

community college, not regional college, and in California, the district itself may be almost as large as a New England state.

An appreciable number of community college and state college agriculture departments, divisions or schools have developed into an Agriculture and Natural Resources structure. One of the first to do so, in 1966, was Shasta College, under the guidance of its Associate Dean of Instruction for Vocational Education.

Shasta College's Agriculture and Natural Resources Department meets certain needs of non-farm students, or better, non-agricultural majors. For instance, the majority of students in such courses as Natural Resources 60, Environmental Conservation, is populated mainly by majors in other than Agriculture or Natural Resources. Fitting like hand in glove into the Natural Resources Curriculum, these courses serve the entire college and community.

The Ornamental Horticulture and Horse Husbandry curriculums serve, in addition to regular day students, adult enrollees from the community. Classes are held in the evenings and on weekends for a vast majority who are taking the courses primarily for pleasure and home use.

The Agricultural and Natural Resources Department of a community college neighboring Shasta College provides an appreciable number of courses which meet the science breadth (general education) requirements. Through these means a large amount of initial enrollment is gained, but even more important, some of the people switch to an Agricultural or Natural Re-

sources major.

Thus, the Agricultural and Natural Resources Programs of California's State and Community Colleges reach forth to serve the urban as well as the rural population. Helping keep food prices within the reach of Americans is one of the most significant and meaningful services which they can render to city dwellers and everyone else.

Through Natural Resources courses, all with environmental foundations, these programs educate people to personally contribute to the ecologic health of this planet and in some cases leadership rolls toward the goal of unpolluted air, water and soil.

The programs train and educate students who will devote their lives to the protection of the recreational areas of our land and to earn their livelihood from this toil.

In this and many ways too numerous to mention, all of the Nation's Agricultural and/or Natural Resources facilities, curriculum and personnel serve rural and urban people in this, our so called urbanized society.

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3 Bill Burrows, letter to Loren D. Phillips, June 4, 1971. 3 pp.

4 William H. Meardy, "Community College Section, National School Boards Association Newsletter," January, 1971, pp. 2-3.

PARTICIPATING CALIFORNIA COLLEGES

Community Colleges

1. Antelope Valley College
2. Butte College
3. City College of San Francisco
4. College of the Desert
5. Fullerton Junior College
6. Los Angeles Pierce College
7. Merced College
8. Merritt College
9. Mt. San Antonio College
10. Napa College
11. Orange Coast College
12. San Joaquin Delta College
13. College of the Sequoias
14. Sierra College
15. West Hills College

State Colleges

1. California State Polytechnic College
Kellogg-Voorhis Campus
2. California State Polytechnic College
San Luis Obispo
3. Chico State College
4. Fresno State College

Respondent

Joe Randolph, Head, Agriculture Dept. and Chairman Tech.—Engr. Div.
Frank Hutchinson, Chairman, Div. of Agriculture and Life Science
Harry Nelson, Chairman, Ornamental Horticulture Dept.
Ted Sypolt, Coordinator, Vocational Education
Bill Morgan, Head, Agriculture Dept.
Bernyl Sanden, Dean of Agriculture
Gary Clausen, Director of Agriculture
Emile LaBadie, Head, Agriculture Dept.
Harold Peck, Acting Dean of Agriculture
Will Nord, Head, Agriculture Department
Richard R. Barrett, Professor of Animal Science
Dean McNeilly, Chairman, Agriculture—Natural Resources
Bruce Jensen, Chairman, Applied Arts & Sciences
Ron Bryant, Head, Agriculture and Forestry Department
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Opportunities for Agricultural Colleges in an Urban-Industrial Environment

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Colleges of Agriculture today are at a crossroads, but it is a crossroads which the colleges themselves have helped construct. This crossroads is the dilemma of identifying the clientele of agricultural colleges in future years and subsequently determining the direction and orientation of college teaching, research, and extension programs. The very existence of the crossroads can be attributed, in large measure, to the contribution by the colleges to the industrialization of agriculture and the migration of laborers off the farms to urban areas. A central question for agricultural colleges today, then, pertains to the role they will play in an urbanized society. Stated differently, what role can a college of agriculture play in an economy which is becoming less oriented to farming?

