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CONDUCTING RURAL WAR PRODUCTION COURSES

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Effective July 1, 1942, several adjustments were made in the Pre-employment National Defense Training Program No. 4 for Out-of-School Rural and Non-Rural Youth (OSY Program) which had been in operation since October, 1940. In the new program (OSYA No. 3), the 25-year maximum age restriction has been removed and an appropriation totalling \$15,000,000, of which \$343,613 is allotted to Minnesota, has been set aside for the year ending June 30, 1943. The program, as amended, provides for the continuation of courses 1-4 inclusive and the addition of new courses listed herewith:

1. Operation, care, and repair of tractors, trucks, and automobiles (including both gas and Diesel engines).
2. Metal work, including welding, tempering, drilling, shaping, and machinery repair.
3. Woodworking.
4. Elementary electricity, including operation, care, and repair of electrical equipment and wiring for light and power.
5. Repair, operation, and construction of farm machinery and equipment.
6. Increasing milk production.
7. Increasing poultry for meat production.
8. Increasing egg production.
9. Increasing pork production.
10. Increasing beef production.
11. Increasing mutton, lamb, and wool production.
12. Increasing soybean production.
13. Increasing peanut production.
14. Increasing vegetable production (commercial).
15. Production, conservation, and processing of food for farm families.
16. Increasing sugar production (sugar beets and sugar cane).
17. Increasing field and vegetable seed production.
18. Increasing hemp production.

During the week of September 14-19, a series of special conferences for school officials, including teachers of agriculture and industrial arts, was sponsored by the State Department of Education at which plans for extending the Rural War Production Training Program were presented. The persons attending these meetings expressed a desire to have the University of Minnesota prepare suggested course outlines for such of the new courses as are applicable to the State. Dean C. H. Bailey of the Department of Agriculture submitted the recommendation to members of his staff with the result that outlines are now being developed in the Division of Agricultural Education with subject matter specialists in other divisions serving as collaborators. The State Department of Education will duplicate the outlines and distribute them to schools ac-

ording to the course offerings. The remainder of this discussion therefore deals with general suggestions pertaining to the conduct of the enlarged program.

Determining Courses To Be Taught

Three factors enter into the decision as to the number of the emergency courses which should be offered, namely: their applicability to the local situation, the availability of facilities, and the availability of qualified instructors. Teachers of vocational agriculture are sufficiently familiar with local farming programs and with the types of farming areas in the state to make decisions as to the commodity courses, representing normal production, which may well be taught and also the phases of the commodities which should receive major emphasis. Certain of the units, such as sugar beets, hemp, and commercial vegetables, are not normally applicable to wide areas in the state, and the decision as to the advisability of teaching such courses should be weighed carefully.

The matter of obtaining adequate facilities should not be much of a problem with the commodity courses, especially where they are held in the central school. If held in outlying areas, the major considerations in the choice of a room are suitable seating, heat, light, and the availability of a blackboard. Film strip projectors can be operated in the absence of electricity if they are of the direct current type, and portable blackboards or improvised charts can be used in the absence of permanent blackboards.

A majority of the Minnesota schools do not possess the facilities to accommodate the mechanical courses, making it necessary to rent outside space for the courses 1-5 inclusive. For the course in the Repair, Operation, and Construction of Farm Machinery and Equipment, an implement dealer's warehouse or a garage should suffice. In any event, the building should provide adequate floor space, sufficient light, a door wide enough to admit machinery, and provisions for satisfactory heating during cold weather.

If Minnesota is to achieve its quota of 800 classes during the present fiscal school year, it will be necessary for local schools to employ many special instructors to teach courses other than those which may be conducted by vocational agriculture and industrial arts

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instructors. The added personnel must have had successful experience in their respective fields and some aptitude for working with groups if they are to succeed as teachers of the emergency classes.

Organizing for Instruction

It appears that some difficulty may be encountered in obtaining satisfactory enrolments in the commodity courses, due in part to tire and gasoline shortages. The major attack upon this problem will be to offer the instruction to small groups in various community centers. Even so, a strong publicity program supplemented by personal contacts with prospective enrollees will be necessary if farmers are to respond to the desire of the Government to assist them with their production problems. Advisory committees have proven to be most useful in helping to plan programs of adult education and are effective in assisting with the securing of enrolments. In schools maintaining departments of vocational agriculture, members of chapters of the Future Farmers of America can render a distinct service by explaining the program to their parents and other farm families in their communities.

Although definite evidence is not available as to the factors which make for consistent attendance in such courses, it may be assumed that careful planning, suitable course content, and sound teaching procedures make for situations to which enrollees respond. While the awarding of attendance certificates may seem trivial to persons organizing the emergency courses, such a recognition is meaningful to the members, and the use of certificates is recommended.

