AGRICULTURAL SHORT COURSES

JANUARY 2-27, 1950

Primrose Hall

Offered by
The School of Agriculture and Forestry
through the
DIVISION OF COLLEGE EXTENSION
N. C. State College
FOREWORD

Agricultural Short Courses at North Carolina State College are designed for young people who desire training in one or more fields of agriculture, but who find it impossible to take the regular college course which provides training in all fields, and for older individuals who wish to become familiar with the most recent agricultural practices. It is the aim of these courses to make better farmers, to help them produce better crops, fruit, vegetables, livestock and poultry, and to obtain greater satisfaction and profit from their enterprises. Short Courses also provide technical training for various industries related to agriculture.

The School of Agriculture and Forestry looks on Short Courses as another way in which the agricultural interests of North Carolina can be served. In these courses, students will receive instruction from the best professors on our staff, and will use all of our available facilities.

It is our earnest desire as time goes on that more and more North Carolina citizens will avail themselves of the opportunity of receiving practical training as provided by these Short Courses.

J. H. HILTON
Dean
School of Agriculture and Forestry
Agricultural Short Courses

GENERAL INFORMATION

Agricultural short courses were re-activated at N. C. State College in 1946. Since that time, the program has expanded greatly to meet the growing need and demand for post-high school training in agriculture for those who cannot spend four years in college.

In 1948-49 the School of Agriculture and Forestry, through the Division of College Extension, conducted 30 short courses, schools and conferences with a total enrollment of 1,258 students. Further expansion of this type of training is anticipated to meet the needs of the State.

The three FARM PRODUCTION SHORT COURSES outlined in this bulletin are planned to be of practical value to any farmer in the State and every young man who plans to make farming a part of his livelihood. These short courses are a continuation of high school agricultural and 4-H Club study with the teaching on a college (non-credit) level.

Elective subjects—Agricultural short courses are planned to fit individual needs as nearly as possible. By offering these three courses at the same time, each student, upon approval of his faculty adviser, may elect subjects from other courses which more nearly fill his particular needs.

ADMISSION AND REGISTRATION

You should apply for the short course of YOUR choice as early as possible, certainly before December 15, 1949. Use the application blank in this bulletin.

The student must be at least 16 years of age and have at least an eighth grade education or its equivalent in experience.

HOUSING

Dormitory rooms will be available in Watauga Hall for short course students desiring to room on the campus. Students rooming on the campus will furnish their own bed linen, blankets, towels and pillows, if desired.
EXPENSES

The expenses listed below include all necessary expenses except personal spending money. Board is served cafeteria style, and the cost is estimated on the average spent per meal by persons eating in the cafeteria. The total cost of the course for tuition, room, board and books should not exceed $100.00.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$20.00</td>
</tr>
<tr>
<td>Room Rent at $3.00 per week</td>
<td>12.00</td>
</tr>
<tr>
<td>Board (estimated)</td>
<td>45.00</td>
</tr>
<tr>
<td>Books &amp; Supplies (Maximum)</td>
<td>20.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$97.00</strong></td>
</tr>
</tbody>
</table>

ACTIVITIES

Short course students, during their stay on the campus, are urged to participate in all college activities, in so far as possible. The college tennis courts, swimming pool and gymnasium will be available under the same regulations as for regular students. Athletic tickets, for any sports events held on the campus, will be available at regular student rates.

VETERANS

Veterans eligible for training may take these courses under the provisions of the G. I. Bill. To obtain a Certificate of Eligibility, veterans should contact their nearest office of the Veterans Administration or write to: Chief, VOCATIONAL REHABILITATION AND EDUCATION DIVISION, U. S. VETERANS ADMINISTRATION at their nearest regional office, (Winston-Salem for North Carolina) and request VA Form 7-1950. The VA will issue you a Certificate of Eligibility. The student MUST bring this Certificate of Eligibility with him when he registers to be eligible to enter under the G. I. Bill.
FACULTY

The short course faculty consists of members of the regular college teaching faculty. Professors teaching short course subjects teach similar subjects in the regular four-year courses. Members of the Agricultural Experiment Station staff and Agricultural Extension Service Specialists assist with special topics from time to time.

CLASSES

Classes will be held five days a week (Monday through Friday). For those students who are on the campus on Saturday mornings, special classes or interviews will be arranged.