There appear to be a number of opportunities available to agricultural colleges and a variety of clientele to be served. Three broad areas of opportunity for new or continued college programs include study of (1) the production and distribution systems for food and fiber, (2) human and community resource development, and (3) the development and conservation of our natural resources. This paper will be confined to these three arc-

as, and primarily the first. It will be argued that these areas provide considerable flexibility for a program which is relevant in an urban society.

A primary area of continuing opportunity is within the domain which the colleges are most familiar — the production and distribution systems of food and fiber. This is where many of our resources are currently expended, but it is my contention that there is considerable opportunity here in both existing and in new areas even in an urban society. Agricultural colleges will likely continue to serve the needs of their former clientele, but can be expected to further expand their service to the agri-business complex, and also to become more fully involved in the problems of the final consumers of food and fiber. A brief review of agriculture's industrial process should add clarity in identifying college responsibilities to these three groups.

When many agricultural colleges were established, especially the land grant colleges, agriculture was an important segment of our economy both relatively and absolutely. The terms "agriculture" and "farming" were freely substituted. Today, however, agriculture encompasses a broad, complex set of production and distribution systems with farming being but one phase. Three primary developments within commercial agriculture are there-

fore of interest to agricultural colleges as we develop programs for the future.

First, we are aware of the recent developments and trends within the farm production units. The trend toward large, specialized production units and toward varying degrees of vertical integration at these levels has received considerable attention (1). We cannot, however, ignore these changes and trends, especially their implications to the emphasis, the orientation, and even, perhaps, the continuation of some college programs.

A second important development in agriculture is the movement of much of the activity of agriculture from farm units to highly technical and specialized farm supply and marketing firms. These firms, frequently referred to as middlemen or the agri-business complex, hold an increasingly prominent position in the agricultural system (2). For one thing, work is being transferred from the farm to non-farm firms, primarily farm supply firms. Expanded lines of products are being manufactured and new services are being offered by these firms. Also, the sources of power and energy have also moved from farms to non-farm sources (3). For example, farm produced horse power has been replaced by non-farm produced tractors and fuel. The increased use of urea is another example.

Programs of research and education will continue and may likely expand to serve the clientele both in the production and the marketing and processing areas. Nor is this necessarily alien to the needs of an urban society. In a complex system of inter-related production and distributional activities such as agriculture finds itself today, improving the performance of a subset of activities should have some influence on the total system and, in turn, on urban residents who are consumers of the final product. For example, improvements in product quality, methods of handling and storage, etc., seem to be in the interest of both the urban consumers and the producers and distributors. But our opportunity for service within the food distribution system need not stop here.

There is a third concurrent development that has taken place within the food production and distribution systems and which carries significant implications for agricultural colleges seeking to develop programs of interest to urban America. Recent years have seen a growing interest in consumer economics. Some colleges have programs in this area, but I submit that we could be playing a more active role in this area especially if we are interested in relating ourselves to an urban society. A brief review of recent developments should be helpful.

It was suggested earlier that much of the activity of agriculture has moved off the farm as one result of agriculture's industrialization. This has had the effect, however, of widening the gap between the farm producer and the final consumer. Consumers, who previously dealt more directly with farmers or at least did so through a modest set of middlemen, are now separated from the farmer by the expanding agri-business complex. Further, they now buy from retail units whose management is highly skilled in merchandising and salesmanship.

We can say, therefore, that we have a new ballgame in terms of the relationship between consumers and those who solicit their business. One economist has suggested that the relationship has been so highly altered that we should abandon our traditional assumption of consumer sovereignty, that is, that the consumer is king, for an assumption of producer sovereignty (4). In addition, some contend that today's professional sellers "are tempted to spend more time researching the consumer, to ferret our bases for overt or subtle appeals, than researching the product and its uses" (5). In short, the balance of power between buyers and sellers has been greatly altered. "Where once the buyer and seller could stand face to face on equal terms, now the transaction has become impersonal, complicated, and heavily weighed on the side of the professional seller" (5).

