

# Oregon Agricultural College Extension Service

O. D. CENTER  
Director

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## EXTENSION SCHOOLS IN AGRICULTURE AND HOME ECONOMICS

H. A. VICKERS



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residents of Oregon who request them.

### Extension School Staff

- \*E. L. Potter, Professor of Animal Husbandry.
- \*O. M. Nelson, Associate Professor of Animal Husbandry.
- \*E. J. Fjeldsted, Assistant Professor of Animal Husbandry.
- L. J. Allen, In charge Pig Club Work, Extension Service.
- E. B. Fitts, Associate Professor of Dairy and Animal Husbandry, Extension Service.
- E. L. Westover, Field Dairyman, Extension Service.
- \*A. L. Lovett, Professor of Entomology.
- \*G. R. Hyslop, Professor of Farm Crops.
- R. V. Gunn, Farm Management Specialist, Extension Service.
- W. S. Brown, Associate Professor of Horticulture and Crop Pests, Extension Service.
- \*A. G. Bouquet, Professor of Vegetable Gardening.
- Anna M. Turley, Assistant Professor of Home Economics and Leader of Home Demonstration Agents.
- Mrs. J. D. McComb, Assistant State Leader in Home Economics.
- Miss Minnie Kalbus, Assistant State Leader in Home Economics.
- C. S. Brewster, Assistant Professor of Poultry Husbandry.
- \*W. L. Powers, Professor of Soils.
- \*C. V. Ruzek, Associate Professor of Soils.
- \*T. A. Teeter, Professor of Irrigation Engineering.
- \*Members of the Resident College Staff.

# EXTENSION SCHOOLS IN AGRICULTURE AND HOME ECONOMICS

By H. A. VICKERS.

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## PART I.

### Introduction.

The Extension Service of the Oregon Agricultural College has conducted a number of different types of Farmers' Institutes, Movable Schools, Itinerant Schools, and Extension Schools during the past five years. The results accomplished in these schools have demonstrated the value of this work, and the large number of requests for continued work has shown the interest created.

It is the purpose of the Extension Service to broaden the scope of these schools materially, and to attempt to meet more fully the demands made for assistance. In doing this, much of the general lecture work will be eliminated, the Extension School being offered as the most promising and helpful type of service. It is felt that rural communities will welcome this change inasmuch as the work of the Extension Schools will be more complete.

The time devoted to each line of work taken up will be sufficient to permit the specialist to develop the subject considered to such an extent that the details will be clear to all. By handling the work in this way, those who are interested will be given information and demonstration in sufficient detail to be able to apply the principles in the solution of their own problems.

### Length of the Schools.

Extension Schools will vary in length from one to five days, and in a few cases may cover a longer period. One or more lines of work may be considered, but in all cases sufficient time will be allowed each subject to permit the specialist fully to develop and illustrate the matter under discussion. Work is offered in agriculture and home economics. Where there is a demand for both lines of study simultaneously, separate rooms must be provided.

List of courses with outlines will be found in Part II of this bulletin.



WOMEN ARE INTERESTED IN HOME ECONOMICS EXTENSION SCHOOLS  
Picture of Demonstration during Farmers' and Home Makers' Week

### The Purpose of the Extension School.

An Extension School in any community provides a means for farmers and housewives to enlarge and broaden their knowledge and experience. Although the average person is quite proficient in the management of the farm or the home, one's knowledge and experience may be enlarged and extended through conference with neighboring farmers or housekeepers

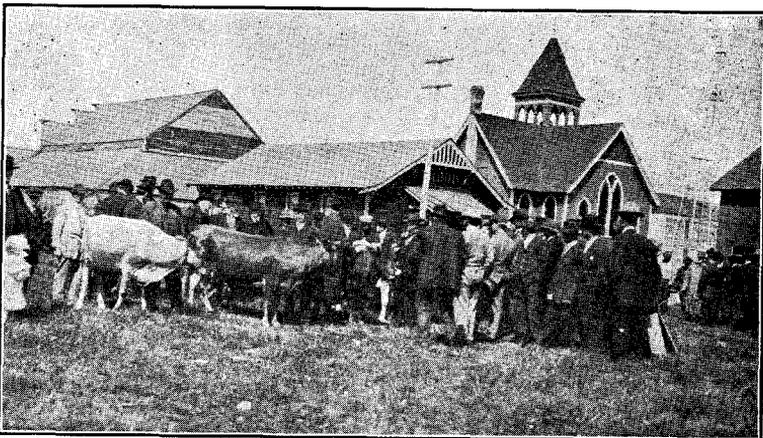
and with the specialists presenting the different lines of work. The purpose of the Extension School may be summed up as follows:

1. To provide systematic courses of instruction on subjects of general community interest. It is the aim of the instructors to make these courses thoroughly practical and as directly applicable as possible. They are able to do this not only through special preparation and experience, but also through constant association with farmers in all parts of the State.

