

The College of Agriculture

by Harold E. Myers, Dean

A recent centennial address by Dr. David D. Henry, president of the University of Illinois, presented some ideas which have relevance to my topic of discussion. He pointed out that fifty years ago, in 1918, President Edmund J. James on the occasion of the semi-centennial of the University of Illinois, "claimed that changes in the University by 1968 would outreach 1918 to a greater extent than the latter's comparison with 1868 because 'the world of 1968 will be more vastly different.'"

President James noted, "Prophecies of the men who labored to secure the foundation of this institution were large and far-reaching, but none of them equalled the reality, none of them appreciated what the responsibilities of the next fifty years were to be, and they would all be greatly surprised at this institution now if they could return to review it. Our fate will doubtless be the same."

This statement is equally applicable to the College of Agriculture of The University of Arizona. It reflects the inability of one generation to accurately predict the future growth and development of a dynamic institution in a changing society.

My remarks are directed to the faculty of the College of Agriculture, whose dedication to overall objectives is second to none of the college faculties of The University of Arizona.

I never cease to be proud of our faculty. When I see some of our men and women in action, my confidence in the individuals and the group as a whole is reinforced.

Over a period of years, our faculty has grown in stature through the professional development of personnel plus a generous infusion of "outside talent" of promising young faculty members who joined us soon after the completion of their graduate programs. We have not tried to build a

faculty of men and women with established national or international reputations.

It is gratifying to observe the national and international recognitions which come to our faculty members. They are frequently requested to participate with other men and women of great stature in significant activities in the United States and in foreign countries. Such invitations have resulted from acknowledgment generated from superior achievement by our faculty.

Our College of Agriculture has been in existence for about three-fourths of a century. The Land Grant colleges of agriculture, throughout their existence, have had one basic objective, and that is to serve the agricultural interests of the state and the nation. Today the objective of the College of Agriculture of The University is to serve primarily the needs of agricultural industry of Arizona.

For the purpose of this objective, agriculture is defined broadly. The College of Agriculture is a social institution created by society to serve agriculture. It is supported largely by public funds. It is the intent of the state legislature and Congress that appropriated funds be used to serve agriculture. Thus, our College has been and is today problem oriented, based on the intent of the appropriating bodies. This is true of resident instruction, research, and extension. Problem orientation is the principal justification for the continued existence of colleges of agriculture.

All of our college programs, whether classroom teaching, research, or extension could be reassigned to other colleges and departments in the University. The same can be said of programs of other colleges of the University. The significant question, is whether the agricultural interests of our state and nation would continue to be served as sympathetically and

as effectively by such dispersal of the agricultural program.

Many years of experience lead me to conclude that a problem-oriented college is indeed the most effective organizational unit for the execution of our objective. Substantiation of this point of view is oft expressed by many of our national leaders — political, labor, business and education. These leaders prophesy that if organizations equivalent to our colleges of agriculture benefited other segments of United States industry, these segments like our agriculture, would be second to none in the world. Only a few days ago, President Charles J. Hitch of the University of California, as quoted in the press, was making essentially this comparison for certain segments of California's economy.

The commitment of the University of Arizona is to serve the people of the state, yes, to serve democracy. Commitments of individual colleges support all University objectives but are pointed primarily toward special segments of our democracy, in our case to agriculture.

The commitment of our University and our College to the idea of service is not unique for the University of Arizona. In a real sense, it is an aim basic to and fostered by all Land Grant Colleges and Universities.

Dr. James A. Perkins, president of Cornell University, expressed the idea of the function of an institution such as ours very succinctly in a Cornell University anniversary address. He stated that from the very beginning of the University one of the strong motivations has been, "the compulsion to be of service to all mankind."

In no area has the service idea been more effectively expressed than in Land Grant Colleges of agriculture. In 1907, Liberty Hyde Bailey said, "The University belongs to the people of the state. It will justify its exist-

College Future

(from page 21)

ence only as it serves the people."

A forward look beyond the horizon of this day should of necessity be based upon all factors which will interact to give us our tomorrow. Since we may not know all of the influences which may shape our college of the future, perhaps a useful prologue to a forward look may be a backward glance reviewing our growth and development.

Arizona's agricultural production pattern and problems have changed over the years. Dean Robert H. Forbes gave special attention to the date palm early in his career at the University of Arizona. The Department of Plant Breeding was established in 1909 when Dr. George F. Freeman was brought to the College as an alfalfa breeder. Alfalfa, the principal crop at that time, fed farm dairy herds although an appreciable acreage was harvested for seed exported to other states.

