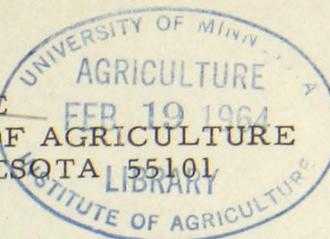


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 INSTITUTE OF AGRICULTURE ST. PAUL, MINNESOTA 55101



THE FUTURE ROLE OF SUBJECT MATTER DEPARTMENTS

in a continuing education program

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On October 2 of this year Dean S. O. Berg spoke before the 70th Annual Convention of the Minnesota Creamery Operators' and Managers' Association in Minneapolis. He stressed a need for continuing education to prevent "human obsolescence" in the dairy industry. His remarks were directed toward the dairy manufacturing people, but he applied them to the dairy production aspects of the dairy industry as well. He warned that further technological advance and improved understanding of our economic environment could precipitate human obsolescence but added that the educated manager, conversant with production's needs and trends and in tune with the economic environment, will not be obsolete.

He urged continuing education for persons charged with creamery operation and management, training of potential replacements, and further education for dairy producers.

It has been predicted that our present fund of knowledge will be increased by 100% in the next decade and increased, again, by 100% in the following decade. If this prediction is true, or even close, we will all become obsolete very quickly if we fail to follow a continuous program of retraining. The University as an educational institution will also become obsolete unless it provides educational opportunities for all segments of society on a continuing basis. Subject matter departments must make their research findings available and interpret them so that their clientele, both students and non-students, may understand and put into use the most up-to-date and modern techniques.

As a dairy husbandman, I can approach this discussion from the standpoint of the Department of Dairy Husbandry, or I can approach it from a broader viewpoint, as an animal scientist. From this approach we can look at it as an animal breeder, a nutritionist, a reproduction physiologist, or, perhaps, some other clearly defined area of study.

It may be realistic to believe that we can more efficiently handle genetics as a whole rather than as dairy genetics, poultry genetics, beef genetics, swine genetics or sheep genetics. The fundamentals of nutrition are similar for all animals and the application of these fundamentals are easily made to the various species. Physiology of reproduction is similar in all animals and all species tend to follow the same behavior patterns.

Presented at the 1963 Annual Minnesota Agricultural Extension Conference, St. Paul, Minnesota.

It may be easier to meet the tremendous tasks of developing an effective continuing education program if the subject matter departments can approach it from these rather clearly defined areas.

Before discussing education beyond the baccalaureate program, I would like to spend a little time on the education programs as we now have them outlined.

The curriculum presented by the dairy husbandry department today fails in many respects to meet the needs of all our students. I confine this remark to dairy husbandry because I am completely familiar with our offerings and we are currently spending considerable thought and time toward remodeling our curriculum so as to bring it up-to-date. I am sure that other departments are doing the same things to their course offerings. I might add that this is a continuing process and certainly we can expect to remodel about as often as the automobile industry does if we are to prevent "curriculum obsolescence."

The animal science curricula offer a science program, only. We have no place for the student who is not specifically science oriented either in our baccalaureate, masters or doctoral programs. Not all people want to be scientists in our research laboratories. Many of them want to be farmers, artificial insemination technicians, dairy herd improvement association supervisors, salesmen, extension specialists, county agents, 4-H Club workers or any of many other kinds of workers.

If we are to believe that education is not just to learn the skills for making a living but to also teach people how to live more effectively, then it is not unreasonable to assume that all people who are engaged in these occupations should have some college education.

What vocational plans can the average individual make, the person, and there are many, who has no desire or capability to become a scientist, or top executive or top anything? He needs a vocation in which he can live and contribute his offering to society. Let us be careful that we do not make the average obsolete before he gets started. Let us recognize and try to provide for all intellectual levels in our plans for continuing education.

I am convinced our subject matter departments must assume that in the years ahead every Minnesota farmer, every artificial insemination technician, every worker in a bull stud, every Dairy Herd Improvement Association supervisor, every feed salesman and every machinery salesman will be a college man, trained by our colleges in the discipline in which he is working.