2. To keep the farmer acquainted with the best and most profitable farm practices recommended not only by the Oregon Agricultural College, but also by other experiment stations and by the United States Department of Agriculture, and to assist in the application of these practices on the farms and in the homes of the State.

3. To bring to the farmer and his wife a knowledge of what is being done on successful farms in other parts of Oregon, and to provide a means of exchange of ideas regarding such methods and practices. The Extension School serves as a connecting link between communities in various parts of the State.

4. To furnish an opportunity for men and women of the community to meet and discuss with the specialists their common farm and home problems.



A DAIRY JUDGING CLASS AT AN EXTENSION SCHOOL

5. To give women an opportunity to discuss home problems and to obtain information regarding the work of the various bureaus and organizations doing special work on such problems.

6. To provide an additional means by which the Oregon Agricultural College and the U. S. Department of Agriculture may assist in enriching the industrial and rural life of the State.



A HOG JUDGING CLASS AT AN EXTENSION SCHOOL

It is inadvisable, both from the standpoint of the community and from that of the instructors, to attempt an Extension School at any place where conditions favorable to success are not apparent. It costs just as much in time, money, and effort to conduct a course with ten in attendance as with a hundred. Conditions favorable to an Extension School are found where there is:

1. A live community interest in practical and profitable farming.
2. A spirit of cooperation on the part of the entire community.
3. Sufficient interest in the school to assist in meeting local expenses and to pledge attendance.
4. A willingness on the part of each one to put the Extension School first for the time being and to do his or her part to make it a success. Entertainments and other attractions that conflict with the School should be temporarily postponed.



(A) ONE PHASE OF A PRUNING SCHOOL—THE INSTRUCTOR ILLUSTRATES HIS LECTURE



(B) A SECOND PHASE OF A PRUNING SCHOOL—THOSE IN ATTENDANCE DO THE WORK UNDER THEIR OWN CONDITIONS IN SELECTED ORCHARDS

## How to Secure and Organize an Extension School.

It should be distinctly understood that the local community itself holds the Extension School. The Extension Service is glad to furnish the instructors, but the success of the school depends primarily upon the efforts of the local people. A local executive committee, with authority to plan for the school and to make all local arrangements, is required.

Any local organization, such as a farmers' union, grange, parent-teachers' organization, or group of people interested, may promote the school for the community.

As a matter of economy in time and money, Extension Schools are usually arranged in series. It is highly advisable therefore to file a petition for a school as far as possible in advance of the date on which it is desired. The period of time devoted to this type of work ranges from about the first of November to the middle of February. One- and two-day schools may be arranged for other months when the work will fit into the special project plans of the specialists.

**The first step in arranging for an Extension School is to select an executive committee, who will prepare a petition and secure the signatures of not less than twenty-five responsible citizens, preferably farmers and housekeepers, who agree to work for the success of the school and to attend all sessions.**

**A petition for work in agriculture should be sent to the County Agricultural Agent, if there is an agent in the county.**

**A petition for work in Home Economics should be sent to the Home Demonstration Agent, if there is an agent in the county.**

In case there are no such agents in the county the petition should be sent to the Extension Service, Oregon Agricultural College, Corvallis, Oregon.

### Petition Form.

We, the undersigned, hereby petition the Extension Service of the Oregon Agricultural College for an Extension School as indicated herein, the School to be held at . . . . .  
sometime between the dates of . . . . .  
the exact dates to be arranged by the Extension Service subject to the approval of the local Executive Committee.

We pledge ourselves to attend all sessions requested in this petition and to take part in demonstrations arranged.

We agree:

1. To provide properly heated and lighted rooms in which the work can be given.
2. To provide such demonstrational material as can be secured locally.
3. To have printed locally a sufficient number of Extension School programs to give proper publicity to the School, the Extension Service to furnish the copy.
4. To assist in every way possible in making the Extension School a success.

**Work Desired**

Subject.....	Course No.....	No. days.....
Subject.....	Course No.....	No. days.....
Subject.....	Course No.....	No. days.....
Names .....	Address .....	
Chairman Executive Committee		
Names .....	Address .....	
Member Executive Committee		
Names .....	Address .....	
Member Executive Committee		

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(The signatures of twenty-five persons in the community are required on the petition in order to secure an Extension School. It is requested, however, that as large and representative a petition as possible be presented in each instance.)

**Final Arrangement for the School.**

When the petition for the school has been granted, a representative of the Extension Staff will meet with the Executive Committee, if possible, and assist in organizing and arranging for the work.

