

*Proc. Series 178*

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COLORADO STATE BOARD  
FOR  
VOCATIONAL EDUCATION

RURAL WAR PRODUCTION TRAINING PROGRAM

Course No. 15

INCREASING HOME VEGETABLE GARDENING

Prepared in  
cooperation with the  
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and issued by  
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## Teaching War Production Courses

The main purpose of the war production courses is to discuss with producers ways and means, and to assist them in outlining plans of action, by which the production goal can be reached in the shortest possible time and with the greatest efficiency.

### Duration of Courses

All the production courses are to be planned to cover not less than twenty (20) hours of instruction extending over a period of not less than two weeks. Each meeting should be two hours in length. One meeting a week for ten weeks or five meetings a week for two weeks will meet these minimum requirements. Any arrangements of meetings within the above limits may be made. It may sometimes be desirable to hold a course a little longer than ten meetings. This is permissible providing the application for the course specifies the exact number of meetings. No course is to be extended beyond this specified number of meetings.

### Determining the Course Content

Each course to be offered in this program must include only one of the commodities designated in the Rural War Production Program.

Before organizing a course the production situation of the critical farm commodity in the locality should be analyzed and the needs of the farmers determined.

In developing the course content emphasis should be placed on farm jobs and problems which lend themselves to an immediate increase in production. Some farmers may need to improve their feeding practices, some will need to use more sanitary measures, some will need to stress more careful management of their livestock and others will find it more desirable to improve other operations in the efficient production of the specific commodity made the basis of instruction of the course. Vegetable growers

may need to change the varieties grown; improve the fertility of their soils; plan ways and means of economizing on labor in harvesting and packaging their crops or improve other operations. Many changes are possible to bring about immediate increase of production.

By no means should a course be organized to cover all phases of the production and the marketing of one of the critical commodities in a general and informational way. On the other hand, the instructor should always have in mind the community practices which can be improved to secure greater or more efficient production. The instruction should, therefore, result in action on the part of each individual member of the class. This procedure definitely gears the instruction into meeting the present war needs.

#### Developing a Preliminary Outline of the Course

A preliminary outline of the course should be developed before the first meeting of the class. This outline will have to be made on a local community basis by each instructor.

In developing this outline he should confer with some of the leading producers in the community. It is possible that the advisory committee could be of assistance in this matter. In the second suggestive job of the outline on page 3, there is provided a scheme whereby the instructor can very definitely discover the problems that should be given emphasis in the course. The results of this meeting might naturally make some changes. However, it is always best to have a well developed plan before starting any undertaking.

A specific job or problem should be made the basis of instruction of each meeting. It is, also, very desirable in planning a course to finish at each meeting the subject taken up for discussion. Following this suggestion enables the instructor to start each meeting with a new job or problem. To aid an instructor in formulating a preliminary outline of a course there is presented on page 3 a suggestive outline of jobs and problems.

INCREASING HOME VEGETABLE GARDENING

Suggestive Jobs or Problems for Meetings

1. The need for increased home vegetable gardening.
2. Determining the important factors in successful home gardens.
3. Budgeting home vegetable needs.
4. Planning the garden to meet family needs.
5. Determining the varieties to grow and the amount of seed needed.
6. Fertilizing the garden plot and preparing the seedbed.
7. Determining planting schedules and planting the seed.
8. Starting plants indoors and transplanting.
9. Considering the advisability of sub-irrigated gardens.
10. Irrigating the home garden.
11. Cultivating garden crops.
12. Controlling plant diseases and insect pests.
13. Canning surplus vegetables.
14. Storing vegetables for winter use.
15. Taking a tour of gardens.

Note. This is merely a suggestive outline, prepared to enable an instructor to better select topics for ten to twelve meetings.

### Making plans for each meeting

Careful planning in advance of each meeting is highly essential. The farmers attending the class will have had considerable experience in the production of the commodity under discussion. The experiences of the farmers supplemented by experiment station data presented by the instructor should furnish the basis for the farmers to determine the approved practices necessary in attaining the production goals. Unless a farmer gets something out of each meeting that will be a real help to him, it is doubtful if he will continue in the class. All of this puts a real responsibility upon the shoulders of the instructor. Most careful planning should enable him to better assume this responsibility.

