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IN-SERVICE TRAINING

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Mr. R. T. Collier, Vice-President of Public Relations, Massey-Ferguson, Inc., recently stated:

"Just to feed the population during the next 30 years, at present levels, we will need as much additional food as is currently produced by all farmers of the world."

Further, lower death rates, particularly a decrease in infant mortality, has brought about changes in the population age balance. In some countries 60% of the population is under 20 years of age. The youngest of all nations, the United States, boasts an average age of 25. In essence, the population explosion is also a youth explosion which greatly amplifies the urgency of agricultural education.

If we look backwards to the year 1945 we can cite three significant eras which our economy has witnessed. During the first era, beginning in 1945, we saw the horror of the atomic bomb and concurrently realized the hope of harnessed atomic energy. In 1955 man liberated himself from the two-dimensional world and soared into space. In 1965 man suddenly realized that, even with his almost unlimited silo of knowledge, food (or the lack of it) would ultimately dominate his thinking.

In the face of our vast but limited resources, we need to nurture all available talent with whatever education it takes to make it flower. This education takes many forms, one of which is in-service training.

To further prepare the stage for the task of addressing ourselves to a discussion of in-service training, let us first resolve another issue.

The more involved I become in this business of education, the more I realize that even educators, bent on the task of imparting bodies of knowledge and manipulative skills to students representing the full spectrum of our society, cannot agree on a philosophical base for their own institutions. I point to the fact that even the program chairman for NACTA's convention has listed Parkland as a junior college.

With deep respect for and commendations to Dr. Cecil Smith, and others who have diligently worked to provide a stimulating, rewarding program, I feel we should set the record straight. Better still, I feel we should liberate; liberate the junior college for the identity it rightfully deserves. Conceding that Parkland College and all emerging two-year colleges are certainly junior to all senior institutions in providing the first two years of formal schooling for those students pursuing baccalaureate and higher degrees, hopefully they are doing what all mushrooming two-year institutions should be doing—namely, 1) seeking out community needs and providing programs of study to satisfy these needs through the media of continuing education, transfer education, vocational and/or technical education, general studies and preparatory education; 2) determining ways they can articulate to the community the services they have to offer; 3) developing

coalitions and partnerships with their communities in the interest of solving what the communities consider to be problems; 4) extending their campuses beyond the geographic confines established by the architects to bring the store front image in their respective communities. In essence, the comprehensive community college, a one-time "maverick" in the dimensions of education, should be recognized as a dedicated servant of its people that adds stature and dignity to its community.

Other NACTA participants have addressed themselves to articulation between junior and senior institutions and have noted worthy inroads made in aligning programs and objectives. Conceding that continued articulation is needed in this area, I feel it high time to bring identity back to in-service training programs. In Illinois these in-service training programs were birthed by our senior institutions and later orphaned by them as a result of increased emphasis on theoretical bases and research projects. We do, in fact, need to have provided that in-service training which is best shouldered by senior institutions. Still in today's technically based society we need also to provide in-service training for agricultural occupations instructors in areas that community colleges are best geared and tooled up for—namely, manipulative, technical and/or vocational skills.

And, as untimely as it may be, I strongly feel that if such training enables the educator to do a better job of teaching, regardless of its level or at what institution acquired, then that training should have attached to it some identifiable credit.

I cite the following cases in point:

1. In 1968 we, at Parkland, responded to group request to consider intensive in-service courses for agricultural occupations instructors. At that time we felt best able to offer a short course in engines and analysis. We did not limit enrollment to the confines of our district; rather, we opened enrollment to the state. As a result, we enjoyed the participation of 48 agricultural occupations instructors, geographically representing our state.

2. As an outgrowth of this experience we felt that the need existed for this type of training and now we are mid-way through a series of short courses catering to both business and industrially based personnel as well as agricultural educators. The following courses are presently being offered by our institution:

- 1) Engines and Electronic Analysis
- 2) Engine Service and Machining
- 3) Welding
- 4) Grain Grading and Testing
- 5) Land Economics
- 6) Management of an Agri-Business

These experiences have helped us to realize that in-service training is, in fact, a necessary and vital element in continuing education.

In summary, the illumination generated by educational innovation in our day reflects more brightly than history has

ever known. We, meaning community colleges and senior institutions, have an incumbent, inherent responsibility to instill a sense of urgency on this matter of continuing

education, or in-service training. Let us get about that task with serious determination.

A General Education Course in Agriculture and Renewable Natural Resources

Report of a Conference at Nicholls State College
Thibodaux, Louisiana
October 31 – November 1, 1968

The Commission On Education in Agriculture and Natural Resources, which sponsored this conference in cooperation with NACTA, was supported by T.O. 26, Contract C-310, between the National Science Foundation and the National Academy of Sciences.

