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UNIVERSITY OF KENTUCKY

COLLEGE OF AGRICULTURE

Extension Division

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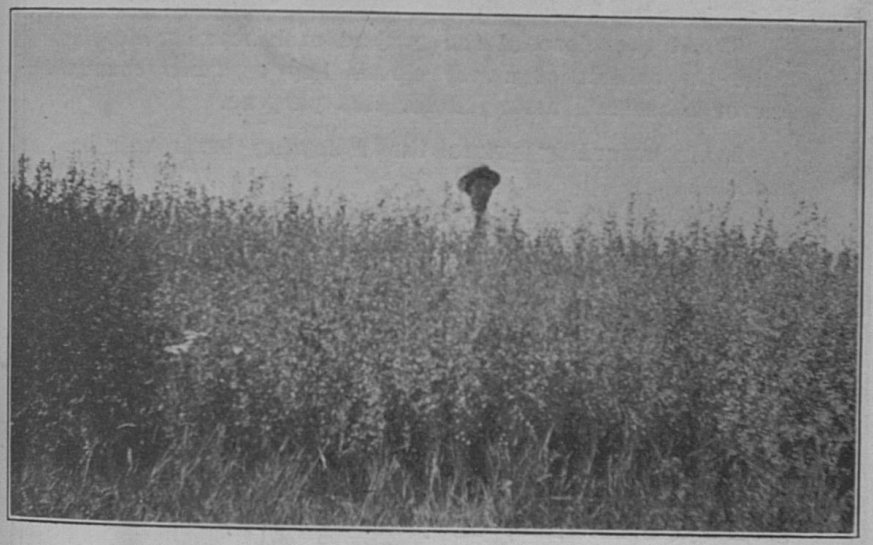
CIRCULAR NO. 87.

Sweet Clover Project
Junior Agricultural Clubs



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REQUIREMENTS

1. Boys and girls from 10 to 18 years of age may undertake this project.

2. Enrollment should take place during the first part of the year, not later than April 1st.

3. Club members must attend the meetings of their respective clubs.

4. They must study the lessons on "Sweet Clover" given in this circular.

5. Each member must grow 1 acre of sweet clover, following the advice of his county agent.

6. Each member must keep a record in a book, which the county agent will supply, of all work done on the project, showing expenses, receipts and profit.

7. Each member should receive the profit from his project.

8. At the close of the project each member should make an exhibit of sweet clover hay at some county fair or other fair arranged for this purpose.

9. In awarding prizes the following basis will be used:

Greatest yield of hay	30 points
Greatest profit	30 points
Best exhibit	20 points
Best record book and story of the project	20 points

10. The prices for man labor, horse labor, etc., found in the record book, must be used in estimating profit.

11. Two disinterested persons must measure the ground and determine the yield.

ENROLLMENT.

Each member must sign an enrollment card and return it to the county agent or State club leader. The consent of the parent or guardian must be secured before this is done.

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The objects of the sweet clover project are (1) to encourage the growing of this valuable legume in Kentucky; (2) to teach the best methods of culture and handling, and (3) to increase the interest of farm boys and girls in farm life. Boys and girls who strive faithfully to apply the information given in this circular in growing an acre of sweet clover will not only have learned much about the possibilities of this crop but will have gained the satisfaction which comes from an earnest effort to do well whatever is undertaken.

SWEET CLOVER.

Sweet clover is very much like alfalfa in many respects, but it will grow on many soils where alfalfa fails. It grows better than alfalfa on very poor or wet soils if plenty of lime is present. This crop has been grown with wonderful success in Kentucky and elsewhere.

Sweet clover is a valuable crop to use for improving worn soils. It is a nitrogen gatherer and when plowed under it builds up the supply of nitrogen and organic matter. It is especially valuable in reclaiming washed lands because it grows rapidly and soon forms a network of roots which helps to keep the soil from being washed away. The long roots grow deeply into the subsoil and make it looser. Because of all these things sweet clover is an excellent crop for Kentucky and the sweet clover project is highly recommended for club work.

Two important varieties are the white and the yellow. White sweet clover makes a larger growth than the yellow and

is better for improving the soil. Some claim that yellow sweet clover is better for hay because it has finer stems, but the white variety will make good hay if sown thickly and cut just before it blooms. Animals not accustomed to sweet clover hay or pasture may refuse to eat it for a time but cattle, sheep and hogs will soon learn to like it.

The sweet clover plant lives two years. It may be pastured or clipped the first year, but the mower should be set to cut as high as possible when clipping because the new shoots come from the uncut portion of the stem, not from the crown of the root, as is the case with alfalfa, so that close clipping may destroy the plants. For the same reason sweet clover should not be pastured too closely.

If a seed crop is wanted, pasture the sweet clover until June, then allow it to produce seed.

Sweet clover is not a pest as some suppose. It can be destroyed by cutting when in full bloom.

SOIL REQUIREMENTS.