This preparation for each meeting may consist of the following:

1. Listing motivating cues; that is, ways of arousing interest.
2. Writing a number of important key questions to direct the discussion.
3. Listing in condensed outline form important functioning facts or data.
4. Recording specific functioning references.
5. Deciding upon and securing worthwhile illustrative materials.
6. Determining where and how to use illustrative material most effectively.
7. Deciding upon the possibility of getting some person to give authoritative functioning data or facts that may help in clarifying discussions and in reaching decisions.

For instance, in suggestive Job 1, "The need for increasing production" of the commodity, the important questions to direct the discussion may be:

1. What are the production goals for the commodity for 1943?  
(national, state and county)
2. Why is the increased production necessary?
3. What are the price prospects for 1943?
4. How efficient is our production?
5. Do we have a responsibility in trying to help more efficient production and increased production?
6. Can we or can we not increase production?

### The conference procedure

The conference procedure is recognized as one of the most desirable methods of conducting classes with adult farmers who have had considerable experience in the production of the commodity made the basis of the instruction. To give farmers an opportunity to discuss their experiences and opinions when trying to solve a managerial problem is the purpose of the conference. The members of the group may want to decide upon the value of some practice; they may want to establish a standard way of doing something; they may want to agree upon some course of action; or they may want to correct some unsatisfactory practice. Whatever may be the immediate purpose, the collective judgment of the group on some problem is obtained through a general discussion. To this discussion the instructor or some authoritative person may add needed functioning facts obtained from experimental data or other reliable sources that should be considered in reaching a decision.

The conference serves only as an effective way for helping men to think straight on some problem or on deciding upon some action. It is not concerned with the development of doing abilities in which case the instruction procedure would be used. Nor is it essentially concerned with imparting information, in which case the informing procedure would be used. This latter statement does not mean, however, that the instructor or other selected person should not add important reliable functioning facts to the pool of experiences and opinions gathered from the group in reaching a decision on the problem under discussion. Decisions should come from the group, however, and not from the instructor who is essentially a leader of a discussion group and whose primary function is to guide and direct the discussions and particularly the thinking of the group.

### The use of illustrative materials

At any meeting in which illustrative materials, such as strip films, pictures, charts and the like can have a functioning value, they should be used. This material may be used to present a preview, to clarify points or to confirm points developed in the discussions. These supplementary aids need careful selection and intelligent use. A list of available U. S. D. A. strip films is appended to this outline.

### Demonstration

In many instances a demonstration by the instructor or by some other person may be very appropriate and helpful in clarifying some ideas developed in a discussion. Often, too, demonstrations can profitably be given while the group is on a field trip or tour to observe some approved practices.

Since emphasis of the course should be centered on practices leading to more efficient and increased production of the commodity made the basis of instruction, everything done in a class not specifically contributing to these ends should be excluded. Time consuming activities of a general nature need to be avoided if practical results are to be immediately attained in the little time given to a course.

### Conducting the meeting

- Step 1. Begin the meetings on time and close them on the scheduled time. If some members wish to remain longer to further discuss some point, this is all right, but the class should be dismissed first.
- Step 2. Before starting a meeting it is an excellent idea to write on the upper part of the blackboard, in front of the group, the problem made the basis of discussion of the meeting. Doing this will greatly help in focusing and holding the attention to what was planned for the meeting. Cautiously side-track irrelevant discussion and controversial questions. Let those who raised them remain after the group has been dismissed if they wish to discuss them.

- Step 3. Start off by clearly explaining the problem or question. Motivate it as best you can.
- Step 4. Put your first key question to the group. These key questions were to be part of the instructor's preparation for the meeting as previously suggested.
- Step 5. Get from the group facts, experiences, or cases pertaining to the question. This assembling of facts is the first phase of the conference procedure.
- Step 6. Record on the blackboard, whenever practicable, in the most condensed and outlined form, the essential functioning material presented. Add what may be needed to help out. This is the selection of functioning facts and the second phase of the conference procedure.
- Step 7. In some suitable way get an evaluation of the functioning facts. This is the third phase of the procedure.
- Step 8. Get from group members suggestions as to a solution or decision; and, if essential, get majority opinion. This is the fourth phase of the procedure. The development of a plan and the execution of a plan, the fifth and sixth phases, are individual matters, and are generally done outside of the meetings of the conference.
- Step 9. In a similar way try to bring the group to a decision in the other vital questions brought up in a meeting.
- Step 10. Before closing a meeting summarize the important questions that were discussed and the things agreed upon as a basis for action.

#### Follow-up work

Systematic follow-up work is an essential and necessary part of the War Production Program. The improved practices actually adopted, the improvements made in enterprise, and other results of the instruction needs to be known. Then, too, there is always an opportunity during supervision of rendering farmers additional assistance in carrying out their plans.