BANQUET

The closing session of the short courses will be a banquet Friday night, January 27. The program will be arranged in cooperation with a student committee. During this program, Certificates will be presented, and prizes will be awarded.
There is a great demand in North Carolina for trained workers in dairy production. This short course is designed to meet the need by offering intensive training in efficient production and management of dairy cattle. This course should be especially valuable for dairy farmers, herdsmen, and others who have had practical experience in this field and desire further training and for persons who plan to add dairying to their farm enterprises.

Course of Study

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours Per Week</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lecture</td>
<td>Laboratory</td>
<td></td>
</tr>
<tr>
<td>Dairy Herd Management</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Animal Health</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Milk Sanitation</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artificial Breeding</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>D.H.I.A. Testing &amp; Records</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Pasture &amp; Forage Crops</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Farm Management</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Selecting Dairy Cattle</td>
<td>--</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Small Grain Production (Elective)</td>
<td>2</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>20</strong></td>
<td><strong>18</strong></td>
<td></td>
</tr>
</tbody>
</table>

Description of Subjects

DAIRY HERD MANAGEMENT
Starting a dairy herd, selection of the individual cow and comparative judging; selection and handling the herd sire; calf raising; development of the dairy heifer; practice in feeding; handling the herd for grade-A milk production; operating milking machines; stables for dairy cattle and livestock sanitation. Students will be taken to the dairy barns throughout the course for practical work in all phases of dairy production.

ANIMAL HEALTH
Discussion of the methods of prevention of the common diseases of farm animals.
MILK SANITATION
Factors influencing the production of clean milk with low bacterial count. Processing and handling milk.

BABCOCK TESTING OF MILK
Laboratory practice in Babcock testing of milk; Practical work in keeping and calculating records necessary for Dairy Herd Improvement Associations.

PASTURES AND FORAGE CROPS
Types of pastures; pasture mixtures, methods of establishing and maintaining. Hay crops, time and methods of seeding, harvesting and preserving.

FARM MANAGEMENT
The place of livestock in the farm organization. The best combination of enterprises. The organization and management of a livestock farm.

DAIRY CATTLE JUDGING AND SELECTION
Breed characteristics and score card requirements for the five major breeds of dairy cattle. Practice judging.

ARTIFICIAL BREEDING
Theory and practice of Artificial Insemination, with emphasis on methods used where work is done by the herdsman in a private herd.
CROP PRODUCTION
SHORT COURSE
Conducted by
Department of Agronomy
Faculty Adviser, R. L. LOVVORN

The Crop Production Short Course offers an opportunity for additional study of the factors which affect crop yields and soil fertility. So much new information has been obtained on these subjects recently that each farmer must continually keep informed on the subjects of fertilization, new varieties, cultivation practices and soil conservation if he is to produce field crops in the most economical and profitable manner.

Students registering for this course will study proven practices in crop production and the latest information available concerning the various crops. They will also become acquainted with the reasons back of all recommendations made in the programs for increased crop yields. GOOD CROP YIELDS ARE NOT JUST LUCK. They are obtained by the person who knows the needs of each individual crop and is willing to supply these needs.

Course of Study

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours Per Week</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Lecture</td>
</tr>
<tr>
<td>Tobacco Production* (or Elective)</td>
<td>3</td>
</tr>
<tr>
<td>Cotton Production* (or Elective)</td>
<td>2</td>
</tr>
<tr>
<td>Corn &amp; Small Grain Production</td>
<td>4</td>
</tr>
<tr>
<td>Pasture &amp; Forage Crops</td>
<td>3</td>
</tr>
<tr>
<td>Special Problems</td>
<td>1</td>
</tr>
<tr>
<td>Soil Management</td>
<td>5</td>
</tr>
<tr>
<td>Farm Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

* Elective for persons not growing this crop.

Description of Subjects

SOIL MANAGEMENT
The production, properties, and uses of fertilizer materials and mixed fertilizers; practical soil management for North Carolina soils and cropping systems; soil conservation.

CORN AND SMALL GRAIN
The importance of corn and small grain for food and feed and their place in our cropping system. Special emphasis will be placed upon production practices.
PASTURE AND FORAGE CROPS
Types of pasture crops, pasture mixtures, methods of establishing and maintaining. Hay crops, time and methods of seeding, harvesting and preserving.