Egyptian cotton, introduced early in the century, became the most important crop in Arizona. It reached its peak in 1920 when 235,000 acres were planted. This large acreage flooded the market to the extent that some lint could not be sold at any price. Short staple cotton came in about this time and increased rapidly, reaching its peak in 1953. In 1967, the acreage was about one-third that of 1953.

The vegetable industry has developed until in 1967, it produced the largest gross income among the crops reported in the 1968 Arizona Agriculture. The livestock feeding industry, a rather recent addition to our agricultural enterprises, continues to grow. At least five of our major feedlots are being enlarged today.

The changing agricultural production picture has been reflected in program changes of the College of Agriculture. At times, our College program has followed the altered production pattern. At other times our program leads in the forefront in bringing about change in production patterns. Sugar beet and safflower research on the crops side and feedlot research on the livestock side are excellent examples of our leadership role.

In the future there seems to be every reason to expect that Arizona's agricultural production pattern will change as it has in the past. The College of Agriculture will reflect these changes. We hope our faculty will continue to predict with some accu-

acy the changes which will occur so we may provide the basis for production shifts.

Since its establishment, the College of Agriculture has enjoyed sustained growth. Its capacity to support our agricultural industry has been multiplied many times. Many new programs have been added. Many new positions have been created. Physical growth is reflected in space devoted to agriculture in the University budget book. In 1956-57, 65 pages were required, while in 1968-69 there are 117 pages.

In spite of our present crowded facilities, there have been significant physical additions in the form of buildings and land. Our research programs have become more sophisticated. An increasing amount of energy has been devoted to basic research. Today, we are working on problems unknown only a short time ago. Our teaching program has changed greatly too, both with respect to types of courses and to their contents. Our extension program has evolved to the extent that an extension worker of a few years ago would be out of place if he were returned to his former position. We are now establishing a firm basis for a foreign arm of the College of Agriculture.

New departments have been added. Areas of research concentration have shifted, partly in response to outside demand, but mostly in response to a careful analysis of research needs on the part of the faculty and administration. Faculty interests help determine the direction of our programs since their areas of research are restricted only in broad terms.

Colleges of Agriculture in the Land Grant System, in cooperating with the United States Department of Agriculture, have proved to be remarkably effective organizations in their role of research and development. In a general way these colleges have been increasingly effective in serving their role.

The University of Chicago and Dr. Earl Heady, Iowa State University, suggest that the return on the investment for research and education programs in agriculture have been of fantastic proportion. Social gains, resulting from these investments, have touched every segment of our society. These gains are now history. Few, if anyone, familiar with science, technology, management and their impact on agriculture will question the importance of these factors as applied to agriculture in the future. It is expected that future changes in agricultural production, processing, and mar-

keting probably will dwarf the revolutionary changes we have experienced during the past few decades.

Thus, I see a continuing need for colleges of agriculture. The difference in the colleges of fifty years hence will surpass that of today and fifty years past. The one thing which should remain constant is the objective, that is, to serve agriculture broadly defined. As the number of farms continue to decrease even to the 50,000 mentioned by Heady, the need for science, technology, and management applied to the agricultural organizations will become more intense.

The name of the college may change. The structure of the college will alter. Some Departments may disappear and others may change name, some new ones may be added, some may be combined into new structural units. Objective will demand that, regardless of name and organizational arrangement, functions will remain much the same as today, that is, service to agricultural industry.

Several Land Grant universities have modified the name of the college but in no instance has the term "Agriculture" been eliminated. A few names include:

- (a) Agricultural Sciences
- (b) Agricultural and Biological Sciences
- (c) Food and Agricultural Sciences
- (d) Agriculture and Home Economics
- (e) Institute of Agriculture
- (f) Agriculture and Environmental Sciences
- (g) Agriculture and Forestry
- (h) Agriculture and Natural Resources
- (i) Tropical Agriculture

One University recently changed the name from Institute of Agriculture to College of Agriculture. Agriculture does recognize in one word the mission-oriented objective of the principal activity of a College of Agriculture.

While I do not believe our present college name is inappropriate, I have asked department heads to consider

the name of College. There has not been formal discussion of the idea as yet. If any of you have a suggestion, please convey it to your department head. One name suggested for consideration is College of Agriculture and Renewable Natural Resources. The term Renewable Natural Resources encompasses most of our departments. Its advantage would be that some people associate agriculture with cultivated agriculture, *per se*, while in reality it includes all land. Thus, the combined name would recognize a broader base for our programs.