#### Attendance records

A record of the names of members of a War Production Class, together with the attendance of each must be kept and reported upon.



Some things to remember

1. There is a vital need for increasing the production of the commodities made the basis of instruction in the Rural War Production Training Program; namely,

Beef	Mutton, lamb and wool
Milk	Poultry for meat
Pork	Commercial vegetables
Eggs	Home garden vegetables
2. The production of these commodities can and must be increased.
3. The 1943 production goals for these commodities are much higher than they were for 1942.
4. This special rural training program for out-of-school rural youth and adults is an emergency measure that must be and can be an important factor in increasing the production of these critical commodities.
5. Food production goals can only be met if each farm and each community produces its share.
6. Instructors and producers must fully appreciate the need for increased production of these commodities.
7. Producers must have a wholehearted desire to help out in the situation as far as economically and physically possible.
8. Producers must analyze their utmost opportunities for more efficient production and for increasing the scope of their production wherever advisable.
9. Improved or most efficient methods will in nearly every instance increase production, and often with smaller units.
10. Losses due to diseases, pests, or management can be reduced and thus increase production.
11. A better quality of the product will increase production by preventing waste.
12. Ways and means of economizing on labor in production and in marketing can and must be worked out.
13. A greater use of labor saving devices is essential.

## U.S.D.A. FILM STRIPS

The following film strips can be purchased from the Photo Lab. Inc., 3825 Georgia Ave., N. W. Washington, D. C., at price indicated. When placing a purchase order, send a request to the Extension Service of the U. S. Department of Agriculture, Washington, D. C., asking for authorization of the sale and for the supplementary lecture notes. There is no charge for the latter. Authorization blanks can be secured from the local extension service if desired.

- No. 379 Marketing feeds through dairy cattle. 31 frames - 50 cents
- No. 515 Eradicating tuberculosis from livestock and poultry. 36 frames - 50 cents
- No. 413 National poultry improvement plan. 48 frames - 50 cents
- No. 126 Selecting hens for egg production. 55 frames - 55 cents
- No. 133 Standard breeds of poultry. 48 frames - 50 cents
- No. 141 Breeds of sheep. 56 frames - 55 cents
- No. 44 Breeds of swine. 33 frames - 50 cents
- No. 53 Hog houses and equipment. 30 frames - 50 cents
- No. 142 Selecting and judging breeding hogs. 31 frames - 50 cents
- No. 271 Marketing eggs in the United States. 53 frames - 55 cents
- No. 275 Preparation of wool for the market. 44 frames - 50 cents
- No. 140 Farm dairy houses. 63 frames - 55 cents
- No. 429 Production of high quality cream for butter making. 30 frames - 50 cents
- No. 503 Insect pests of garden vegetables and their control. 63 frames - 55 cents

## Other Film Strips

The College Photo Shop, Colorado State College, Fort Collins, has a large assortment of strip films which it rents. If interested, write for its circular - Visual Aid and Photographic Service.

To give an idea of the variety of these strip films a few are mentioned here, together with their number:

- No. 60 Round worms and swine sanitation.
- No. 52 Poultry housing in Colorado.
- No. 39 How insects attach garden vegetables - control.
- No. 24 Farm sheep raising.
- No. 73 Swine management.
- No. 108 Poultry management in Colorado.

## Kodachrome Slides

The College Photo Shop has a very complete supply of Kodachrome Slides on all agricultural subjects. A set of about 50 slides can be made and rented as desired. These slides are colored and measure 2 x 2 inches. Then, too, it is possible to add one's own local pictures to a set. Kodachrome Slides are considered the very best visual aids in instruction.