This course is intended as a general education course for all college students to focus their attention on the application of agricultural sciences in solving pressing world problems. Human societies are constrained by the resources and technology available for the production and distribution of plant and animal products. Students should understand the interrelationships of various disciplines as they relate man to his sources of physical sustenance. The course here outlined should introduce agricultural majors, during the freshman year, to the significance of agriculture as a major force in advancing civilization. It should enable the college of agriculture to maintain close contact with its freshman students even if their technical courses in agricultural sciences are delayed until they have completed substantial work in the basic sciences.

COURSE CHARACTERISTICS

At the outset there was general agreement on certain characteristics that would be appropriate to the course as outlined here. These may be summarized as follows:

● In the majority of institutions one course could effectively serve both majors and nonmajors; the variable here would be the background of the individual. In each instance, the student's need for the course should be determined in consultation with his advisor.

● The course would be most effective if offered at the freshman level, particularly if it serves as an agricultural orientation course for majors as well as a general education course for nonmajors, although it would not be inappropriate as a general education course at any undergraduate level – nonmajors might well take it as an elective in the sophomore or junior year.

● A three semester-hour course, or equivalent, would be minimum to treat the subject matter adequately. In some situations, the faculty might feel justified in devoting as many as six semester hours to this course.

● A single professor should assume administrative and instructional responsibility even when a multi-instructor approach is adopted. An ability to relate the subject matter to world problems, to challenge the imagination of the student, and to cross disciplinary lines is of utmost importance. The institution should provide a climate wherein this job – properly done – brings professional rewards equal to those within a specialty. Exposure to the total academic community could provide an avenue of professional growth not ordinarily available to one within a specialized field.

● The basic aim should be to develop an attitude toward renewable natural resources rather than to teach about resources. Here may be a situation suited for using visiting lecturers, and of new teaching aids and methods. Where feasible, individual student research problems, and selected case studies, would increase student involvement.

● It should be possible to fit this course into any conventional grading system.

● The course would be best administered in a college of agriculture, but outside conventional subject matter departments. The faculty should be directly responsible to the Dean of Agriculture or the Director of Resident Instruction. As a somewhat less desirable alternative, the course could be offered in a discipline such as sociology, economics, or geography.

● To maximize its acceptability as a general education course outside of agriculture, the expressions "agriculture" and "renewable natural resources" in the course title should be placed in a context that underscores their role in solving human problems. Most frequently suggested titles were: Agriculture – Renewable Natural Resources – Man; Agricultural Resources and Man; Man and His Environment; Man – His Struggle to Survive; World Food and Population.

COURSE OUTLINE

This outline includes more subject matter than could possibly be effectively presented in a three-credit-hour course, for the reason that the instructor can more conveniently eliminate than supplement as he builds his own course. However, any revision should retain a reasonable balance of material.

I. Introduction

- A. Resource-Related Fundamental Problems Confronting Mankind
 1. Aggression
 2. Population expansion
 3. Nourishment
- B. The Role of Agriculture in Helping Man Meet the Challenge of Tomorrow

II. Man and His Environment – An Overview (3 to 6 lectures)

- A. Man in the Universe
 1. Physical space perspective
 - a. Man an infinitesimal speck
 - b. Space exploration
- B. Man on Planet Earth – Elemental Environment
 1. Climate – basis of regional variations
 - a. Relationship of earth to sun as determinant of climate
 - b. Radiation and temperature – heat energy at different points
 - c. Composition of air
 - d. Maintenance of stable atmosphere
 - e. Major wind and pressure belts
 - f. Rainfall
 - g. Light intensity and length of day
 - h. Limitations of climate on food production
 2. Patterns of natural vegetation
 - a. Cycle of plant growth and decay
 - b. Vegetation and climatic maps
 3. The great soil groups
 - a. The processes of soil formation
 - b. Classification and distribution of soils – relation to natural vegetation
 - c. Limitations of soil on food production
 4. Summary – land, water, air, climate and renewable biological resources
 5. Current problems in man's management of the elemental environment
 - a. Land – erosion, chemical pollution, depletion by mechanical means and by mismanagement
 - b. Water – increasing demand for potable water, pollution, mismanagement of watershed
 - c. Air – pollution
 - d. Natural resources – mismanagement of grazing lands and forests

C. Human Societies

1. The historical development of societal organizations
 - a. Family – the basic unit
 - b. Tribe – nomadic to agrarian – development of property rights
 - c. Movement to urban centers – made possible by agriculture
 - d. Factors encouraging the formation of nations
2. The place of religion in society
 - a. Stabilization of customs and mores, relation to family
 - b. Satisfaction of man's nonphysical needs
 - c. A factor in communication, health and education
 - d. Relation to agriculture and food production
3. Governmental organizations and their relationship to agriculture and food production
 - a. Tribal organization
 - b. Feudal organizations
 - c. Monarchal organizations
 - d. Totalitarian forms
 - e. Democratic forms
4. Economic phases
5. Current problems of government in managing food production – shortages and surpluses

III. Impact of Agriculture on Contemporary Man

- A. The Population Problem (3 lectures)
 1. Introduction – The central resource problem to be discussed is the expected doubling of world population during the next