

SWEET CLOVER BUILDS UP SOIL

**MAKES FINE PASTURE ON
RAW LOGGED OFF LAND
AND DRY HILLSIDES**

**State College Expert Declares
This Legume Will Build Up
Soil Where Other Crops Fail**

By Leonard Hegnauer.

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Sweet clover has proved its many excellent and desirable qualities and shown its wonderful possibilities. Chemical analysis shows that it is rich in protein, which makes it a valuable adjunct in any ordinary ration. It also has the ability to make its way under adverse conditions and leave the soil better for having grown there. On certain soil types and under certain conditions it is the only plant that can be relied upon to help the soil both physically and chemically. It is along these lines where its great strength lies; to it has been shown over and over again that it can be used both as hay and pasture to good advantage. It has then possibilities for further development and its spread of influence should be greatly widened.

Fills Important Place

It must be understood that it is not the intention of this article to attempt to show that sweet clover is to take the place of other legumes; but rather to show that it can take a place which no other legume can successfully fill. The legumes (such as the clovers, alfalfa, vetch, peas, etc.) are absolutely for soil improvement and soil building purposes. Without the aid of the legumes crops the maintenance of soil fertility would in the main be a hopeless task. It is therefore no mean place which this plant attempts to fill.

Good For Dry Hills

In Western Washington, there are countless acres of more or less partially cleared hill lands that are now growing up to weeds and shrubs which might as well be seeded to sweet clover and thus return some revenue as pasture. These lands are of a clay type—more or less devoid of humus—and therefore not in good physical condition. Even if the land were cleared, the returns from ordinary crops would be small until such time as more humus forming materials could be added. It is on these hill-sides and slopes, where the soil becomes hard and where there is much drying out in the summer months, that sweet clover would be of material benefit in reclaiming land.

Some of these places should doubtless remain in sweet clover permanently, as they are unsuited to the ordinary cultivated crops. Other portions could be thoroughly cleared later, and the growing of sweet clover on them during these earlier years would be of immense value to the soil, and would bring larger returns when put under cultivation. The value to the soil would be twofold:

First, there would be an accumulation of organic matter from the roots and tops of these plants which when worked thoroughly into the soil, would make it much more friable and porous and would thus help, thru processes of decay, to liberate more of the mineral plant food. Second, there would be an addition of nitrogen, due to the work of the nitrifying bacteria which inhabit the sweet clover roots, which would add greatly to the fertility of these lands. These soils usually are very weak in humus and nitrogen, and an addition of the residues from sweet clover would put them into a much better balanced plant food conditions.

Sow Early

In the matter of the preparation of a seed bed, sweet clover is an exception to the rule. Most crops, to be at their best, must have a mellow, well-prepared seed bed. Sweet clover on the contrary requires a firm seed bed—practically without preparation. A deep, well pulverized seed bed would not give the best results with sweet clover. The seed should be sown in winter or early spring—preferably when the frost is going out and the ground is honey-combed by the action of the elements. If sown then, sufficient covering will be provided to insure germination. If seed is sown later, when the ground is in fit condition, harrowing would be advisable, provided the ground permits of harrowing. In no case is it necessary or advisable to plow the ground and prepare it as in the case of other crops. A firm seed bed is what the plant most desires.

PIONEERS OF WASHINGTON HORTICULTURE Early Orchards Still Persist In Many Places FIRST FRUIT AT HUDSON'S BAY POSTS

By J. L. STARK, Horticulturist, Western Washington Experiment Station.



In almost every locality of Western Washington can be found the moss-covered fruit trees of the past generation which still stand as landmarks of an earlier horticulture. Too often we criticize or at least make light of the efforts of the men who planted these trees and those to whom we owe our present knowledge of fruit growing in our particular locality. It is of those men and their work that this paper is written—to the pioneers of Western Washington horticulture.

We have very little authentic information on the earliest orchard plantings of Western Washington. Trees along the Columbia river are reported to be 80 years or more of age. One of these, an old apple, is at Vancouver, Washington. The gavel used by the president of our association was made from this tree and presented by Mr. A. A. Quarnberg, Vancouver. A few trees of great age are still standing near Friday Harbor at the old site of the Hudson Bay Trading Post.

During the years 1848 to 1850 some grafts and trees were packed from Oregon at great expense. Soon after trees and fruit were brought by vessels, seeds secured and planted. In 1853, some of the writings of earlier settlers speak of farms and orchards in the locality now known as Grand Mound. Small nurseries were soon started and orchards planted near Olympia, Steilacoom, the Puyallup and White river valleys, and in Whatcom, Mason and Clarke counties. Prune orchards were started about 1876 near Vancouver.