TOBACCO PRODUCTION
Plant bed management, cropping systems, mineral nutrition and soil requirements, transplanting, field care of the crop, harvesting, fundamental problems of curing, elements of quality in tobacco, and factors influencing them, grading of tobacco, aging, manufacturing and consumption.

FARM MANAGEMENT
Principles of farm organization and management, factors affecting profits in farming. Developing practical farm plans and farm work programs.

COTTON
Fertilization and cultural practices. Characteristics of certain varieties. Insect control.

SPECIAL PROBLEMS
Seed Improvement—Problems encountered and methods used in the production and distribution of High Quality Seeds of adapted varieties and hybrids. The advantages of producing or using certified planting seeds.

Soybeans and Peanuts—Liming, fertilization and cultural practices. Characteristics and adaptations of certain varieties.

Soil Testing—Soil testing as an aid in determining the lime and fertilizer needs for the soils and crops of North Carolina.

In addition to the above three subjects, class periods will be devoted to other crops and subjects of general interest.
STATE COLLEGE RECORD

BEEF CATTLE PRODUCTION
SHORT COURSE

Conducted by
Department of Animal Industry
Animal Husbandry Section
Faculty Adviser, LEMUEL GOODE

The increased interest in beef cattle has created a demand among producers for intensive training on the practical handling of beef cattle on the farm. This short course, designed to fill this need, will be valuable to persons already established in beef cattle production as well as to anyone planning to add beef cattle to his livestock program.

Course of Study

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lecture</th>
<th>Hours Per Week</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Problems of Beef Production</td>
<td>2</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>Beef Cattle Management</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>(Breeding Herd)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fattening &amp; Marketing Cattle</td>
<td>2</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>Beef Cattle Nutrition</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Farm Management</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Pasture &amp; Forage Crops</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective Subjects**</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>**TOTAL</td>
<td>20</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Swine Production*</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

* Elective for Beef and Crop course.
** Tobacco or Swine Production, Small Grain.

Description of Subjects

BREEDING HERD MANAGEMENT

Phases and areas of beef production, starting of beef cattle enterprise, selecting breeding stock, buildings and equipment, breeding beef cattle, winter and summer management of the breeding herd, weaning, dehorning and castrating calves. Students will spend two afternoons per week at the Animal Husbandry farm. A three-day tour of leading beef cattle farms in the Coastal Plains and Piedmont sections of the State will be made during the third week of the course.
FATTENING AND MARKETING BEEF CATTLE
The importance of age, sex and grade in feeder cattle, selecting feeder cattle, feeds for fattening cattle, feed lot practices, methods of marketing and cattle markets.

BEEF CATTLE NUTRITION
The importance of protein, minerals, carbohydrates and vitamins in the ration, nutritive requirements and how to supply them.

GENERAL PROBLEMS IN BEEF PRODUCTION
Baby beef production, financial aspect of beef production, fitting for show and sale, diseases and parasites affecting beef cattle.

PASTURE AND FORAGE CROPS
Types of pasture crops, pasture mixtures, methods of establishing and maintaining. Hay crops, time and methods of seeding, harvesting and preserving.

FARM MANAGEMENT
Principles of farm organization and management, the place of livestock in the farm organization, the organization and management of a beef cattle farm.

SWINE PRODUCTION
Basic requirements for the pork production enterprise, systems of breeding; characteristics of the breeds; Selection of breeding animals; housing requirements; care and management of breeding animals; practical aspects of swine feeding; swine sanitation and market trends. The afternoon sessions will be devoted to various phases of pork production at the Animal Husbandry Farm.
SCHOOLS, CONFERENCES AND OTHER SHORT COURSES

The following Schools, Conferences and Short Courses offered by the School of Agriculture will be announced in special bulletins. For additional information on any of these courses, write to: Division of College Extension, N. C. State College, Box 5125, Raleigh, N. C.