A good, live organization with an adequate number of committees is essential to a successful Extension School. It is always advisable for the men and women to work together in arranging for and carrying on the course. This is best realized by having a single organization, with separate committees in charge of the men's work and the women's work. Joint sub-committees should be appointed to look after the different parts of the work.

The Executive Committee should consist of not less than three people.



A COMMUNITY DINNER OFTEN PROVES A DESIRABLE ADJUNCT TO AN EXTENSION SCHOOL.

### Program Arrangement.

While it is impossible always to follow exactly any set form of program, it is desirable to have a standard form and to adapt this form to meet local conditions. All of the outlines for Extension School Courses are planned to fit into the following general form:

- 10:00-10:40—**Lecture or demonstration.**
- 10:40-11:00—Discussion.
- 11:00-11:40—**Lecture or demonstration.**
- 11:40-12:00—Discussion.
- 1:00 - 1:40—**Lecture or demonstration.**
- 1:40 - 2:00—Discussion.
- 2:00 - 4:00—**Demonstration.**

The suggested program arrangement does NOT make provision for special sessions, contests, or exhibits. Under "Suggestions" mention is made of the Boys' and Girls' work, a Question Box, and special lectures.

If these are desired, additional time must be allowed or evening sessions arranged.



A GRAIN GRADING SCHOOL AT LA GRANDE, JULY 11-13, 1918  
TOTAL ATTENDANCE, 45

### **Continuation Work.**

Extension School work can produce results of value to any community. Where several cooperators can be secured, the specialist may be able to return later and assist in planning and carrying on the work. A definite plan of continuation work will be formulated by the specialist, county agricultural council committee, county agent, and voluntary demonstrators attending the school. This plan shall include an outline of the particular work to be undertaken by the individuals, names of persons who have volunteered to perform the work, and a definite time at which to report the progress or completion of the work to the Extension Specialist concerned.

### **Suggestions.**

1. Advertise your school. Have it announced, and programs published in the local newspapers. Newspapers in your county will doubtless publish a few lines if your committee will send copy to the editors. Have teachers, ministers, and other public speakers announce the meeting. Direct some committee to telephone to the various communities, asking one leader in each community to telephone to the people in that section.

2. Begin all meetings on time.

3. Permit nothing to interrupt or hinder the work planned. Allow no outside speakers to interfere with the regular program.

4. Remember the school is for the whole county and not merely for the locality where held. Begin advertising early and do not fail to let the public know of the meetings.

5. School Boards are often willing to allow the pupils, above the sixth grade, especially those taking work in agriculture and home economics, to attend the sessions. It is usually good practice for them to be accompanied by one of the teachers and to be required to take notes. If pupils are allowed to attend only a part of the time, instructors should be consulted as to the best time for them to come. The more mature pupils from rural districts can usually profit much from the work and should be encouraged to attend.

6. Where practicable always arrange one session for the boys and girls. The first hour of the session might be devoted to some school contest to be determined locally and in connection with the School Superintendent, Local Club Leader, and teachers.

7. Have a Question Box and place it in charge of some competent person who will carefully conduct the same.

8. The publications of the Oregon Agricultural College are free to all. Lists of available bulletins will be provided at all schools.

In some schools special evening lectures can be arranged. Subjects of such lectures, time of lecture, etc., will have to be arranged to meet local conditions.

#### **Farmers' and Home-Makers' Week.**

The big State Extension School is held on the Oregon Agricultural College Campus during the first week of January. During this week approximately twenty conventions and conferences convene for the consideration of particular problems. Attempts are made to outline plans of campaigns which will be effective in securing results during the next year. The assistance and counsel of all interested persons are desired. Special courses in agriculture and home economics are arranged in such way that during the week much information may be obtained along these lines. Some of the best talent of the United States is secured for special addresses. All farmers and women who are interested in community and home betterment should take part in this work. Circulars and programs are available, usually the first week of December, and these will be sent upon request.

**PART II.****EXTENSION SCHOOL COURSES**

Department	Course I	Course II	Course III	Course IV	Course V
Animal Husbandry	Beef Cattle	Pork Production	Mutton Production	Wool Production	
Dairy Husbandry	General Dairying	Dairy Herd Improvement	Feeding Dairy Cattle	Milk and Milk Products	
Entomology	E. Ore. Bee-keepers' Course				
Farm Crops	Grain Grading	Grain Production	Forage Production	Potato Production	Bean Production
Farm Mechanics	*Gas Engines and Tractors	*Concrete	*Farm Equipment		
Farm Management	Farm Management and Accounts				
Horticulture	The Homestead	Orchard Management	Vegetable Gardening	Insect and Plant Diseases	Pruning
Home Economics	Clothing Conservation	Food Conservation	Food Preservation	Health Conservation	General Home Economics
Mechanical Engineering	*Special Courses				
Poultry Husbandry	Poultry Production				
Soils	Soil Irrigation	Soil Drainage	Soil Management		

\*NOTE—Courses which have not been definitely outlined but which are subject to arrangement in a few places when specialists are available.

