Negative Staff Reactions to Departmental MBO

Few systems are without problems. The MBO which is in its seventh year of use in the Department of A&IE at MSU is no exception. Staff members sometimes look across campus and feel that inherent in this system is a greater expectation than is requested of staff members in departments where no MBO exists. Some staff members have expressed a concern that the system is demeaning and they do not need to be driven by such a management system. They feel their freedom is inhibited by having to plan and state tangibly their expected output. These findings parallel those of Terpstra, Olson, and Lockeman when they commented that, "Scholars and academicians have traditionally placed much value on individual autonomy, behavioral flexibility and academic freedom."[5]

New staff to the department and established staff have voiced their concerns. New staff suggest that the system does not provide enough protection during the period when they are new and developing. Established staff express a concern that the MBO system does not provide enough protection for them when they are winding down their career. A fear shared by all staff is that the MBO system, if not carefully monitored, may tend to make individuals more concerned about their own personal growth and development than about the department as a whole.

From the department chairperson's viewpoint, the departmental MBO has been particularly beneficial in encouraging staff planning, resulting in increased staff and departmental productivity. Staff members benefit in knowing the whole department's goals, objectives, and direction, as well as the part staff members play in the department's thrust. The system of individual staff role and scope development followed by the several step evaluation involving self, peer and department head is fair in that it rewards output and provides the basis for more rapid staff advancement. A major concern is whether the system's limitations can be fully identified and adjustment made so that the department and its faculty will remain dynamic, which was the original intent for instituting the MBO system.

Internal peer evaluations at MSU conducted in 1975 and again in 1982 indicated that the department is among the best managed within the university. Reviewers felt the department should share its MBO system with others.

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A Future For Agriculture

J. David McCracken and
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In this article, the probable future changes in agriculture will be presented. Then questions regarding current practices among professors of agriculture and the need for future changes in how professors organize and deliver educational programs will be raised. The intent of the article is to cause professors of agriculture to evaluate current practices and begin to debate the changes needed for the future.

Those involved in resident instruction are faced with the challenge of preparing their students for a future that will be much different than today. It will be essential that students be prepared as creative thinkers and scholars so they can cope with their changing environment.

The future of agricultural instruction in colleges will largely depend upon the nature of agriculture, both on farms and in businesses and industries involved with agricultural products and services. The more realistic estimates of future conditions probably result from projecting some current trends, keeping in mind possible technological breakthroughs or system breaks.

Future Trends in Agriculture

The trend toward fewer, larger, and more specialized commercial farm enterprises is expected to continue in the immediate future. During the 1969-78 period in Iowa, farms of over 500 acres experienced the highest percentage growth, while farms of 70 to 499 acres experienced decline (Cooperative Extension Service, 1982). This trend appears to be typical of a national trend. There is potential for a disappearance of the middle-sized farm. Each large farming unit will be operated as a business with an increasing percentage of the large units taking advantage of incorporation. The managers of these enterprises will, of necessity, need to have a high level of competence in business and managerial skills.

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Farmers as a group have been pessimistic about the future (Lasley, 1982). More than half (54%) expect overall economic aspects to become worse. Almost one-fourth, however, felt prospects would improve in the next five years (pp. 2-3).

Many entering farm managers are likely to possess a bachelor's degree. The technology that has been and is being developed will be applied to the production of food and fiber. Computer technology is likely to have the greatest early impact. Computers will be used to mix rations, meter feed to animals, monitor the livestock environment, aid in management decisions, monitor equipment performance and report crop stress. Laboratory analysis of such things as plant tissue and animal feed will become routine. Electronic controls will save labor and increase precision for most agricultural operations.

Scientific breakthroughs will be likely in areas related to genetic manipulation, weed control, nitrogen-fixation improvement in legumes, development of an annual alfalfa, new crops for saline soils, feed treatment to improve feed conversion and hormones for improved milk production (Sauer, 1983). Ocean farming and vertical integration will suffer greater usage. Biotechnology will bring difficult adjustments to agriculture. Previously unedible biomass will be processed resulting in highly nutritious, preserved products at reasonable prices. These products will compete favorably with the more expensive traditional food products.

Labor utilized in farming operations will become more specialized. Farm managers may hire a full-time mechanic to maintain and operate complex equipment, an animal care worker to care for a pig nursery or to milk the dairy cows, a fertilizer and chemical technician to manage a crop fertility program and a records analyst/computer programmer to operate the system computer.

Agricultural production will be closely managed. Emphasis will be on prevention of major problems and quickly reacting when problems occur. Subject-matter specialists will be hired by farmers as consultants when changes in the enterprise are contemplated or when problems are in need of resolution. The very best specialists will be sought by the large farmers, regardless of source.

Another type of farmer will exist in the future and will be in need of assistance from agriculturalists. The "living on a little land" or rural living ideas will be an increasing phenomenon. The number of farms of less than 70 acres has increased for the 1969-78 period (Cooperative Extension Service, 1982). These "farmers" occupy potentially productive agricultural land and can produce food for themselves and others if they are trained to utilize their available resources.