Animal Nutrition Conference
Aerial Photo Interpretation Training Course for Foresters
Commercial Flower Growers' School
Cotton Classing Short Course
Creamery Fieldmen's School
Dry Kiln Operators Short Course
Farm Managers Short Course
Frozen Food Locker Short Course
Hardwood Lumber Grading Short Course
Herd Testers Short Course (D.H.I.A.)
Ice Cream Making Conference
Ice Cream Making Short Course
Insecticide & Fungicide School
Market Milk Conference
Market Milk Short Course
Nurserymen's School
Seedmen's School
Softwood Lumber Grading Short Course
State Garden Schools
Techniques of Artificial Breeding Short Course
APPLICATION

Please enroll me for the Four Weeks Short Course in

(  ) Dairy Production
(  ) Crop Production
(  ) Beef Cattle Production

beginning January 2, 1950

Name ..............................................................

Street or R.F.D. .............................................. Age .................

Town ................................................ County .................

EDUCATION (grade, high or college year completed) ..........

(  ) Enclosed you will find a check for $20.00 to cover tuition fees.

(  ) I will pay tuition fees at the time of registration.

I (will) (will not) take this course under the provision of the G. I. Bill.

I (do) (do not) desire a dormitory room.

Mail this application to:

Eugene Starnes
Division of College Extension
Box 5125
Raleigh, N. C.
I. What part of the N. C. corn crop was planted to hybrid corn in 1949?
   (Ans. 32%)

II. How does corn rank in North Carolina in respect to farm value with other crops?
    (Ans. 2nd or 3rd depending on year)

III. What are single crosses?
    What are double crosses?
    (Ans. Cross of 2 inbred lines
      Cross of 4 inbred lines
      or cross of 2 single crosses)

IV. What is an inbred line of corn?
    (Ans. A strain which has been purified by successive generations of inbreeding.)
# CROP PRODUCTION SHORT COURSE

## Class Schedule: January 2 - 7

<table>
<thead>
<tr>
<th>Hour</th>
<th>Monday January 2</th>
<th>Tuesday January 3</th>
<th>Wednesday January 4</th>
<th>Thursday January 5</th>
<th>Friday January 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 - 9</td>
<td>Registration Polk Hall - 108</td>
<td>Tobacco Barracks 19 Mr. Hawks</td>
<td>Weed Control Barracks 19 Dr. Shaw</td>
<td>Cotton Barracks 19 Mr. Welch</td>
<td>Cotton Barracks 19 Mr. Welch</td>
</tr>
<tr>
<td>9 - 10</td>
<td>Opening Exercises Polk Hall - 110</td>
<td>Soils Barracks 19 Dr. Woltz</td>
<td>Soils Barracks 19 Dr. Woltz</td>
<td>Soils Barracks 19 Dr. Woltz</td>
<td>Soils Barracks 19 Dr. Woltz</td>
</tr>
<tr>
<td>10 - 11</td>
<td>Farm Management Barracks 19 Mr. Pierce</td>
<td>Corn Barracks 19 Dr. Harvey</td>
<td>Farm Management Barracks 19 Mr. Pierce</td>
<td>Corn Barracks 19 Dr. Harvey</td>
<td>Farm Management Barracks 19 Mr. Pierce</td>
</tr>
<tr>
<td>11 - 12</td>
<td>Pastures and Forage Crops Barracks 19 Mr. Chamblee</td>
<td>Small Grains Barracks 19 Mr. Rankin</td>
<td>Pastures and Forage Crops Barracks 19 Mr. Chamblee</td>
<td>Small Grains Barracks 19 Mr. Rankin</td>
<td>Pastures and Forage Crops Barracks 19 Mr. Chamblee</td>
</tr>
<tr>
<td>1 - 2</td>
<td>Tobacco Barracks 20-D Mr. Hawks</td>
<td>Tobacco Barracks 20-D Mr. Hawks</td>
<td>Pastures (1-3) Barracks 20-D Dr. Chamblee</td>
<td>Pastures (1-3) Barracks 20-D Dr. Chamblee</td>
<td></td>
</tr>
<tr>
<td>2 - 5</td>
<td>Tobacco Laboratory Barracks 20-D Mr. Hawks</td>
<td>Corn Laboratory Barracks 20-D Dr. Harvey</td>
<td>Soils Laboratory Barracks 20-D Mr. Pierce</td>
<td>Farm Management Laboratory Barracks 20-D Mr. Holler</td>
<td>Cotton (3-5) Barracks 20-D Mr. Holler</td>
</tr>
</tbody>
</table>