## EXTENSION COURSES IN ANIMAL HUSBANDRY.

**COURSE I—BEEF CATTLE (Two days)—Professor Potter or Professor Fitts.**

1. **Methods of Wintering Cattle.**  
Substitutes for hay and other methods of wintering as demonstrated by experiments at Union and Corvallis, Oregon.
2. **Improvement of Grazing on Pastures and Ranges.**
3. **Fattening Steers.**  
Results of five years work at the Eastern Oregon Experiment Station.
4. **Market Grades and Classes of Cattle—Demonstration.**  
Based on Portland Market Conditions.

### Second Day.

1. **The Place of Beef Cattle in Oregon.**  
Discussion of conditions favorable and unfavorable to beef production.
  2. **Breeds of Beef Cattle and their Adaptability to Oregon Conditions.**
  3. **Pure Bred Cattle.**  
Methods of Raising, Costs and Returns.
  4. **Judging Beef Cattle—Demonstration.**
- COURSE II—PORK PRODUCTION (Two days)—Professor Fjeldsted, Mr. Allen or Professor Fitts.**

### First Day.

1. **Oregon's Place in Pork Production.**  
Number of hogs Oregon can produce and factors influencing increase or decrease of production.
2. **Growing the Pig.**  
Feeding and management methods based on tests at Corvallis, Union, and other experiment stations.
3. **Marketing Hogs in Oregon.**  
With special reference to present local conditions.
4. **Market Classes of Hogs—Demonstration.**

### Second Day.

1. **Breeds of Hogs for Oregon.**
  2. **Feeding the Sow and Her Litter.**
  3. **Fattening Methods.**  
With special reference to present feed situation.
  4. **Judging Hogs—Demonstration.**
- COURSE III—MUTTON PRODUCTION (One day)—Professor Nelson or Professor Fitts.**

1. **Sheep on Oregon Farms.**  
Conditions favorable and unfavorable to profitable production.
2. **Sheep Feeding.**

3. **Sheep Pastures.**

Based on tests at Corvallis showing carrying capacity of various Oregon forage crops and pastures.

4. **Handling Sheep—Demonstration.**

**COURSE IV—WOOL PRODUCTION (One day)—Professor Nelson or Professor Fitts.**

1. **Breeding for Wool and Mutton.**

2. **Marketing of the Wool Clip.**

With special reference to formation of pools and other sale arrangements under Governmental control. Professor Nelson is official representative of the Federal government in wool buying for Oregon.

3. **Market Grades and Classes of Wool.**

4. **Preparation of Wool for Market—Demonstration.**

**EXTENSION COURSES IN DAIRY HUSBANDRY.**

**COURSE I—GENERAL DAIRYING (Two days)—Professor Fitts.**

**First Day.**

1. **The Business of Dairying.**

The place of dairying in agriculture; essentials to success; production costs.

2. **Building Up the Herd.**

Selection of breed; the sire; keeping records; handling the herd.

3. **Calf Raising.**

Feeding and handling from birth to maturity, including common diseases and their control.

4. **Judging—Demonstration.**

How to select a good cow by the type or conformation.

**Second Day.**

1. **Feeding for Milk Production.**

Principles of feeding; selection of feeds; balanced vs. unbalanced rations; pastures.

2. **Silos and Silage.**

Essentials in silo construction; types of silos; crops for the silo; silage in the ration.

3. **Handling and Marketing Milk and Cream.**

Essentials in producing a first class product; milk-room conveniences; selling milk, cream or butter.

4. **The Babcock Test—Demonstration.**

The testing of milk and cream is simple and inexpensive. Samples of milk and cream will be tested. (Note—Arrangements will need to be made for tester and apparatus.)

**COURSE II—DAIRY HERD IMPROVEMENT (Two Days)—Professor Fitts.**

**First Day.**

1. **Breeds of Dairy Cattle.**

Origin, characteristics and adaptability of the several breeds.

2. **Developing the Herd.**

Breeding methods; selection of the sire.

