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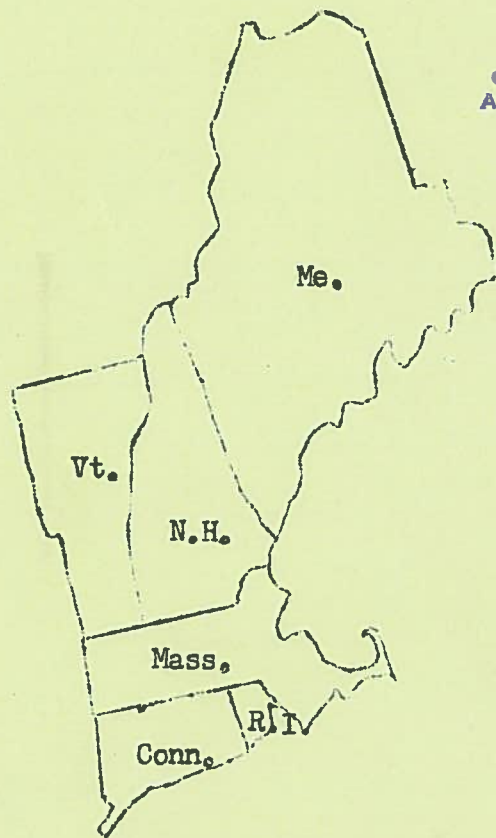
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NEEDED—A REORIENTATION OF AGRICULTURAL TEACHING

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The general topic to which I have been asked to contribute, Reorganizing the Curriculum of Colleges of Agriculture, seems to me to be an entirely too superficial description of the real problem which agricultural faculties are being asked to solve. I submit that the fundamental task is one of a complete reorientation of existing teaching programs. This involves a reconsideration of educational objectives, and the development of curricula and syllabi that recognize the careers open to students trained in "Agriculture".

Most of us here have already felt the increasing urgency to do something about this situation. In our work with individual students we have tried to guide their choices of electives to fill the gaps left by existing curricula. As individuals, however, we neither have the capacity nor the time to effect the desired changes. By capacity I mean that most faculty members are so specialized that they do not feel qualified to recommend educational requirements in other areas. The reference to time reflects one of the disadvantages of being part-time teachers. Most of us do not have enough time to spend on improving our own courses, let alone time to devote to curriculum evaluation.

On the department level there is some scattered evidence of influence in curriculum changes. As an example, I would point out that a curriculum in Agricultural Business was formally incorporated into the teaching program at Rhode Island 4 years ago. This curriculum was developed and introduced by the Department of Agricultural Economics in an effort to provide broader fundamental education in an area into which significant numbers of our graduates have been going. The credit for this belongs to Dr. Rorholm who provided the leadership and inspiration required to sell the program to the faculty. This, it seems to me, was a step in the right direction, but a very short step. Frankly, we have not been overwhelmed with students majoring in this curriculum. Much of the reason, in my opinion, lies in the fact that a substantial part of our faculty do not completely understand or are at odds with the basic intent of the curriculum.

For the past few years, colleges of agriculture across the country have experienced declining undergraduate enrollments. University administrators are concerned about the mounting cost of instruction per student, in view of the chronic shortage of funds for resident teaching. This entirely warranted concern has resulted in requests that college deans examine their teaching programs with an eye toward reversing the trend in per-student cost either by increasing student numbers, or by condensing programs of instruction. In some respects it is unfortunate that the problem of justifying budget requests is the stimulus for the tremendous amount of curriculum consideration going on in colleges across the nation. However, one of our battles has been won: the college administration is receptive to change. It is now up to us to redefine our educational objectives, develop curricula, and convince our administrators of the wisdom of our proposals.

The reasons for declining enrollments in agriculture during a period when general enrollments are increasing apparently are not universally understood or have not been thoroughly digested by agricultural faculties and administrators. Originally, instruction in agriculture was intended to train young men to do a better job in production. This purpose is thoroughly understood and accepted by the people who provide us with our raw material. Yet for many years, we in New England and certainly in Rhode Island have been aware that the majority of our students have had no intention of finding their niche in production. (This is not to say that we have done too badly by them within the limitations of existing curricula.) Lack of real knowledge of what the field of agriculture includes is one of the fundamental reasons why young people who know they will not be farmers are not interested in receiving the present type of agricultural training.

Within the past 2 or 3 years we have had "agriculture" redefined to include: (1) farmers; (2) industries which supply and service agriculture; and (3) industries which process, store, handle, and merchandize the products of agriculture. It is estimated that nearly 40 percent of the total employed persons in the United States are included in these segments. Credit for this formulation lies with Davis and Goldberg. <sup>17</sup> To my knowledge, Michigan State University was the first to relate this definition to a curriculum revision which has been publicized by President Hanna. More recently, I have had occasion to familiarize myself with the changes which have been effected at North Carolina, and with the material that Dr. H. B. James is using to publicize these changes.

