

consultation with faculty prepares a specific list of criteria that he will use in evaluating a particular class (Table 1). This set of criteria is available to all instructors either when they are hired or when the criteria were put together.³ Second, at mid-semester, the department chairman arranges to meet with each class for the last fifteen or twenty minutes of the class period. During this time, the department chairman asks the instructor to leave and conducts the review procedure. The chairman reviews the criteria with the students, trying to involve many students in discussing the strengths and weaknesses of the course and the instructor.⁴ Third, after the review, the department chairman prepares a written statement for the instructor on the findings of the review and also has a face-to-face critique with the instructor.

This type of review has several advantages. First, the instructor and the reviewer know beforehand the criteria by which instruction is evaluated. Second, since the review accounts for the first half of the class, the reviewer has an opportunity to combine the observations of the class over the entire first half of the semester. This tends to overcome the "sample of one" criticism. Third, because the review occurs at mid-semester, the students who were respondents have an opportunity to benefit from the review. If there are problems such as distracting mannerisms of the instructor, physical distractions in the room, unclear assignments, the instructor has the opportunity to make corrections and improve the course for the students who offered the suggestions. Fourth, there is a relatively low cost associated with this review procedure. The reviewer spends approximately fifteen or twenty minutes with the class at mid-semester and some time in a written and a face-to-face critique. These times are much less than those associated with peer reviews of several lectures of each class.

Conclusions

The resident instruction review procedure described effectively circumvents many of the problems involved with conventional review procedures. While the authors believe that the mid-semester review procedure is an effective one, they also believe that it is just one procedure that complements other methods. Mid-semester reviews should provide one input into the evaluation of resident instruction. There is no reason to discontinue the end-of-

3) The questionnaire was designed to bring out student responses to those criteria that we believe make a good teacher. These criteria were derived from a student questionnaire administered at the end of the semester — the results of which are also reviewed by the department chairman. There is a plethora of articles that deal with teaching criteria. Some of the more recent easily found in the *NACTA Journal* are: Swanson (8), McVey (7), Gardner (5), and McComas (6).

4) Casavant (3) discusses the mechanism and benefits of a similar approach which he called Colleague Aided Evaluation (CAE). His procedure was a mid-semester visitation by a peer, designed primarily for self-improvement. Questions apparently were covered more informally and oriented toward problems the instructor felt he was having. He did, however, observe the same student reaction that we have noted at Nevada: students have been open in their discussions and have occasionally had disagreements.

semester student evaluations as well as in-depth classroom visitations. However, the latter because of their high cost need not be conducted every semester, but perhaps every year or two. By following all three methods, the department chairman is provided with a stronger base for evaluating resident instruction.

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Ag Manpower Expansion In Developing Countries

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The world food problem has focused worldwide interest on agricultural development. However, agricultural development is not only the basis for increased food production to solve the world food problem; it is the foundation upon which overall development of a country rests.

Agricultural development requires many inputs, among which are land resources, capital, and manpower. Given the land, capital, and other resources, it takes competent agricultural manpower to develop a plan; put the other resources together, and actually achieve increased agricultural production.

For the past 25 years or more, American universities have been a major resource throughout the world in the development of agricultural institutions designed to produce the manpower required for agricultural development. With the advent of new foreign technical aid pro-

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grams, it is likely that American universities may be involved even more in the future, in providing institution building expertise to developing countries.

Manpower Needs

As we look back upon our experiences, successes, and shortcomings of the past generation, and as we plan for maximum contribution in future agricultural institution building efforts, we might do well to analyze the agricultural manpower needs of the developing countries.

Several kinds of agricultural manpower are needed by developing countries. Enlightened, skilled farmers are required. The means for enlightening farmers and for improving their farming skills is an effective agricultural extension service, another critically important cadre of manpower. A third major category of agricultural manpower is the professional agriculturalist who staffs governmental ministries of agriculture, universities, and research stations.

Although the expert staff of American universities who have gone overseas as agricultural administrators, teachers, researchers, extension workers, or consultants have made useful contributions during their brief tours of overseas duty, their contributions have been insignificant compared to the contributions to agricultural development made by people from the host developing country who have been trained in the U.S.A. The major portion of the short assignment of an American agricultural expert in a developing country is usually spent learning to function in a strange foreign culture and in different institutions; however, a well-trained developing country national may give 25 or more years of dedicated service to his new country.

Performance Requirements

Therefore, the major thrust of future American technical aid provided by universities should be directed towards improving the effectiveness of the programs to train developing country agriculturists in the U.S.A. To do the best possible job of training the developing country national for agricultural development work in his home country, we must understand the performance requirements of the job he will be doing when he returns to his home country.

There is room for some agricultural academicians to staff new universities in developing countries. There is also need for the theoretical scientist to do agricultural research in developing countries. However, the critically important need is for applied agriculturists — generalists and specialists in scientific agriculture who can relate what they know to the practical problems of developing agriculture and agricultural institutions in their nation.

How can an American university which is providing technical assistance and/or training manpower for agriculture in a developing country plan and conduct a program to produce the agricultural practitioners needed by developing countries? The trend has been to enroll foreign students into traditional undergraduate and graduate degree programs of study in agriculture. However, the performance experience of some of these Ameri-

can-trained foreign country agriculturists would suggest that this traditional training does not always precisely fit their performance requirements.

