REQUIRED MEAT COURSES FOR STUDENTS MAJORING IN FOOD TECHNOLOGY, ANIMAL HUSBANDRY AND HOTEL-RESTAURANT MANAGEMENT

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Required meat courses may be taken to imply that certain groups of students enrolled in particular colleges or universities will be obligated to schedule one or more courses offered by the meat division of the animal husbandry or animal industry department. Twenty college catalogs from the institutions that we represent were checked to learn the number and captions of meat courses that are required. This group of agricultural colleges lists 66 meat courses with titles of: Meat, Farm Meats, Butchering and Curing, Commercial Meats, Meat Grading, Meat Judging and Meat Technology, to mention a sample. Based on limited ability to read college catalogs, it was discovered that eight of the entire offerings were "required," to be scheduled by students majoring in animal husbandry, institution management or food technology. I admit that this observation is incomplete, but it alerts us to realize that we are teaching in a field where the student of his own initiative elects to schedule work.

According to catalog information there are certain impediments in the way of "meat" course elections. This is particularly true for animal husbandry majors. Prerequisites and permission of the instructor are included with many course descriptions. This situation may be explained with two good reasons: 1, Limited laboratory space and equipment had to be protected from a deluge of enrolees. 2, Instructor's time was shared teaching other courses or with other responsibilities.

Thirty years of progress have brought obvious changes in emphasis and now we are concerned with contemporary problems of "what to teach" undergraduates who elect meat courses.

A "Public Relations" objective is listed first, since food consumers out-number all other groups of people. Let's share our good humor, peace of mind and other attributes of health derived from an adequate meat diet. These are the minds and souls to be saved with factual reasons for why we eat meat. The truth about edible portion and eating qualities can easily be taught in connection with retail cut identification and meat cut selection according to grade factors. At this point it seems appropriate to subtly impose an appreciation of production and processing economics. These are the people who need help in meat handling and fundamentals of cookery if animal food products are to hold their place in the center of the meal where consumer good will has placed meat. When this public relation objective is well taught, I surmise there will be increased interest toward majoring in institutional management, food technology and animal production with specialization in meat.

People who have decided to be institutional management majors can use the features of the first objective to good advantage. They will also need information in wholesale meat procurement. The more successful institution managers have a keen appreciation of meat grades and brands. They also know boning yields, cooking shrink and serving counts for applicable wholesale and carcass product. Meat curing, sausage manufacturing and

general packing house operations will need consideration for mutual relations in the work-a-day world.

The subject material for meat courses offered animal husbandry majors evidently is rather broad as related in course descriptions found with course listings that were reviewed.

Carcass yield is a primary topic with any profound livestockman and it is indirectly important to all consumers. The project becomes involved with preconceived notions and preferences for breed characteristics but upon exposure students acquire a tangible meaning of this important area of the livestock business. We agreed at our previous meeting that incidental to carcass yield there was ample opportunity to teach knife skills, safety precautions, meat hygiene and by-product disposition.

Meat Wholesaling affords opportunity to study carcass grade variations and cut-out values with a view to breed and feed for increased weight of the more preferred regions.

Processing operations of the packinghouse are better understood after a batch of pork fat is rendered and the lard is drawn into the can. Similarly, it means much to cure bellies, artery pump hams, and stitch pump picnics and finally remove them from the smoke house to learn how much weight has been gained or lost and to compare final results with commercially cured cuts. Sausage making offers other possibilities to appreciate processing and efficient as well as honest utilization of parts that might otherwise become waste.

The animal husbandry major in most of the represented institutions has been, and is the popular enrollee. Emphasis may vary depending upon student intentions for future occupation. Those who intend to become commercial breeders and feeders will need the carcass yield portion and may desire to work out a farm home meat supply and storage plan. Livestock buyers may have similar interests, but if there is a desire for plant management then product information and cultivation of human relations among classroom fellowmen may be more essential. Super market managers and locker plant operators will need to go farther into appreciating cutting tests, retail display and packaging selfserve meats.

The new development of curricula in food technology brings another group of students into meat courses. To date the number has been small, but we need to get ready to be more helpful to those who elect such a program if these men are to find their way into the meat industry. Students in food technology are offered training in a course of study based upon the principles of chemistry, mathematics, physics and bacteriology as applied to the manufacture, processing and preservation of agricultural products. Such students upon graduation may find their way into assignments as production foremen, regulatory and quality control work, others may do graduate work and head toward research.

This group of persons may comprise a variety of home experience, yet by relatively unfamiliar with what is taught in the freshmen animal husbandry course nor will they have the usual feeds and feeding classwork. At the moment our feeling at Ohio State is to carry them through the same

carcass yield laboratory periods with cattle, hogs, calves and lambs as is done with the animal husbandry students. We let them use their hands to dehair hogs and side beef or pelt lambs. The viscera snatching act is always a thrill and a review of anatomy that is real. Likewise the steps of refrigeration, wholesale and retail cutting, curing and smoking, rendering, freezing, sausage making may be endured for the sake of observing and understanding respective procedures. We hope that good teaching may inspire them to study some of the many problems that baffle the meat industry, as well as to become well educated folks.

It is my firm belief that these direct contacts in the meat laboratory will help broaden student understanding to the end that their effort on a subsequent job assignment may be tempered. They will respect knife skill. They will seek objective physical or chemical measures of carcass beef to reinforce observations of conformation, finish and quality as currently used to predict grade and indirectly, meat eating qualities. Microbiology will have fruitful application.