It is not my intention to credit these people with a new and fundamental discovery. Some of us, mostly economists, have lived by this concept for years. But I think we have to credit them for being the first to formalize the concept, to relate it to curriculum needs, and to publicize it. We must hasten to do the same. The problem is particularly vital in a state such as Rhode Island in which only a fraction of 1 percent of our employment is in primary agricultural production. The bulk of our enrollment in agriculture has been and will continue to be students with urban backgrounds. There is no question in my mind, but that we have good reason to offer instruction in agriculture as we know it to be, but we have an educational job to do on the outside. I am optimistic enough to believe that we could easily double our enrollment in agriculture at Rhode Island if we remove the pastoral stigma that characterizes us.

While I am on this point of correcting conceptions there is another area of impression that merits serious attention. I am concerned with the general air of inferiority which seems to surround agricultural students, at least those at Rhode Island. This is manifested in many ways, and at all levels. My students tell me that they are regarded by their fellow students as socially and intellectually inferior. Neither impression is generally true, but they exist nonetheless. The faculty of other colleges as well as of agriculture are inclined to make sweeping generalizations because of the difficulty which some agricultural students experience with the basic sciences, with English, and even with the basic courses in agriculture. Resistance to attempts to include fundamental

courses in several areas at the administrative and faculty levels on the grounds that students will fail carries the implication that our students are not capable.

I have never been convinced that this is the case. Our entrance requirements are comparable with all except engineering. Most of our students have the same urban and suburban backgrounds that other students possess. Our graduates have not had to apologize for the success they have found in their graduate work or in their careers. We lose significant numbers of capable students because of these attitudes, and because we do not have a program properly oriented to their interests.

Along with the job of correcting the public conception of agriculture and the impressions of agricultural students, we have the tremendous task of developing agricultural curricula that recognize the basic needs of the students who will find employment in agriculture. Earlier in this paper I indicated that a complete reorientation of the teaching program was in order. This is based on the assumption that present programs are essentially production-oriented. It also recognizes some truth in the criticism that colleges of agriculture turn out graduates who are well-trained for specific positions in rather specialized fields. For a long time, I have been convinced that we should strive to increase the capacity of our students; to pay more attention to fundamentals; and to let the employers assume more of the responsibility for specific vocational training. Our job is to educate students, not to train them for specific jobs.

Curriculum revisions which are currently coming to light certainly indicate that my convictions are not entirely unshared. The development of curricula in Agricultural Business, Agricultural Science, and Agricultural Technology (or General Agriculture) reflects a move from "training" to "educational" areas. Adjustments which recognize minimum requirements in languages, the humanities, and the social, physical, and biological sciences tell me that the need to "educate" is being recognized.

Several colleges are now offering instruction in the three curricula just mentioned. In New England, Connecticut, and Rhode Island are scheduled to make the shift this fall. The variation in the detail with which these curricula have been developed, and in some of their fundamental requirements seem to me to indicate something of the differences in the state of mind of the faculty or in the leadership which has been given to the problem. It is not realistic to believe that a faculty even as small as the one of which I am a part can completely agree on the details of a reorientation. Strong leadership at the administrative level will be needed. It is important, therefore, that administrators have a clear concept of the desirable direction.

It is not my intention to comment further on the changes that are currently appearing except to say that they represent only a partial answer in the right direction. Instead, I would like to comment briefly upon two fundamental points upon which the agricultural faculties of our

New England universities have not indicated visible progress.

The first of these concerns the general problem of reflecting the changing orientation into the actual course offerings, and even into the traditional organization of the departments of instruction. In my own institution, for example, we have reduced the number of curricula from 10 to 3. We have not done much about departmental course offerings. I think we must face the fact that condensation of courses within departments is entirely possible, and that combination of departments of instruction is not unfeasible. It seems to me that there are several areas in which the fundamentals are more important for the bulk of the students than are the application (in terms of dairy cattle, poultry or other animals, or in horticulture, agronomy, or forestry).

I think, also, that we have spent far too much of the student's time with the introductory agricultural courses. At Rhode Island past students have been required to take 15 to 18 credits in such courses. There has been a tendency to use these as proselyting courses to attract majors. If the actual careers that our graduates have made for themselves can be used as legitimate criteria, I submit that we have performed a great disservice to our students by requiring them to waste a great deal of time in college. I think the possibilities of consolidating introductory courses into applied science courses, one for plants and one for animals designed to teach the student how the basic sciences are applied to agriculture, should be developed to replace these.

Secondly, I think that there is general agreement that there will be a continuing, but declining demand for the specialized vocational training programs. From the standpoint of the best possible education for the students, and in the interest of reducing costs of instruction, it logically follows that a serious attempt to concentrate each of these areas of instruction into one or two of the New England colleges should be made. This, I understand, is the basic philosophy of the New England Institute of Higher Education. I have no doubt but that the problems encountered in effecting such a consolidation are large and complex. But it seems to be a realistic alternative with real possibilities for this region.

In brief summary I have tried to point out that we have been very slow to revise and reorient our teaching programs to better educate students with positions in modern agriculture in mind. It cannot be done by individual faculty members, and only to a limited degree by departments. The proper direction must be grasped by the college administration, and we can help to shape this. Strong leadership from the top is essential to effect the needed changes. Current developments appear to be properly directed, but more difficult problems of departmental reorganization remain to be solved. If we are strong enough to do these things, we will find we have a future.

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1/ Davis, J. H. and Golberg, R. A., "A Concept of Agribusiness", Alpine Press, 1957, p. 2.