American colleges and universities have, in the past, designed their traditional degree programs with the assumption that their American clientele have had an acceptable level of practical exposure to agriculture before admission to a degree program. Therefore, most of these institutions, in the past, have not included practical training in degree programs. With the apparent trend toward the enrollment of more students from a non-farm, urban, background, American Colleges in Agriculture may no longer hold this assumption. Since a higher percentage of American agricultural graduates are apparently being placed into agri-business and other non-production related agricultural occupations, the performance requirements of these graduates may be changing also. It is not clear whether colleges of agriculture have made substantial changes in either the admission requirements or curriculum to accommodate these changes.

Emerging African universities have recognized the need for incorporating a practical training component into their undergraduate degree program in agriculture. Beginning in fall semester of 1977, the four Nigerian universities which offer degree programs in agriculture, on a country-wide, coordinated basis, are requiring practical training of all undergraduates in degree programs in agriculture. This change in the approach and curriculum is supported and was actually promoted by the Federal Ministry of Agriculture of Nigeria, which is responsible for planning agricultural manpower development for the country. This support is forthcoming in a country short on agricultural manpower, in spite of the fact that the practical training will add one year to the time required to produce a Bachelor of Science graduate in agriculture in Nigerian universities.

A variety of approaches will be used in the various Nigerian universities to organize and conduct this required practical training of undergraduates. These developing institutions have in operation, or will develop, some form of a university teaching farm, to serve as a land/livestock/field laboratory to facilitate the systematic teaching of practical agricultural skills in which the students are required to be proficient. Each teaching department in these universities has attempted to identify the practical agricultural performance requirements of their graduates and then systematically to include practical activities in the curriculum of the Bachelor of Science Degree in Agriculture. One-fourth of the total time spent by students in a B.Sc. degree in general agriculture will be devoted to practical training on the University Teaching Farms of these institutions.

The objective of this practical agriculture training program in Nigerian universities is to produce a graduate who can relate to and apply scientific agriculture to his work as a teacher, research worker, extension agent, government worker, or any other agricultural development of his country.

American colleges and universities should likewise recognize that, as a general rule, foreign students enroll-

ed in degree programs in the U.S.A. have not had exposure to practical agriculture as their American counterparts have generally had. If the foreign student trained in agriculture in an American institution is to be useful, the American college or university must deliberately and systematically build a practical agriculture training component into the program of studies of each foreign student. This practical training should be individualized to meet the specific need of each student.

Developing a Program

A program of studies of a foreign student is usually based on (1) an assessment of previous academic work completed, (2) an identification of remedial and prerequisite courses required, (3) required courses for the particular degree being sought, (4) the students' individual interests, and (5) perhaps also, the developmental goals of the students' home country.

If the foreign student is to be useful to his home country upon graduation, the assessment of previous work completed must also include an assessment of practical skill competencies and a determination of the students' home country job performance requirements, including the requirement for practical skill performance. The program of studies should then be planned to include not only the classroom training required for com-

pletion of the degree, but also these specific practical competencies required.

Several techniques could be used to accomplish the practical training required by foreign students. Systematic placement for part-time work on university farms of American universities could be used as one means of practical training. Summer or vacation placement or attachment to various agricultural agencies or commercial firms for supervised practical agricultural experience would also be appropriate. Another technique would be to place foreign students on carefully selected private farms where they might gain a feel for farming — a university might work through vocational agriculture departments in local high schools to arrange this kind of placement. The regular practical and laboratory training activities of well-taught college agriculture courses will likewise be useful.

Useful manpower for agriculture in developing countries can and should be one of the very important products of American universities in the decade and generation ahead. The key to success in this venture is a keen awareness of the nature of the need and a program of studies individually and systematically planned for each foreign agricultural student. American universities can measure up to this important task.

Educational Status of Blacks In U.S. Agriculture

R. Grant Seals

Abstract

Despite numerous problems, the 1890 land grant colleges have graduated a significant number of black baccalaureates in agriculture. Today job opportunities for blacks in agriculture are good, and a concentrated effort should be made to attract more blacks to doctoral degree programs in agriculture.

The 1890 Colleges and Universities

The historically black land-grant colleges have been the foci of black agricultural activity in education and development since 1890, and they have suffered severe constraints all the way from rigid segregation, separate but unequal, anticipated desegregation, and benign neglect, none of which has solved their problems. Nevertheless, they have kept the profession open to blacks and still supply a significant number of the black baccalaureates in agriculture. Since the enabling legislation (1), 1890 Land Grant Colleges have offered post-high school programs of agriculture, and many of them have offered the baccalaureate degree since the early part of the Twentieth Century (Table 1).

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Table 1. The 1890 Colleges Showing Dates Founded and the Dates First Baccalaureate Degrees were Offered²

	Date Founded	Offered the Baccalaureate
Alabama A&M University	1875	1939
University of Arkansas at Pine Bluff	1873	1929
Delaware State College	1891	1947
Florida A&M University	1887	1909
Fort Valley State College (Georgia)	1895	1945
Kentucky State University	1886	1929
Southern University (Louisiana)	1880	1922
University of Maryland, Eastern Shore	1886	1936
Alcorn State University (Mississippi)	1871	1871
Lincoln University (Missouri)	1866	1924
North Carolina A&T State University	1891	1925
Langston University (Oklahoma)	1897	--
South Carolina State College	1872	1924
Tennessee State University	1909	1922
Prairie View A&M University (Texas)	1876	1901
Virginia State College	1882	1943

In the late fifties, West Virginia State College gave up its land grant status and discontinued agriculture. In the early sixties, Kentucky State University discontinued agriculture but retained its land grant status. The Home Economics Department at KSU is the center of land grant activity.