3. **Calf Raising.**  
Feeding and handling the calf and heifer; calf meals.
4. **The Dairy Type—Demonstration.**

**Second Day.**

1. **Handling the Herd.**  
Details of cattle management, including milking; grooming; watering; salting; dehorning; exercise; etc.
2. **Herd Record Keeping.**  
Its importance; methods of securing records; advanced Registry records; Cow Test Associations.
3. **Community Breeding.**  
Benefits following development of breed centers. How to organize a Community Breeders' Association.
4. **Some Common Diseases and Methods Used in Their Treatment.**

**COURSE III—FEEDING DAIRY CATTLE (Two days)—Professor Fitts.**

**First Day.**

1. **Principles of Feeding.**  
Composition of different feeds. Digestion, assimilation and uses of feeds in animal body.
2. **Feed Requirements for Growth and Milk Production.**  
Economical and profitable feeding dependent upon knowledge of requirements. Basis for balancing rations.
3. **Feeding the Bull and the Dry Cow.**  
These are often neglected. Proper feeding and handling very important; profits materially affected.
4. **Balancing Rations.**  
Rations will be worked out and adapted to local conditions using feeds available.

**Second Day.**

1. **Feeding Practices.**  
Preparation of feeds; regularity in feeding.
2. **Succulent Feeds and Their Value.**  
Importance of green feeds in the ration. Silos and silage.
3. **Buying Feeds.**  
Comparative values of different feeds; securing nutrients or real feed values instead of weight or bulk. Cooperative buying; time of year to buy.
4. **Balancing Rations.**  
A continuation of the work begun on first day

**COURSE IV—MILK AND MILK PRODUCTS (Two days)—Professor Fitts**

**First Day.**

1. **Food Value of Milk.**  
Food value far beyond protein and energy content absolutely essential in the diet.
2. **Essentials in Producing Clean Milk.**  
Precautions to be taken and practices recommended as regards the stable, cow, milker and utensils.
3. **Care and Handling of Milk and Cream.**  
Covers, cooling, bottling, separating, holding and delivery,

4. **The Farm Separator.**  
Demonstration on setting, regulating, operating, oiling and cleaning.

#### Second Day.

1. **The Milk House.**  
Location, construction and equipment.
2. **Utilizing By-Products.**  
Using skim milk and whey. Making casein, cottage cheese, milk sugar, etc.
3. **Marketing Dairy Products.**  
Comparative returns when sold as milk, butter or cream. Advantages of cooperation.
4. **The Babcock Test—Demonstration.**  
Testing milk and cream. (Note—Arrangements will need to be made for tester and apparatus.)

#### EXTENSION COURSE IN BEE-KEEPING.

##### COURSE I—EASTERN OREGON BEE-KEEPERS' COURSE (One day) —Professor Lovett.

1. **Disease Control.**
2. **Wintering—Demonstration.**
3. **Preparing for the Honey Flow.**
4. **Foul Brood Control—Demonstration.**

##### **The Use of the Winter Pack—Demonstration.**

Foul brood diseases and poor wintering are the limiting factors in honey production. The preparation for the honey flow really begins the previous summer. The latest approved methods in disease control, wintering, and preparation of the bees maximum production will be discussed and actual demonstration of methods presented.

#### EXTENSION COURSES IN FIELD CROPS.

##### COURSE I—GRAIN GRADING (Three days)—Professor Hyslop.

Need for and importance of grain grading and grain inspection.  
Taking the samples.  
Wheat classes and the basis for their establishment.  
Varieties of wheat by classes and the basis for their establishment.  
Dockage and its determination.  
Test weight per bushel, its significance and exact method of determination.  
Reasons for, and method of distinguishing characters of ordinary damage and heat damage in grain.  
Distinguishing character and objection to foreign material other than grain.  
Varietal mixtures, their determination and use.  
Grain mixtures and their effect on milling value.  
The gluten test.  
Climatic, soil and varietal factors affecting wheat quality.  
Wheat blending.  
Standard varieties.  
Moisture changes in grain and the moisture test.  
Determination of smut dockage.  
Value of smutty wheat.  
Factors affecting wheat value at shipping point.

- Classes, grades and grade factors for oats.  
 Classes, grades and grade factors for barley.  
 Classes, grades and grade factors for corn, with special reference to value and keeping quality of Eastern corn shipped to North-west sections.  
 Problems of placing grades. Students are given grade factors and place grades in oats, barley, wheat and corn.  
 Analysis of samples of wheat, oats and barley, by students.  
 (Note—This Grain Grading School cannot be arranged in conjunction with other Schools. The work outlined above requires three full days, the work beginning at 8:30 a. m. and continuing through to 5:00 p. m. At some points two evening sessions are necessary.)

**COURSE II—GRAIN PRODUCTION (One day)—Professor Hyslop.**

1. **Standard Variety and Preparation for Maximum Production.**  
Seed-bed preparation; time, rate, and manner of seeding.
2. **Special Methods of Handling Grain**
  - a. To control weeds.
  - b. To minimize frost losses.
  - c. To avoid winter killing.Harvest precautions to avoid loss.
3. **Bulk Handling vs. Sack Handling of Grain.**
4. **Conditions Affecting the Marketing of the Grain Crop.**  
Grain quality as affected by climatic and other conditions.  
Marketing by grade.