Sweet clover does not require as rich a soil as that for alfalfa. In fact it will grow on very poor soil provided lime is present. It does well on poorly drained soils. Club members are advised to use corn stubble land for the sweet clover project or land that need not be plowed in order to make a seed bed. If lime is not already present in the soil of the acre it should be added in the form of finely ground limestone or burnt lime. Practically all parts of the State except parts of the Bluegrass region need lime for raising sweet clover. The need for lime in a soil can be determined by the following test which can be made by club members themselves or by the county agent or club leader: In a ball of wet earth make a shallow depression and pour into it strong hydrochloric (muriatic) acid. If lime is present tiny bubbles of gas will be given off. If much lime is present the bubbling will be very vigorous, but when only a small amount is present it will be so slight as to be seen with difficulty. If no bubbles appear lime is needed. If the soil

needs lime apply ground limestone at the rate of two tons per acre and disk it into the soil as soon as the ground can be worked in the spring.

SEEDING.

Disking the limestone into the soil will give the necessary preparation of the soil for seeding. The seed should be sown broadcast at the rate of about 15 pounds of hulled seed per acre or 20 pounds of unhulled seed. Cover by harrowing lightly with a spike-tooth harrow. If a clover-seed drill is available it should be used in sowing the seed instead of the broadcast method. The same quantity of seed should be used in drilling.

Inoculation is very important and should not be neglected. If possible get inoculated soil from an alfalfa or sweet clover field. In many places small patches of sweet clover may be found along roadsides or railroads from which a few hundred pounds of soil may be obtained. Use about 400 pounds per acre and sow just ahead of the disk or harrow when the land is being prepared or the seed covered. This precaution is necessary because if the inoculated soil lies on the surface, exposed to bright sunshine for even a short time, the bacteria may be killed. If inoculated soil cannot be obtained the seed should be treated with one of the various laboratory cultures now on the market. The directions for the use of these cultures as given on the package should be faithfully followed.

THE SEED.

When seed is bought to start the project one should be sure that it is good. Sometimes seed is found on the market that has a germination of only 25 or 30%. Test the seed. Place 200 seeds between two moist blotters and keep the blotters between two plates in a warm place. Watch closely when sprouting begins. Remove the sprouted seeds every day or two and keep a record of the number that sprout.

HARVESTING SWEET CLOVER HAY.

Sweet clover, when cut at the proper time and carefully cured, makes hay that compares favorably in feeding value with alfalfa hay. Sweet clover should be cut before the plants

bloom. Do not postpone cutting or the stalks will become hard and woody. A long stubble should be left or one may fail to get a second crop. In order to make good hay, sweet clover should be left in the swath only long enuf to wilt thoroly and then should be raked into wind-rows or shocked. This will prevent burning and the consequent loss of leaves. The length of time for curing in the windrow or shock will vary with the weather, but sweet clover requires longer to cure than alfalfa, because the stems are larger.

COMPLETING THE PROJECT.

If the sweet clover has been sown in February or March, the project will come to a close about October 1st of the next year, twenty months after the seed was sown. Projects started later in the year will come to a close at the same time.

RECORDS.

It is easy to keep records if one is careful to write down all the items each day. Calculate the expense of each operation as soon as the work is done and write it in the record book. Keep up the record and when the project is completed there will be no doubt concerning its correctness. It will give you an interesting, true story about the cost of growing an acre of sweet clover and the profit on the undertaking.

SELECTING THE EXHIBIT.

Select a small sheaf, about 2 inches in diameter, and tie it securely with a strong cord. In making the selection, observe the following points:

Color. Be sure that the sample is clean and bright in appearance. This shows that the hay has been properly cured.

Stems. The stems of the hay should be as fine as possible. Coarse stems show poor quality.

Leaves. The sample should carry all the leaves as nearly as possible. The leaves are rich in protein, hence the importance of curing the hay without losing them.

Condition. Do not select any that shows yellow leaves, or any sign of disease, decay, mold or poor color. The sample should not be dusty.

Purity. Remove all sticks, weeds, grass, or traces of other hay, such as red clover or timothy.

CLUB SCORE CARD—SWEET CLOVER HAY.

Points	Perfect Score	Judge's Score
Color	20	
Stems	20	
Leaves	20	
Condition	20	
Purity	20	
Total	100	

Remarks:

STORY OF THE PROJECT.

Subject. "How I Grew My Sweet Clover."

Instructions. The story must be the work of the club member. Pen and ink should be used; everything of interest connected with the project should be told. If the story is interesting it may be sent to some farm journal for publication.

Suggested Outline for the Story.

1. How I became a club member.
2. Object of the sweet clover project.
3. Why I chose the sweet clover project.
4. Preparation of the soil.
5. Seeding.
6. Cutting and curing.
7. Marketing.
8. Exhibits, prizes won, etc.
9. Give an account of your yield, cost of production and profit.
10. What has club work done for you?
11. What are your ambitions as a club member for next year?
12. Give anything else of interest. A picture of the crop may be interesting. Send it with the record book.

Reference:

Kentucky Bulletin 178, Agricultural Experiment Station, Lexington, Kentucky.

Extension Circular 60, College of Agriculture, Lexington, Kentucky.

Farmers' Bulletins 797, 820 and 836, U. S. Dept. Agriculture, Washington, D. C.