Businesses and industries which support agricultural production will also experience adjustments. Fewer and larger operations will emerge as farmers move toward high-volume purchasing and marketing. Many will use purchase agreements and contracts involving service after a purchase or as a part of a lease. More business will be transacted away from a local community in which a farm is located.

Communication will be greatly improved. A computer on the farm will be interactive with the computers at universities and in business and industry so that information can be transferred, products can be purchased or sold and electronic transfer of funds can occur. The improvement in communications and the movement toward larger volume purchases and sales will likely result in further decline in the populations of small rural communities and further urbanization.

Agricultural occupations which serve the home and business will continue to grow. In horticulture, sale and servicing of indoor and outdoor ornamentals will experience increasing demand. The need for post-harvest physiology expertise will expand as more plants are grown in warmer climates but sold in northern areas. While people will continue to enjoy their local, state and national parks and have a real concern for the environment, occupational opportunities in natural resources which require knowledge and skill in agriculture are likely to be limited in times of scarce public financial resources.

The agricultural sector will increasingly need to educate the consumer concerning the production and marketing of food and fiber. The large percentage of the population will have little direct knowledge of agriculture. It will be more important to have agricultural science taught as a part of the curriculum for all students. Students who are not interested in a career in agriculture should still obtain a basic understanding of agriculture and its importance in society. Colleges of agriculture should perhaps develop courses for students of other majors to take to broaden and enrich their programs.

Questions We Need to Consider

Given this view of the future of agriculture, what ought professors of agriculture be doing, both now and in the future?

Are we providing curricula that provide increasing competence in the area of business and managerial skills? In the courses we teach, are we introducing and **using** new and emerging technology that is essential to the production of food and fiber?

Currently, are we viewing the computer as a tool for learning and for decision making and problem solving, or do we view it as a separate subject and teach it as such? To what extent are we as professors routinely using computer applications in our own courses?

Are we preparing students to use laboratory analyses of feeds, plant tissues, etc. in real world decision making or are we teaching these procedures as an end in themselves?

Does our course content and our approach to teaching cause students to identify problems on the frontier of knowledge, use their basic sciences in thinking about such new possibilities, begin to hypothesize regarding solutions and think of how such new knowledge could be used to improve the quality of life? Or do we focus almost exclusively on past problems that have been solved?

Does the current curriculum prepare students to manage people? Do we include in the curriculum personnel selection, motivation of employees, communicating with employees and employee counseling?

Are we preparing students who can be the kind of subject matter specialists that farmers and agribusiness operators will hire, people who have in-depth knowledge, excellent problem solving skills, and a detailed knowledge of commercial operations?

What are we doing now to educate consumers? What are we doing to be sure college of agriculture graduates will be effective at educating consumers about agriculture?

Change We Must

Our individual and collective response to the above questions will determine how we as professors of agriculture will meet and/or usher in the future.

It is apparent that the business and industry of agriculture, both on and off the farms, will increasingly become more technological, more specialized, more business oriented, and more efficient. The number of part-time small farmers will increase. The consuming public will have little direct knowledge of agriculture. Education in agriculture at the college level must change with the changing agricultural environment. A future orientation will allow for further growth and development. The challenge of change also will bring opportunities to serve the public in new and improved ways. Agriculturalists should resolve to meet the challenge!

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SURVEY REPORT

1983 Computer Use in Poultry Science Curricula

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Abstract

The results of a survey of 37 of the 50 institutions teaching poultry science in the United States and Canada are reported. The various departments were asked how computers were being used in their curricula. Responding departments were divided into those teaching primarily poultry science and those concerned with both poultry and large animals. Poultry majors were not identifiable in most of the "animal sciences" departments (those teaching more than one commodity). Computer use in undergraduate and graduate instruction was similar for courses in nutrition, physiology and business management among the department types. Computers were used in breeding and genetics courses in "animal sciences" departments but not for similar courses in poultry science departments. Thirty-five programs for instructional use were reported to be available for sharing amongst the departments (list available from authors).

Introduction

Computers are rapidly becoming an integral part of most agri-business. Their uses include keeping financial records, preparing balance sheets, performing break-even analyses, projecting budgets, keeping production records, summarizing reports of production, formulating least-cost rations, and preparing income tax statements (Anonymous, 1982).

Educators at all levels have become concerned with preparing students to deal with technologically advanced equipment, including computers. Although most educators agree that students should be "computer literate" there seems to be little agreement on what this means. In a recent article "Computers in Education" in a popular magazine, Watt (1983) stated:

> "In the past year or two, computer literacy has become a kind of political football at the federal, state, and local levels. No one quite knows what it is, but everyone is sure that it's good for us".

In an effort to determine the present status of computer use in poultry science curricula, various teaching departments in the United States and Canada were surveyed during the first half of 1983. A secondary objective of the survey was to compile a list of software already prepared that is available for teaching poultry science.

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