**COURSE III—FORAGE PRODUCTION (One day)—Professor Hyslop.**

1. **Seeding and Management of Permanent and Temporary Pastures.**
2. **A Comparison of Soiling and Silage and Pasturing Methods.**
3. **Principles and Practice of Silage Making.**
4. **Hay Making and Hay Values—Demonstration-Lecture.**

**Substitute Lectures.**

**The Production of Succulent Forage as Root Crops, Kale, etc.  
 Supplemental or Catch Crops for Forage Purposes.**

**COURSE IV—POTATO PRODUCTION (One day)—Professor Hyslop.**

1. **Cultural Methods for Potatoes.**  
Soils and their preparation; preparation of seed for planting (demonstration); time and manner of planting.
2. **Grading and Marketing the Potato Crop—Demonstration.**
3. **Potato Varieties, Their Identification and Improvement—Demonstration-Lecture.**
4. **Potato Storage and Potato Products Manufacture.**

**Additional Subjects.**

Where it is possible to have a Plant Pathologist present and the work can continue for two days, the following subjects may be added to the program:

- Potato Diseases and Their Treatment.**  
**Potato Seed Inspection and Certification.**

**COURSE V—BEAN PRODUCTION (One day)—Professor Hyslop.**

1. **Bean Varieties and Their Improvement.**
2. **Cultural and Harvest Methods for Beans.**  
Source of seed; planting; harvesting and threshing.
3. **Grading, Packing and Marketing the Bean Crop—Demonstration.**  
Necessity for bean grades. Use of beans as by-products.
4. **Special Problems in Bean Production.**  
Handling of beans when wet; handling and using dirty beans; inoculation, etc.

**EXTENSION COURSE IN FARM MANAGEMENT.**

**COURSE I—FARM MANAGEMENT AND ACCOUNTS (One day)—Mr. Gunn.**

1. **The Business Side of Farming.**  
A general discussion of the management of the farm as a business enterprise as applied to the correlation of the different industries on the individual farm with special emphasis on the economic side of production as it relates to what and how much to produce.
2. **Farm Labor Efficiency.**  
A general discussion on the possibilities of betterment of the farm labor situation, especially as it may be affected by better wages and better organization and efficiency on the individual farm.
3. **Why Use Farm Accounts?—Demonstration.**  
A general discussion—how the replanning of a farm business for increased profits is impossible without past records—the necessity of records if the farmer is to have a voice in price control—the value of records in obtaining loans and establishing credit and in making out the income tax returns. The above discussion is to be followed by a demonstration of a simple system of farm records.

**EXTENSION COURSES IN HORTICULTURE, ENTOMOLOGY, AND PLANT PATHOLOGY.**

**COURSE I—THE HOMESTEAD COURSE (One to four days—Professor Brown.**

- \*A—The Farm Orchard.**  
Three lectures covering the subject from the standpoint of the farmer who wants a small orchard for the needs of his family.  
One field exercise in pruning.
- B—Small Fruits.**  
Three lectures taking up the strawberry, the brambles, the currant, the gooseberry, and the grape. One field exercise in pruning various small fruits.
- C—The Vegetable Garden.**  
Three lectures designed to help the farmer in growing vegetables for home use. One laboratory exercise.
- D—Special Lectures.**  
An evening lecture with lantern and slides.
1. **Making the Home Grounds Attractive.**

2. **Insect Pests of the Orchard and Garden.**

A lecture illustrated by lantern slides.

3. **Plant Diseases of the Orchard and Garden.**

A lecture illustrated by lantern slides. (Lectures two and three may be shortened and combined into one lecture if desired.)

**COURSE II—ORCHARD MANAGEMENT (One to five days)—Professor Brown.**

**A\*—Planning and Planting the Orchard.**

Three lectures covering such subjects as choice of orchard lands, varieties to plant, pollenizers, laying out the orchard, depth of planting, dynamiting soils before planting, etc. One field exercise.

**B—Growing the Orchard.**

Three lectures dealing with such subjects as tillage, tools used in cultivation, fertilizers, cover crops, thinning fruits, etc. One field or laboratory exercise.

**C—Pruning the Orchard.**

Three lectures covering the fields of pruning young trees, trees just coming into bearing, and mature trees; corrective pruning and tree surgery. One field exercise in pruning.