May I raise a question at this point about offering a meat service course for veterinarians? This was an item of conversation in our deliberations one year ago. Our federal and local inspection services are executed by doctors of veterinary medicine and furthermore they are good people who eat three or more meals daily. Shouldn't they know meat from the consumer and processor point of view as we can teach them in the meat laboratory? We know them as receptive, eager, students in the three credit hour course which has been given all seniors for the past six years at Ohio State University.

Before I conclude these remarks concerning meat course content for undergraduates I'd like to admit that course organization requires much planning. The teacher must make allowance for change from quarter to quarter and be alert to alter sequence within a quarter or semester as the case may be.

Time available for laboratory is a first consideration. There are two major possibilities. Using twelve or more clock hours per week has the advantage of sequential utilization of the parts of carcasses from the original set of slaughter animals. This scheme provides a high degree of continuity. On the other hand, such concentration may embarrass physical equipment and refrigerated space. It may over-tax the instructor's ability to coordinate and supervise. Where limitations on product disposition exist this plan would produce too much at one time.

Hence, we have the other possibility of reducing class hours for any one quarter and divide the subject material into two or three sequential offerings with a smaller credit hour value. We all know there is precedent for this plan.

An answer to the proposition "Required meat courses for students in food technology, animal husbandry and institution management" is to improve meat course teaching abilities. In my opinion teachers need to be like the Dean Rice pedigree with an out-cross of judicious salesmanship. Then meat courses will enjoy student good-will comparable to the consumer good-will which meat has attained.

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CHAIRMAN ANDERSON: In discussing with the committee the setting up of this program a few months ago, I am quite sure that we picked the right man to discuss the subject of Required Meat Courses. This fact has been proven by the fine paper we have just heard on the subject.

We are going to ask Zane Palmer of the University of Missouri, to lead the discussion.

PROF. PALMER: May we open discussion on Professor Kunkle's paper on "Required Meat Courses for Students Majoring in Food Technology, Animal Husbandry and Hotel-Restaurant Management"?

PROF. J. J. WANDERSTOCK: Larry, what are the mechanics involved in setting up some of these specialized courses? How do you decide what the curriculum should be in these courses? Should you make a survey? For instance, on your Institutional Management Course, did you survey the need and then base your course on those needs, or just how did you go about setting up the curriculum for these courses?

PROF. KUNKLE: I am afraid that my most accurate answer is that the courses have grown up somewhat like Topsy. The fact is that we inherited all these courses. The original plan at Columbus was to offer a course to Home Economics students and to Animal Husbandry majors. One was called Meat Selection and Identification, and the other was called Meat and Meat Products.

We had a committee of retrenchment sleuths in 1932, if any of you remember that year. It did not affect me directly, but they decided that it was a good idea to make two three-hour courses out of the one 5-hour course, and they called one three-hour course a carcass yield course, and the subsequent three hours was a meat grading course. We found that we did not have enough time to get a laboratory period completed in a so-called two-hour clock time, so we went back and sold the administration on reinstating the carcass yield course, as a five-hour course, and kept the three-hour course.

Then, when the veterinarians came along, they were anticipating service with the Veterinary Corps during the war, and promptly asked us if we would include their men in the meat grading class, so we made a hybrid out of it.

We gave them everything we could, including just a little bit of night work in the laboratory, and I have just finished signing 68 senior veterans' grade cards, and I did it with a lot of humility, because we did not get to first base with that larger group in five clock hours the way we had with some of the previous students.

Now, that is our history.

PROF. WANDERSTOCK: The reason I asked the question is that at Cornell we have about the same situation, and the courses have just grown. I wonder whether it would be a good idea to try to survey the needs for these special courses and then base the curriculum on satisfying those needs.

PROF. PALMER: Are there any other questions?

PROF. ZIEGLER: At Penn State, I happen to be a member of a committee to investigate the needs, as far as our institution is concerned, of students who wish to take a food technology course. We do not offer a food technology course at Penn State. In our survey we found that in the past two years we would have had two students secure information that way.

I would like to ask a question since I will have to give my idea as to how many credits a man should have who is going to major in meats in taking the food technology course. As I get it, he could either go to horticulture, or he could go to any type of food processing, and meats will be one of those. Professor Josephson, who is head of our Dairy Husbandry Department, was at your place, and he told us something about your set-up, but he did not tell us how many credits you required for this man that you graduated in meats. How many credits did you require him to take? Do you have that set up as a standard four-year curriculum, or is it a five-year course?

PROF. KUNKLE: It is set up as a four-year curriculum with the expectation that the best students will continue and get a Master's Degree.

PROF. ZIEGLER: Are your courses on a credit basis - two-credit course, or three-credit course?

PROF. KUNKLE: Mostly three and five.

PROF. ZIEGLER: How many credits did this man have to take? What did you require?

PROF. KUNKLE: He graduated with 16 hours of credit in meats work.

PROF. ZIEGLER: Sixteen hours of credit. You do not give one credit per hour, do you?

PROF. KUMKLE: We call them credit hours. As the man becomes a senior and is eligible to graduate, he must have 200 credit hours. That may mean many more class hours. This man had 16 credit hours of the 200 hours required to graduate, or that he graduated with.

PROF. ZIEGLER: In meats?

PROF. KUNKLE: That is correct.

PROF. PALMER: Do we have any other questions at this time? If not, I will turn the meeting back to Professor Anderson.

CHAIRMAN ANDERSON: No doubt more discussion could take place on this subject, but time does not permit. For that reason, we will proceed to the next paper, "Curricular Requirements for M.S. and Ph.D. Degrees in Meat", by Professor J. I. Miller of Cornell University. Professor Miller.

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