The previous experience with evening courses for adult farmers indicates that the members prefer meetings held at night once or twice a week during the period of concentrated instruction, and special meetings arranged on the seasonal basis during other parts of the year. There is no reason to believe that the preference as to the time of meetings will differ with this program, although every effort should be made to discuss the plans for increasing production as soon as possible. In some cases, classes

held during the day may be practical where labor situations permit. The course in farm machinery and equipment offers a little different situation in that longer sessions are necessary and because a considerable amount of the time will be devoted to the actual adjustment and repair of machinery and the construction of equipment. Day sessions for this course are therefore preferred.

Planning the Course

Before a course can be planned effectively, it is desirable to do the following things:

1. Set up the underlying purposes of the course.
2. Determine the instructional needs in the light of these purposes and the degree to which these needs are being met.
3. List the outcomes which should result from the instruction.

Each of the suggested outlines for the different commodity courses being prepared at the University of Minnesota include: (a) a statement of general purposes of the course, (b) a master list of approved practices, (c) a survey form, (d) an outline of lesson topics, (e) plans for the presentation of the different topics, including some factual information, and (f) lists of references and visual material applicable to the course.

The teachers who make use of these outlines should bear in mind that they are suggestive in character and that the contents should be adjusted to meet varying situations in different sections of the State and even on individual farms represented within a given class. It is recommended, therefore, that the practices to be advocated should be checked with local committees, with other teachers of similar courses, and with representatives of agricultural agencies in the area, including the extension service.

The suggested survey forms are designed to assist the teacher in securing certain fundamental information from the members at the first session of the class. An analysis of the information secured from the survey and a study of the references pertaining to the course, together with the advice obtained from others, should enable the teacher to adjust satisfactorily the suggestive materials to the local situation.

The Conference Procedure

The generally accepted method for teaching the commodity courses involves the conference or discussion procedure. This procedure consists of advancing ideas, raising questions, and attempting to answer them. It has several advantages among which are the following:

1. The discussion is realistic and centers about situations with which the class members are directly familiar.
2. It stimulates an expression and clarification of opinions.
3. It enables each member to become

familiar with the practices of his fellow farmers.

4. It keeps the instruction on the comprehension level of the group.
5. It gives more assurance of results inasmuch as farmers are inclined to believe that practices which have proven satisfactory for their neighbors will also be feasible for them.

The physical arrangements for a situation in which the conference procedure is used should be such as to make for informality and to encourage the direct exchange of ideas between the members. Where the size of the group will permit, it is desirable to be seated in a circle or about the outside of tables arranged in oblong fashion. In any event, the members should be able to see each other and to have a direct view of the leader who is ordinarily located next to the blackboard.

The actual steps used in following the conference procedure or the discussion method are similar to those listed herewith:

1. A definite problem is evolved for class discussion.
2. The problem is introduced and analyzed into questions for discussion purposes.
3. The experiences of the class are obtained.
4. Scientific data and other factual information are presented.
5. Conclusions are drawn.
6. Plans are set up for placing the conclusions into practice.

Lesson Plans

Although the conference procedure is an informal one, it is essential that the teacher have in mind definite objectives for each meeting and information at his disposal which may be drawn upon to answer questions as they arise. A written plan or guide sheet similar to the following is justifiable if it accomplishes no other purpose than requiring the teacher to make extensive and systematic plans for each lesson in the course.

Problem: What are the best methods of shearing, handling, and marketing wool, including shearing pelts?

Purposes:

1. To increase the value of wool through proper shearing, care, and marketing of fleece.
2. To increase the production of shearing pelts.

Situations found on farms at present:

1. Shearing is improperly done, thereby decreasing the value of the wool.
2. Shearing is frequently done in cold or wet weather, resulting in death loss, illness, and uneven shearing.
3. Improper storage and marketing practices are followed, resulting in lower grades of wool.
4. Shearling pelts are receiving little at-

tention as a source of income, and the Government needs these pelts for the armed forces.

Teaching suggestions:

1. Secure a set of wool exhibits and show them to the group, illustrating the difference in the elements of the various grades of wool.
2. Secure a fleece and demonstrate proper methods of rolling and tying.
3. Be able to discuss briefly the steps involved in processing wool, and relate the effect which the use of poor twine and the improper handling of the fleece may have upon these processes.

Discussion questions:

1. When should sheep be sheared?
2. What factors affect the price of wool?
3. What are the characteristics of a good fleece?
4. What is the proper way to roll, tie, and pack a fleece?
5. Why should we use paper twine in tying wool?
6. Why should we sack tags, manure locks, and chaffy wool separately?
7. What is the best method and time of marketing?
8. Should we produce shearling pelts?
9. How can we produce shearling pelts?

References:

- Horlacher and Hammonds. *Sheep*. The Interstate Printers and Publishers.
Minn. Agr. Ext. Service. *Your Sheep Business*. May 1, 1940.
Minn. Agr. Ext. Bul. 141. *Sheep on Minnesota Farms*.