**D—Spraying, Spray Mixtures and Spray Fixtures.**

Three lectures on such subjects as following the spray calendar, different types of insect life and plant diseases and the bearing of this knowledge upon the methods used in spraying, spray mixtures, spray machinery, including accessories. One field exercise in spraying or examination of apparatus.

**E—Harvesting and Marketing.**

Three lectures covering such subjects as preparation for harvesting, time of picking, harvesting equipment, grading, packing, cool and cold storage, bracing cards, finding a market, and marketing organizations. One laboratory exercise.

**COURSE III—VEGETABLE GARDENING (One to four days)—Professor Bouquet.**

**\*A—Community Vegetables.**

Lectures and demonstrations dealing with problems concerned in production and marketing of vegetables which are specialties in certain districts particularly suited to the same; such as, onions, onion sets, cabbage, broccoli, celery, tomatoes, etc.

**B—Market Garden Vegetables.**

Lectures and demonstrations covering the various crops grown expressly for the home market, such as lettuce, celery, asparagus, sweet corn, cabbage, cauliflower, tomatoes, etc., and subjects pertaining thereto, such as variety, and seed strain selection, soil fertilization, land cropping, irrigation, and successful marketing methods.

**C—Cannery and Dehydrator Vegetables.**

Lectures and demonstrations dealing with the production of special crops grown expressly for processing in the cannery or drier, such as beans, beets, cabbage, spinach, tomatoes, squash, sweet corn, etc.

**D—Vegetables in Greenhouses and Frames.**

Lectures and demonstrations dealing with the use of the small greenhouse and frames in the production of young vegetable plants; also in the growing of crops to maturity, such as tomatoes, cucumbers and lettuce.

**COURSE IV—INSECT AND PLANT DISEASES (One to four days)—Profesesor Brown.**

(Insect and plant diseases dangerous to fruits and vegetables and methods of combatting them.)

**\*A—Pome Fruits.**

Insect and plant diseases damaging pome fruits—apple, pear and quince. Three lectures and one laboratory period.

**B—Stone Fruits.**

Insect and plant disease troubles of the stone fruits—peach, plum, prune, cherry and apricot. Three lectures and one Three lectures and one laboratory exercise.

**C—Small Fruits and Nut Trees.**

Insect and plant diseases affecting small fruits and nut trees. Three lectures and one laboratory exercise .

**D—Vegetable Gardening.**

Insect and plant diseases which the vegetable grower dreads. Three lectures and one laboratory exercise.

**COURSE V—PRUNING—Professor Brown.****A—Winter Pruning—One Day Demonstration.**

Consists of one lecture covering the most important features of pruning followed by field work in orchards during the balance of the day.

**B—Winter Pruning—Five Day Cooperative Course.**

Pruning is taken up more thoroughly and systematically than is possible in the one day demonstration. A lecture is given each day. This will be followed by field work. The time employed in this work will be from late autumn to early spring. Pruners bring their own tools and do the work under the direction of the instructor in charge.

**C—Summer Pruning—One Day Demonstration.**

One lecture followed by field work. The time for this work will be from June to August, inclusive, the exact time for different sections of the State depending upon season, kind of fruit, and age of trees.

**NOTE—**\*Each series listed in Courses I, II, III, and IV constitutes a single day's work. A community may select those sections it is especially interested in, thereby limiting the number of days work to the time that its people might desire to spend in specific lines of work.

**SPECIAL LECTURES—Professor Brown.****The English Walnut.**

Covering the subjects of soils adapted to walnuts, varieties, cultivation, pruning, diseases, harvesting, marketing, etc.

**The Filbert and Some Nuts Not Generally Known in Oregon.****EXTENSION COURSES IN HOME ECONOMICS.****\*COURSE I—CLOTHING CONSERVATION—Miss Turley, Miss Kalbus, or Mrs. McComb.****1. Need of Conservation—(Required).**

Presentation and discussion of the textile situation as it exists in the world today and our relation to the conservation of textiles.

**2. Removal of Stains from Clothing and Other Textiles—Exhibit and Demonstration.**

A demonstration will be given showing the methods of cleaning and removing stains and the materials necessary for the same.

**3. Uses of Old Clothes—Exhibit and Laboratory Demonstration.**

An exhibit showing a series of articles made from old clothes. The members attending the school will supply their own material. The possibility of the garment to be remodeled will be discussed by the class after which it is ripped, cleaned, pressed and retouched. Members of the class do the work.

**4. The "Tale of the Shirt."**

Men's shirts too old for further wear by the owner will be brought to the meeting and garments made from them.

**5. Cleaning and Renovating Hats.**

Velvets and silks from last year's hats will be brought to the meeting and cleaned and freshened. The work to be done by those attending.

**\*COURSE II—FOOD CONSERVATION—Miss Turley, Miss Kalbus or Mrs. McComb.****1. The Food Problem and Conservation (Required.)**

The local as well as the National food problem will be presented.