The two terms, Agriculture and Renewable Natural Resources tends to wed basic functions of the United States Departments of Agriculture and Interior so far as production and management of plants and animals and their utilization are concerned. With the heavy involvement of the two federal departments in Arizona, the suggested name might tend to combine within the College the functions of the two federal departments as they relate to people, land, plants, and animals. Parallel functions could prove beneficial to the college and the State of Arizona.

At the moment, there are no plans to alter the departmental structure of our College. Several institutions have restructured their organization usually in a manner to reduce the number of departments. Sometimes the net result has been reduction of the total number but at the same time creation of sub-units equivalent to the former departments. Where such a step has been taken, the usual trend combines the plant departments and the livestock departments.

Such combinations may have advantages. Two frequently suggested values are: (1) to reduce administrative costs and (2) to integrate effectively similar work done in more than one department. The two suggested advantages are not very compelling arguments since the number of requisitions to be issued, the number of ledger sheets to be kept, the number of letters to be written, and the number of telephone calls to be received would not differ greatly in either organizational plan.

Also if two scientists do not wish to work together, their mere presence in the same department does not guarantee cooperation. We have come a long way with our present departmental structure in the interdisciplinary approach to the solution of problems but we still have some distance

to move in this direction before reaching perfection.

It has been interesting to observe the frequent reorganization within the United States Department of Agriculture. It happens with each change in administration and sometimes more frequently. To an outsider, it appears that the productivity is not enhanced but if anything reduced by the upset which occurs during the movement from one set of offices and laboratories to another.

To me, departmental reorganization does not hold the key to a more successful program in the college. Yet there will be departmental changes in the future.

At the moment it seems that many of our departments should assess the academic value and selection of courses. Each department has a teaching program, *i.e.*, offers courses for both undergraduate and graduate students. Therefore, a student may take his major work in any one of the several departments. A review of the graduating seniors reveals that most of our graduates major in only a few departments. Some departments are not represented by graduating seniors. For seniors completing their degree requirements in June 1968, departments with four or more majors were:

Animal Science

Watershed Management

Agricultural Economics

Agronomy

Horticulture

Entomology

Agricultural Education

We should review our undergraduate offerings with the intent of eliminating undergraduate majors in certain departments or of finding some way of increasing student interest in the program. Certain of these departments may need to offer service courses for students majoring in other departments. The elimination of undergraduate majors in a department would not necessarily effect its graduate program. Small classes may force us to move in this direction rather rapidly.

Our involvement in international agricultural programs has been significant over a period of many years. Our instructional program has in-

involved many foreign students and, recently, a few foreign faculty members. We have had two overseas institutional development contract programs — Iraq and Brazil. Also there we have maintained an informal relationship with Mexico over a long period of time.

Dean Forbes was our first international worker predating Point 4 and The Rockefeller Foundation programs by several decades. Enough of our faculty members have had experiences in other countries to present a world-wide outlook in almost every course regardless of department. We can expect this experience to increase, equipping our faculty to better understand world problems. Additional courses dealing with these problems will be added.

Our foreign involvement should continue and, hopefully, increase. But basic to the most effective overseas activity, as well as our campus international agricultural program, is the necessity of building a faculty whose principal responsibility is international agriculture.

Foreign activity should in my opinion focus on research, principally applied research, to a much greater extent than is now possible. Success of The Rockefeller Foundation agricultural programs has been closely related to the results of its applied research programs.

In the request budget for 1969-70 a budget position is being requested for International Agriculture which, if approved, will be our first step in the stabilization of our international program.

Our space problem, especially office and laboratory, is very critical. I have reason to believe we will have some relief in the next few years. First space expansion will be for the School of Home Economics. Plans for the utilization of the space to be vacated by the College of Nursing have been in the office of Mr. Robert Houston, Physical Plant Director, for several months. Completion of the Biological Sciences building will give our College more space, but just how much has not been determined as of this time. If the present Biological Sciences building is assigned to our College, there will still be an unmet need for additional space.

The College must acquire additional land both near Tucson and in Maricopa County. We have been trying to get the Alvord tract, a 400 acre parcel of federal land at the intersection of Baseline Road and 35th Avenue just west of Phoenix.

(Turn to next page)

College Future

(from page 23)

We need many minor facilities which we may get, hopefully, over a period of years. A home management laboratory and a shops teaching laboratory have both been approved, but lost because of cuts in the capital appropriations.