Recommended Practices:

1. Shear sheep when weather is warm and dry.
2. Never dip sheep just prior to shearing or for a few days after shearing.
3. Shear sheep on clean, dry floor or canvas.
4. Avoid tearing fleece apart when shearing.
5. Remove all dung locks, dirty wool, and chaffy neck wool from the fleece.
6. Place fleece out side down, fold in the sides, and roll tightly from the breech end.
7. Use a minimum of paper wool twine in tying.
8. Store in clean, dry room.
9. Market wool cooperatively through a wool pool.
10. Earmark undesirable sheep, found at shearing time, as an aid in culling your flock subsequently.
11. Use only uniform lots of lambs in producing shearling pelts.
12. Manage so fleece is one-half inch long at market time.
13. Hold lambs for two months if sheared with a regular comb. If a coarse or goat comb is used, the holding period will be reduced.

Other Teaching Methods

The tendency for teachers to lecture is undoubtedly the major abuse in teaching adult classes for farmers, although there are some situations where certain types of technical information needs to be explained by the telling process. It is in this area where specialists such as extension men, the county agent, or the local veterinarian are occasionally brought before the class. Many teachers have used an outside specialist to advantage by having him sit with members of the class and contribute to the discussion from time to time as a consultant.

The field trip offers excellent possibilities for demonstrating and evaluating practices and is an effective means of interesting the members in applying the practices observed to their own farms. Such trips are frequently made to points outside of the community, but more often take the form of tours involving a number of farmer members who have a common interest in such matters as sow testing, contour farming, fertilizer treatments, or the growing of new varieties of crops.

The use of charts is an effective way to present information involving statistics or facts which are difficult to comprehend unless presented in visual form. Certain types of charts are available from commercial firms and educational organizations such as those pertaining to cuts of meat, composition of feeds, or the working parts of a farm machine. In the absence of such charts, it is possible to prepare temporary charts which are quite legible when made with wrapping paper and heavy, dark crayon.

Film strips, film slides, and motion pictures have their place in the teaching of adult classes. With the film strips, a wide selection is available from the U. S. Department of Agriculture. By their use, it is possible to provide clear illumination with projectors which are easily operated and which can be stopped at any time for discussion purposes. The film slide, of which sets on several subjects can now be secured through the county agent, is becoming increasingly popular because the projections can be arranged to suit the occasion and frames can be deleted or added as desired. Motion pictures should be selected for a definite purpose and used to illustrate specific points pertaining to the lesson. Even though most films are rather long, their use is most beneficial where the features to be observed are pointed out in advance and where a discussion follows the presentation.

Where the emergency courses are sponsored by schools maintaining departments of vocational agriculture, a wide variety of specimen materials should be available for use in the lesson presentations. Such items include plant disease specimens, grain varieties, nodular formations on roots of legu-

minous plants, insect mounts, fertilizer samples, grades of grain, spray materials, soil samples, and weed mounts.

Follow-Up-Work

Elsewhere in this discussion, it was suggested that the outcomes to be derived from teaching the emergency classes be set up before any lessons will have been conducted. Such outcomes are based on needs as determined by a thorough study of the local situation, supplemented by recommendations of specialists and advisory committees. The discussions and observations made by the class are then designed to have the members become committed to the application of the anticipated outcomes. If, for example, one of the lessons in the poultry unit deals with the production and marketing of good quality eggs, the conclusions reached by the class should involve such practices as (a) the providing of dropping boards with screens, (b) gathering eggs at least three times a day, (c) immediate cooling and storing at temperatures of 45° F. to 55° F., (d) removing small dirt spots with steel wool or emery cloth, and (e) delivering eggs at least twice a week.

Where farmers understand the purpose for which the emergency courses are planned and where recommended practices are the outgrowth of the discussions in which they take part, it should be a simple matter to obtain from most members a list of the practices which they propose to use. This can be accomplished by developing an accumulated list of practices as the course proceeds and referring throughout the course to the decisions arrived at by the class. At or near the close of the series of meetings, the practices should be reviewed and the members asked to check those which they are using and those they propose to follow, on a form provided for this purpose.

The farming programs of men enrolled in the Rural War Production Training Program also provide the bases for developing group undertakings which can be used to supplement individual practices to excellent advantage. Many of the group activities associated with adult education programs for farmers in normal times, such as the organization of breeders associations and marketing cooperatives, involve long-time planning. Nevertheless, there are many possibilities for group undertakings, the benefits of which may contribute to the realization of the war-time objectives as illustrated in the course on the production of mutton, lambs, and wool in which activities such as the following are feasible: cooperative purchase of ewes, ram rings, cooperative ownership of dipping tanks, pooling of lambs by grades for marketing, wool pools, cooperative use of labor in shearing and drenching sheep, and the cooperative buying of drugs.