**2. Selection of Food or Planning the Family Meal.**

The balanced diet for the family and the Nation will be outlined in this lecture.

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**\*NOTE—**The first subject in Courses I, II and III is required wherever the courses are taken. Any other subject listed may be selected to complete the first day's work. The selection of each additional subject adds one day to the course: e. g., Under "Clothing Conservation", the lecture "Need of Conservation" will constitute part of the first day's work no matter how many days are devoted to the course. The selection of any other topic (e. g., "Uses of Old Clothes") combined with the lecture would constitute the first day's work. The selection of any additional topic would involve still another day's work.

3. **Cereals and How to Use Them—Demonstration.**

The food value and preparation of cereals will be given in this demonstration.

4. **Sugar—Where? Why? How?—Demonstration Lecture.**

5. **Why to Use Milk and Eggs at Present Prices—Illustrated Lecture.**

Latest investigations regarding food value of milk and eggs will be given.

6. **Let the Fireless Cooker Save Time, Fuel, Food.**

A demonstration showing the use and results of the use of the fireless cooker.

**COURSE III—FOOD PRESERVATION—Miss Turley, Miss Kalbus or Mrs. McComb.**

1. **The Preservation Budget.**

Outlines and general discussion will be given of the amount and kind of food necessary for the average family to preserve for use during the year.

2. **Canning.**

Up-to-date methods of canning fruit, vegetables and meat.

3. **Drying Fruits and Vegetables.**

Showing preparation of products for drying and actual methods.

4. **Brining and Salting—Demonstration.**

**COURSE IV—HEALTH CONSERVATION (One day)—Miss Turley, Miss Kalbus, or Mrs. McComb.**

1. **Home and Community Sanitation.**

A discussion of the relation of home and community sanitation to health in prevention and control of communicable diseases.

2. **The School Luncheon as a Health Conservation Measure.**

3. **Emergencies and Simple Remedies.**

**COURSE V—GENERAL—Miss Turley, Miss Kalbus or Mrs. McComb.**

1. **The Work of the Home Demonstration Agent and How to Secure an Agent in Your County.**

2. **Household vs. Farm Account Keeping.**

**EXTENSION COURSE IN POULTRY HUSBANDRY.**

**COURSE I—POULTRY PRODUCTION (One day)—Professor Brewster or Mr. Upson.**

1. **War-Time Poultry Feeding Problems.**

The feed cost of egg production, feeding for winter eggs, mixing of rations, use of local feeds. A two hours demonstration-lecture.

2. **Building and Equipping the Farm Poultry House.**

Methods of remodeling poultry houses.

3. **Breeding Poultry for Egg Production.**

Selection of breeding stock by means of external characters, methods of culling out the poor producers, how to tell the laying hen. Two hours demonstration-lecture. Demonstration in culling.

## EXTENSION COURSES IN SOILS.

## COURSE I—SOIL MANAGEMENT—Professor Ruzek.

## A—Farm Soils.

\*Soil origin and formation, Classification and properties, Physical improvement, Soil moisture control, Rotation.

## B—Soil Building.

\*Principles of soil fertility, Exhaustion and maintenance of fertility, Preservation and use of manures, Selection, use and value of fertilizers, Principles of liming.

## COURSE II—SOIL IRRIGATION (Two or five day course)—Professor Powers and Professor Teeter.

## A—Irrigation Practice.

\*Selection and preparation of land for irrigation. Time, amount and frequency of irrigation, economic use of water, irrigation of special crops, irrigation by pumping, effects of irrigation on soils and crops, crop rotation and permanent agriculture under irrigation, etc.

## B—Irrigation Institutions.

\*Principles of Irrigation Law—acquisition and loss of water rights, the adjudication and administration, law relative to rights of way. State and government aid in irrigation, etc.

## C—Irrigation Engineering and Management.

\*Organization for operation and maintenance, measurement of irrigation water, delivery of water to irrigators, structures for distributaries, records and accounts, etc.

## COURSE III—SOIL DRAINAGE—Professor Powers.

## A—Farm Drainage.

\*Soil and soil water as related to drainage, benefits of drainage and kinds of drains, parts of drainage systems and their location, surveys, construction of tile systems, treatment of drained land, cost of drainage, special problems.

## B—District Drainage.

\*District drainage—drainage districts and drainage laws—assessment of benefits and damages, drainage district procedure, design, construction and cost of outlet ditches.

## COURSE IV—ADVANCED WORK IN ABOVE SUBJECTS. Courses may be secured by special arrangement.

\*NOTE—In all of the courses under Soils, a maximum of demonstrational work will be given.