We are concerned about agricultural college enrollment. How many feed salesmen today are just selling a bag of feed instead of selling a feeding program based on good information? How many artificial insemination technicians are just breeding cows instead of realizing that they are the most potent force we have in the breeding of our future herds and flocks? How many Minnesota farmers are college trained? How many Dairy Herd Improvement Association supervisors are college trained? You may say these people don't need a college education. Go down the road and visit a dozen farmers, study their feeding programs and you will be appalled at the lack of knowledge of both the farmer and the feed salesman.

A study of our artificial insemination programs indicates that it is the high settling bull that gets the nod, regardless of his genetic worth. Again, you may say these kinds of jobs do not pay enough to attract college trained men. Our artificial insemination technicians reach as high as \$12,000 annually, Dairy Herd Improvement Association supervisors can earn close to \$8,000 annually, and the sky is the limit in sales work. Industrial wages are about \$4,800 yearly. If the Reproduction group in dairy husbandry could supply the annual demand for artificial insemination technicians of our two Minnesota cooperative bull studs, it would take 20 graduates each year. If we could train all the feed salesmen so that they were reasonably competent nutritionists, we would have to build new dormitories to house them during their training. If we were to train the new men who are taking over our farms each year, we would have another dormitory filled.

How can we get some of these people into our programs? By tooling up so that we can meet their intellectual needs and vocational desires. One agricultural science curriculum isn't enough. It is important that the feed salesman be trained in nutrition, as well as business, social science and the humanities. If he is so trained, he can help to meet the needs of his clientele. If he isn't so trained, he sells only a bag of feed and helps to put his customer out of business. The artificial insemination technician needs to know something more than how to fill a pipette and insert it into the cervix of a cow. We have close to 300 of these men in Minnesota contacting our farmers every day. They are a potent force in a continuing education program for farmers, or could be if we trained them to meet farmers' needs.

These things may be dreams but they can be real.

In the meantime, our subject matter departments need to look at their programs for professional workers. More adequate summer school offerings for vocational agricultural instructors could help them to keep abreast of new knowledge uncovered by research and provide means toward advanced degrees and professional improvement. Outstate courses for people engaged in the animal sciences, dairy farmers, beef farmers and others could well be two weeks in length, conducted during the day-time, between chores, so to speak, 5 days per week. Intensified courses in nutrition, breeding, reproduction, management should be conducted as clinics, not as after dinner speeches.

The continuing educational program for out-state professional workers is a challenging one, particularly as college trained people move into the areas I have previously mentioned. I am confident our subject matter departments will have to carry the class room out into the state rather than having the student come to the classroom in St. Paul. It is possible to conduct excellent classes in this manner, difficult, perhaps, but very possible. We have excellent University facilities located at strategic points in Minnesota where graduate instruction could be available.

The Duluth Branch and North East Experiment Station at Duluth, The North Central School and Experiment Station at Grand Rapids, The Northwest School and Experiment Station at Crookston, The Morris Branch and The West Central Experiment Station at Morris, The Southern School and

Experiment Station at Waseca and the Lamberton Station are currently manned by several people at the Ph.D. level and have equipment and space facilities well adapted to a high level of instruction.

Joint appointments between branch station personnel and subject matter departments are in order. Part of the instructional staff is already in residence at these points outstate and only needs to be supplemented from the St. Paul Campus.

Throughout my discussion I have never specified a definite length of time for the training of any individual in any discipline. Training time can and perhaps must be variable. Certainly, we can train a thoroughly competent Dairy Herd Improvement Association supervisor in a shorter period of time than we can train a competent nutritionist. Surely his training program will be different and surely his continuing educational program will differ, but fundamentally, both must be trained and both must continue to learn if they are to prevent their own obsolescence.

Subject matter departments have an obligation to develop programs and implement programs that provide proper and adequate first training, and proper and adequate training thereafter.

I have challenged our own program as it now functions and proposed some rather radical changes. If we are to serve our educational function in the years ahead, certainly, we must pioneer.

Jobs are available for well-trained people who keep up-to-date and it is our job to provide the programs for training and keeping up-to-date, if we are to serve our purpose and not become obsolescent.

It is your job and the job of industry to help us organize programs of training and it is your job and the responsibility of all industry to help guide people into these programs as they become available.