## INCREASING HOME VEGETABLE GARDENING

### Reference Material

#### Bulletins

1. The home vegetable garden. Colorado Experiment Station, Bul. 357, Fort Collins.
2. Vegetables for victory. (Shows what and how much to grow.) Circular Colo. Ext. Service. Get a supply for the class.
3. Feeding the farm family. (Shows how to budget vegetable needs.) Circular Colo. Ext. Service. Get a supply for the class.
4. Vegetable seed treatments. F. B. 1862, U.S.D.A.
5. Home canning of fruits and vegetables. F. B. 1762, U.S.D.A.
6. Subsistence farm gardens, F. B. 1746, U.S.D.A.
7. Hotbeds and coldframes. F. B. 1743
8. The farm garden. F. B. 1673, U.S.D.A.
9. The city home garden. F. B. 1044, U.S.D.A.
10. Farm drying of fruits and vegetables. F. B. 984, U.S.D.A.
11. Damping off and its control. Colo. Ext. Service, Cir. D-8
12. Cutworm control. Colo. Ext. Cir. 104-A
13. Vegetable crop pests. Colo. Ext. Cir. D-6
14. Vegetable disease control. Colo. Extension Cir. D-9
15. Diseases of tomatoes and their control. Colo. Extension Cir. D-11
16. Home storage of fruits and vegetables. Colo. Ext. Cir. D-12
17. Drying fruits and vegetables. Colo. Ext. Cir. D-15
18. Preservation of vegetables by salting. Colo. Ext. Cir. D-32
19. Standard varieties of vegetables for Colo. Cir. 22, Hort. Dept. C.S.C.
20. Asparagus Cir. 20, Hort. Dept. Colo. State College.
21. Propagation of plants. Colo. Experiment Station, Bul. 468, Fort Collins.
22. Diseases and insects of garden vegetables. F. B. 1371
23. Concrete tile sub-irrigated garden. Colo. Ext. Circular by W. M. Case.
24. Growing baby lima beans. Hort. Dept. Colo. State College

#### Books

1. Vegetable crops. Thompson; McGraw-Hill Book Co. \$5.00  
(Considered an excellent up-to-date book)
2. The food garden. Blair; The Macmillan Co. \$2.00
3. Vegetable growing. Knott. Lea and Febiger. Philadelphia
4. Truck crop plants. Jones and Rosa; McGraw-Hill Book Co. \$5.00
5. The Vegetable Gardener's How Book, Chesla C. Sherlock, Macmillan Co., \$3.00

F. B. (Farmers' Bulletins) are obtainable from County Agents, Bulletin Mailing Room, Colorado Extension Service, Fort Collins; and from your Senator or Representative in Washington, D. C.

HOME VEGETABLE GARDENING

Teaching Suggestions and Aids

Arranged in order of suggestive jobs and problems as given on page 3.

1. The need for increased home vegetable gardening.
  - a. Get group acquainted.
  - b. Explain purpose of course and nature of meetings.
  - c. Explain the "conferences procedure" see page 5.
  - d. Develop need for increasing home vegetable production.
    - Transportation facilities getting less.
    - Higher prices, more leisure time.
    - Less commercial canning.
    - An investment in health and economy.
  - e. Present facts from "Information on 1943 Food Production Goals."  
Secure this circular from the A.A.A. office.
  - f. Show some slides on good vegetable gardens.
  
2. Determining the important factors in successful home gardens.
  - a. This job might be combined with number 1.
  - b. As far as possible get factors from the group and record on blackboard. Suggest others to complete the list.
  - c. In general these factors are in line with the jobs listed on page 3.
  - d. Make a table on blackboard showing extent to which the factors are operating favorably and unfavorably.
  - e. Determine the important factors to be considered. These should largely determine the course content.
  
3. Budgeting home vegetable needs.
  - a. Send for circular "Feeding the Farm Family," Extension Service, Colorado State College. Get sufficient copies so each member of group has one.
  - b. Explain procedure and have each member of group work on problem.
  - c. The job may require more than one meeting. Could be finished out of class.

4. Planning the garden to meet family needs.

- a. The best thing here is the circular, "Vegetables for Victory," issued by Colorado Extension Service. Each member should have a copy.
- b. Explain procedure and have each member work on problem.
- c. Consider the early garden and the late garden for storage of vegetables.
- d. See page 7, Colorado Experiment Station Bul. 357, for an illustration of a garden plan.
- e. It might be profitable to have some members to put their garden plan on the blackboard and explain it.

5. Determining the varieties to grow and the amount of seed needed.

- a. Refer to: Colo. Exp. Sta. Bul. 357, "The Home Vegetable Garden." Horticulture Circular 22, "Varieties of Vegetables," Horticulture Department, Colorado State College.
- b. Consider purpose for which vegetables are going to be used. Immediate use, canning, drying, and storage.
- c. Pool experiences of group on success with different varieties for different purposes.
- d. Consider length of growing season of principal vegetables with relation to maturity.
- e. Consider new disease resistant varieties.
- f. Have some seed catalogs on hand for reference. Perhaps each member of group should have a catalog.