Agricultural Extension Service is expected to continue as a function of the College of Agriculture. It is now and has been the most significant state-wide function of the University of Arizona. Coordinating Agriculture and Home Economics Extension with the teaching and research activities has kept it a part of the College of Agriculture where it should be now and in the future.

The development of General Extension other than the teaching of extension courses has caused many university administrators to question whether all Extension activities, including agricultural, should not be combined. Some universities have taken this step. I have taken the stand that agricultural extension should not be combined with general extension. Not one of my colleagues, where the combination exists, has expressed sympathy for the new plan.

Basically there are two principal reasons why I oppose the combination.

(1) New federal legislation creating extension activities in different areas are not restricted to Land Grant institutions, but become the function of several uni-

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(From page 5)

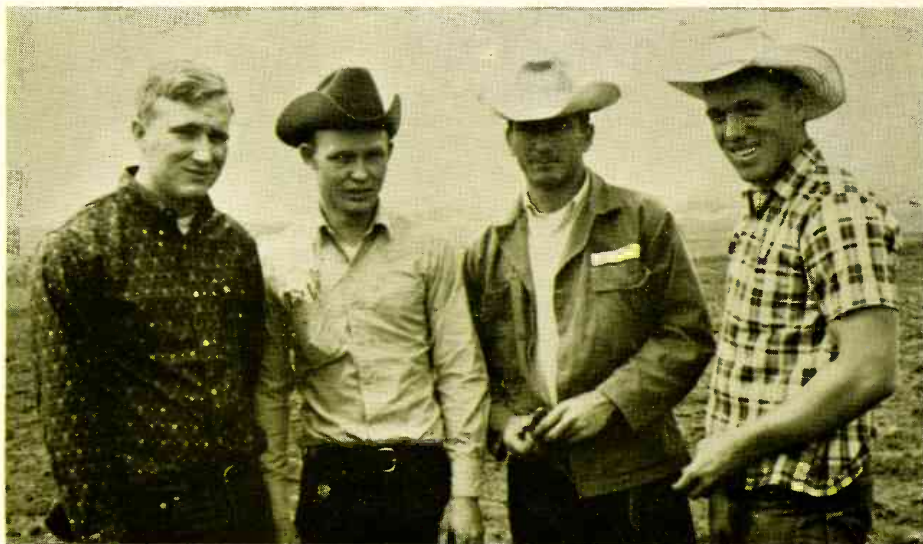
Spray this mixture on leaves and stems so as to wet them thoroughly.

"Without the surfactant the spray is less effective," Montierth will tell you from experience.

Some growers follow the recommendation of using an agitator to keep the iron sulfate mixed well in the solution while it is being applied. Montierth didn't. He felt the tractor bounced around enough going over the field that an agitator wasn't needed.

There are many problems yet to be checked by on-farm testing. These include studies of the best time to make an application and the value of repeat applications.

"But, it sure works," Montierth said. And, with the experiences that Irwin John and W. R. Sikes had they'll readily agree.



University of Arizona soils judging team in its first year of competition, won fourth place in national finals of intercollegiate soils judging at Kansas State University. Left to right are Chris Hayes, Tucson; Larry Humphrey, Florence; Ray Kingston, Tucson; and Dennis Fenn, Benson. Their coach is Dr. D. F. Post of UA College of Agriculture.

versities and colleges within a state. The state is then subdivided in such a way that each university or college has its little area of influence. Agriculture is unique in that it has a state-wide extension system which should be maintained.

(2) The chief advantage of the combination of Agricultural Extension with General Extension is to facilitate coordination of administration of all extension programs. The main advantage of keeping agricultural extension in the College of Agriculture, other than the reason noted in No. 1, is to coordinate subject matter. To me, the latter is more compelling than the former.

The future of the College of Agriculture and the School of Home Economics in the University of Arizona

is bright. Whether its future will live up to my, and hopefully your, expectations depends principally on the productivity of the faculty and the relationship of this productivity to the over-all objective of the College, i.e., to serve the agricultural interests of the state and nation. We have been supported by the University administration, the Board of Regents, the Legislature and the public because we have produced and because we have had a good public image. Whether the College continues to grow is largely in the hands of the faculty. If we continue to produce results useful in agriculture and if we maintain a good public image, our place in the University will be solid and we will be supported by the public which has benefited and hopefully will continue to benefit from our work.

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