne, soft-rot bacteria may account for losses which occur when tubers are stored under improper environmental conditions or harvested during the warm summer months.

Control

There are several procedures which can be taken to minimize disease loss.

First, only the highest quality seed available should be used. Personal inspection of potato seed fields should be made, if possible, prior to harvest. This is particularly important in view of a recent article (1) which indicated that some States no longer consider blackleg in certifying seed potatoes.

Second, proper field leveling, avoidance of poorly-drained soils, and avoidance of overirrigation are cultural practices that can be taken to minimize disease loss.

Third, continuous cleansing of the cutting knives with a disinfectant and the use of fungicide** treated seed-pieces are recommended as inexpensive insurance policies against *Fusarium* activation of the seed-borne soft rotting bacteria.

¹ Crawford, Malcom
1971. Blackleg, the potato disease that comes looking for you! Spudman 26-27, July.

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