Consumer response to this "new game" has varied from total indifference to active participation in demonstrations protesting pricing and merchandising practices of supermarkets. If one can generalize on the recent consumer movement, including the emerging programs in consumer economics, it appears the

concern is with the range of problems confronting consumers — consumers as representatives of households — when they enter the marketplace as buyers. These concerns have perhaps been summarized best by Presidents Kennedy and Nixon in defining the basic rights of Consumers:

1. The right to make an intelligent choice among products and services and the right to accurate information on which to make that choice.

2. The right to expect that his health and safety has been taken into account by those who seek his patronage.

3. The right to register his dissatisfaction and to have his complaint heard and righted when his interests are badly served.

These are some of the recent developments in our market system and of the consumer movement. Of importance for this paper, however, is whether and how a college of agriculture can relate itself to these issues. The separation which has occurred between farm producers and consumers was discussed earlier as one result of agriculture's industrialization. It does not follow, however, that consumers should necessarily be separated from agricultural college programs — especially consumers of agricultural and agriculturally related products. Consumers of the products and services of the food and fiber systems, whether these consumers are rural or urban, are potential clientele of agricultural colleges. Agricultural researchers recognize the importance of proper operation of all subsystems within the food distribution system as a prerequisite for proper operation of the total system. Certainly one part of this system includes the markets in which the final consumer is a buyer. Consumers, then, could be included as part of a college's clientele. This would seem especially appealing if a college was concerned about its role in an urban society — a society where most consumers of food products are urban residents.

The second concern pertains to the type of programs which agricultural colleges can develop in the interest of the consumer. Certainly one of the first programs that comes to mind is consumer education. Investments in consumers through a program of consumer education and investments in those persons working with consumers can take at least four major dimensions: (6)

1. Investments in developing and clarifying consumer values and enhancing capabilities for satisfaction from consumption.

2. Investments in the managerial and decision-making capabilities of consumers.

3. Investments in consumer knowledge of markets and product alternatives.

4. Investments in consumer understanding of economics, market processes, and abilities to change market performance.

These investments could serve as the foundation of a consumer education program. Yet consumer education programs alone are not the answer — nor can they stand alone without being supported by a sound research program. What, then, could a supportive research program entail? One area of inquiry could concern itself with the rules of the market and the effect on participants in the market system when the market rules are altered. Altering market rules particularly through the legislative route may be a less expensive process than some efforts at consumer education. But there are also shortcomings to this approach. Consumers may readily identify their overall goals — but their allegiance to those goals may be shaken and resistance may be encountered when the goal narrows to a specific program which touches individuals or communities or when the consumer learns that in order to be protected in one area, he must give up some freedom or resources in another. Thus, it seems appropriate that consumers be informed in advance of the pros and cons of various policy alternatives designed to meet their goals.

For example, consumers may demand that bacon be packaged to expose a full slice of bacon — but it seems they would also be interested in knowing what this will cost them in terms of higher packaging costs and a higher retail price before such a regulation is enacted. This type of information typically is not available to consumers. The point is this, identification of alternative market rules and the consequences of each is a crucial element in a consumer oriented program and can be a valuable service to a college's consumer clientele.

A second area pertains to a systems approach to analyzing problems in the production and distribution of food and fiber. A promising area for systems analysis (and for training programs

for that matter) is within the retail distribution of food. Do we now have the most efficient retail distribution system for food given the possible alternative systems in a computer age and given the heavy usage of such as expensive input as labor in our present system? I am not satisfied that we have. Further, I view this area as being considerably broader than food distribution through grocery stores, for it should also include the growing distribution through restaurants, fast food firms, and the like. Over one-fifth of all food in the U.S. is consumed away from home — yet this is an area which agricultural colleges have left virtually untouched. To the extent that it is the urban consumer which accounts for most of the food consumed away from home, then research and educational efforts in this direction would seem to keep an agricultural college relevant to an urban society.

A third area of research opportunity deals with some specific topics of interest to consumers especially as they approach the marketplace as buyers. Some of these topics include an analysis of the potential benefits and the need for truth in packaging and unit pricing; the adequacy of grades and standards for judging product quality; and the potential for product testing and for product dating of food store items. These topics are pertinent to the consumer's interest in making an intelligent choice in the marketplace and the right to obtain accurate information on which to make that choice.