6. Fertilizing the garden plot and preparing the seedbed.

- a. Start with a discussion of basic facts on soil fertility.
- b. Bring out importance of fertile soils in the production and quality of vegetables.
- c. Stress the importance of organic matter and how it may be supplied.
- d. Pool experiences on the use of commercial fertilizers.
- e. Emphasize fact that thorough seedbed preparation is the most important labor saving practice.
- f. Stress importance of turning under organic matter in the fall.
- g. Pool experiences of group in getting a good seedbed.

7. Determining planting schedules and planting the seed.

- a. Develop with group planting schedules for main vegetables. Consider vegetables for immediate use, canning and storage.
- b. Refer to Colorado Experiment Station Bulletin 357, Pages 8-13.
- c. Stress importance of planting at proper depths.
- d. Pool experiences of group for success in planting. Small and large seeds in different soil types.
- e. Again emphasize the importance of a good seedbed.

8. Starting plants indoors and transplanting.

- a. Discuss advisability of raising own plants indoors or of buying plants.
- b. Determine success of members of group who have used each method.
- c. Discuss ideal soil for growing seedlings indoors.
- d. Discuss sowing seeds in flats and transplanting.  
See page 14, Colorado Experiment Station Bulletin 357.
- e. Discuss conditioning plants for transplanting.
- f. Pool experience of group in transplanting and evaluate results.
- g. Pool experiences for success with plant protectors.
- h. It might add interest to have different kind of flats to show to group.
- i. A demonstration on preparing soils for flats might also add interest.

9. Considering the advisability of sub-irrigated gardens.

- a. Refer to Colorado Extension Circular--Concrete tile sub-irrigated gardens.
- b. Pool experiences of group on sub-irrigated gardens.

10. Irrigating the home garden.

- a. Bring out importance of watering thoroughly once a week and avoiding daily, shallow sprinkling.
- b. Stress avoiding overhead sprinkling to prevent foliage fungous diseases.
- c. Other important points:
  - Irrigate as often as necessary to keep plants growing uninterrupted during the season.
  - Slightly ridge plants and space irrigation furrows to prevent base of plants from getting too wet.
  - Provide for drainage furrow at end of garden.
- d. Pool experience of group on different methods of irrigating and evaluate results.

11. Cultivating garden crops.

- a. Some important points:
  - Shallow cultivation
  - Preventing crusting
  - Cultivation after irrigation
  - Efficient tools
- b. Pool experiences on efficient cultivating tools and methods.
- c. If possible have a good display of cultivating tools, your local hardware dealer will gladly loan these.

12. Controlling plant diseases and insect pests.

a. Refer to:

Colorado Extension Bulletin 104-A, "Cutworm Control."  
"Bug News," No. 3, by Sam McCampbell, Colo. Ext. Service  
Fort Collins.

b. Some important points:

1. The two classes of insects: sucking and chewing
2. Control measures for sucking insects (contact sprays).  
Wettable sprays: - Blackleaf 40, soaps and oils.  
Dust sprays: - Blackleaf 40, lime-sulphur.
3. Control measures for chewing insects (Stomach poisons)  
Arsenate of lead, calcium arsenate, paris green.
4. Many good commercial products are no longer available.  
The problem is to make the best use of what is available  
and to use it economically.

c. Pool experiences on most common insects; sprays used; kind of  
sprayer and results obtained.

d. Prepare a display of home gardening sprayers, samples of  
different spraying materials and mixing solutions and dusts.

13. Canning surplus vegetables.

- a. Have canning specialist demonstrate home canning methods.
- b. Send to Colorado Extension Service for special bulletins on  
canning so that each member has copies.
- c. Be sure to give assistance in getting ready for the demonstration.



14. Storing vegetables for winter use.

- a. Refer to Colorado Extension Circular D-12, Home storage of fruits and vegetables.
- b. Some types of storage are:
  - Outdoor pits and trenches; house cellars; outside cellars; storage mound.
- c. Bring out storage requirements of different crops.
- d. Bring out again suitable storage varieties of vegetables.
- e. Discuss storage management; temperature; humidity; ventilation; regrading.
- f. Pool experiences of group in storing different types of vegetables.

15. Taking a tour of gardens.

- a. Some Sunday afternoon might be practicable for this.
- b. Thoroughly prepare for the tour to make it profitable.
- c. Make arrangements for use of cars to economize on gas. Use no more cars than absolutely essential.
- d. Throughout season keep up the interest in good home gardening.
  - Occasional meeting or tours
  - Supervision
  - Articles in local paper, etc.

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