To review briefly, agricultural colleges have plenty of opportunity to relate their programs to the needs of an urban society even by working within the food distribution systems. Indeed, programs concerned with food distribution problems and topics can logically include features of specific interest to the urban consumer. While shifting priorities may be needed in some cases, the opportunity exists for service to the urban community.

We turn now to topics outside (but not unrelated to) commercial agriculture where agricultural colleges may find potential areas of service to an urban society. Presently, there is a growing interest in human and community resource development. Although this is an area outside of commercial agriculture we are not divorced from it for the opportunities available are due, in part, to the industrialization and commercialization of agriculture. Further, we may not always evaluate college programs in terms of their influence on the urban community, but the latter is influenced, nonetheless, by developments in the commercial sector of agriculture and by programs designed to alleviate human and community resource problems.

One could argue, for example, that agricultural programs and policies and supportive efforts by agricultural colleges historically have not held sufficient concern for the urban community and its problems. We have assisted in and promoted the industrialization of agriculture which has, in turn, contributed to the migration of farm workers to urban communities thus adding to the problems of urban congestion. The cotton industry provides an interesting example. A study of large cotton producers in Mississippi revealed that between 1960 and 1967, the labor requirement in cotton production was reduced from 82 to 13.5 man hours per acre. This was due in large measure to a substitution of \$4 per acre for machine power and services and \$10 per acre for pesticides and herbicides. Yields, however, increased from 750

to 850 pounds per acre (7).

No rebuke of technical advance is intended. But neither does it seem feasible for agricultural college programs in the 1970's to feed continued technical change with one hand without offering a hand to those laborers left technologically unemployed. We can't have our cake and eat it, too. Rather than *backing off from* industrialization, a more reasonable alternative suggests that we seek to provide for the needs of those left jobless. Studies of the costs of rural to urban migration to both the migrant and the urban community and efforts at determining the feasibility of rural industrial development are examples which seem to fit this need. Considering the present state of urban congestion, efforts by agricultural colleges to stem the flow of rural to urban migration would likely be met with acceptance by urban residents. The opportunities in this area are plentiful.

The third major area of opportunity concerns the development and conservation of our natural resources. Since environmental issues have received considerable attention at this conference, I will treat this topic briefly.

Again, I do not feel that the sources of many of the problems in this area are unrelated to the industrialization process of both agriculture and the economy as a whole. Our efforts to research the problem areas and identify and evaluate alternative solutions, however, may prove to be quite difficult. Emery Castle has suggested that "we know quite a lot about preserving the quality of the environment: we also know quite a lot about stimulating economic activity; (but) we have difficulty in resolving conflicts between the two." (8) Agricultural colleges have the expertise to maintain or extend programs in this area and should do so whether we are a rural or urban society for our clientele in this case is society as a whole.

In summary, I have identified three major areas which colleges of agriculture may choose to emphasize in relating themselves to an urban society. Each of them is addressed to a particular clientele. It would appear that the industrialization of agriculture, rather than diminishing the college's original base of support by reducing the farm population, has instead broadened the areas of opportunity for service.

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ANNUAL REPORT

Teacher Evaluation and Recognition Committee
National Association of Colleges and Teachers of Agriculture
Northeastern Junior College, Sterling, Colorado
June 16-18, 1971

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Even the good teaching to be found in agriculture can and should be improved; this goal will be accomplished sooner if good teaching is made visible. To achieve this objective, the NACTA Teacher Evaluation and Recognition Committee continues its efforts to implement the TEACHER FELLOW program established by NACTA at its 1969 annual meeting in Alfred, New York (NACTA Journ. XIII: 40-41, 1969). Acting upon a proposal approved last year (NACTA Journ. Sept. 1970, pp. 62-64) an interdisciplinary group representing 15 colleges and universities from 13

states assembled for a five day workshop, Jan. 29-Feb. 2, at Arizona State University, Tempe. The 28 participants included professors and chairmen from agricultural colleges and professors from several departments in colleges of education. Dr. James Bell and Dr. Charles Malone of the ASU College of Education were co-directors assisted by Mr. Frank Anderson, Principal of Central High School, Phoenix, and E. Grant Moody of NACTA served as coordinator for the workshop.

The workshop purpose was to become familiar with the use of a defini-