One of the earliest nurseries in the

Northwest was the Lewelling Nursery Co., south of Vancouver. The stock was brought across the plains and kept moist by soaking with water when possible to secure it. Many of the early orchards came from that nursery. Seth Lewelling, Milwaukee, Oregon, originated the Bing cherry.

It is quite likely that these early nurseries also grew and distributed berry plants. Mr. Charles H. Ross, Puyallup, states that his father, D. M. Ross, brought fruit trees and berry plants from Oregon when he settled in the Puyallup valley in 1865.

The early berry growers had small plantations in the home garden and sometimes sold or more often gave away their surplus fruit. Among the early growers commercially in the Puyallup Valley were Col. J. Hinson, A. R. Keith, E. S. Ridge and J. B. Rawley. The berries were grown both on hill and valley soils.



In 1888-1889 berries were being shipped by these growers and others chiefly to Tacoma and Seattle. They were sold fresh, dried, and canned in glass jars. About 1889 Mr. Rawley of Puyallup is reported to have received one thousand dollars from berries and poultry on one acre of land. While the berry business was in its infancy seed was being sown for another important industry—that of the grape. Mr. Adam Eckart is the pioneer experimenter and commercial grower of grapes on Puget Sound.

In North Bay on Stretch Island he met Lambert B. Evans who had about a dozen vines of Isabella and Concord grapes about 15 years of age. Mr. Eckart bought forty acres of wild land, cleared and planted ten acres to

grapes. Only he and his family can tell of the difficulties and hardships during the early experience with grape growing on that little island.

Another early grown horticultural crop in Western Washington particularly the southern part, is the English walnut. Mr. A. A. Quarnberg, Vancouver, Washington, one of the pioneers with this crop, gives the following information: "In Clarke county about 65 years ago was planted the first English walnut tree in the Northwest. The first French walnut trees were planted in 1888 by William Smiley in Fruit Valley. Among these were two grafted trees, one Mayette and one Franquette. In 1893-1894 Mr. Quarnberg planted several trees of French walnut as did also August High and Henry J. Biddle. As far as known the first experimental filbert trees were planted in 1894 by Nat M. Novellus, Henry J. Biddle and A. A. Quarnberg, all in Clarke county."

Prunes early became a paying crop in Clarke county and in 1890 four hundred thousand pounds were dried. In 1886, A. W. Hidden, Vancouver, reported \$1800 from five hundred trees ten years old after deducting expenses, freight and commission. J. H. Fletcher, Vancouver, reported \$2000 from one hundred trees for four years, an average of \$5 per tree.

The members of the first board of horticulture were: Henry Bucey, Tacoma, president; H. H. Spaulding, Almoda; D. M. Jesse, Walla Walla; J. T. Blackburn, Vashon; Chaffetz Knight, Vancouver; E. L. Von Gohren, East Sound; S. W. Maxey, Ellensburg; and C. A. Tonneson, Seattle.



Northwest News

SPOKANE: To avoid a collision with a buggy carrying a man, woman and child near here, G. Anderson drove his truck and trailer loaded with 12,000 feet of logs over a 100-foot bank into the Little Spokane River. A wrecking crew with a derrick fished the truck, trailer and logs from the water. Anderson escaped injury by jumping before his truck went over.

SALEM, Ore.: Under a bill finally passed by the state legislature and in the hands of the governor, purse seine fishermen will be put out of business in one year and trawlers in two years. A spirited fight has been waged over the fishing measure aimed at trolling and purse seining in deep water off the mouth of the Columbia River. The measure is designed to protect the gill net and seine fishermen of the Columbia River.

ABERDEEN: Dredging at Cow Point is expected to start within the next two or three weeks. Fort Commission engineers said. The work was scheduled to be under way at this time, but the accident at the Anderson-Middleton mill made it impossible to supply the power. A power line from the Grays Harbor Lumber & Shingle Company plant out into the channel is rapidly nearing completion, and the work on the bulkhead is progressing favorably. It is planned to start one shift dredging as soon as the power line is established, transformers arrive and sufficient power can be obtained.

Shipments of apples in refrigeration from Puget Sound to England arrived in due condition in the British Isles and found immediate demand, according to word received by Seattle shipping men. H. M. Volk of the Holland-America Line in a report received by Puget Sound shipping men says a shipment of 20,000 boxes of Northwest apples which his line carried to London in refrigeration last fall arrived in fine condition. He was informed that only 182 boxes needed coverage and that the entire shipment was immediately distributed to the retail trade.

Ten to twelve pounds of good seed per acre should be sufficient to make a good stand. In cases where land is not yet cleared, some of this may be saved by simply seeding the open spaces and not wasting seed on ground which is unsuited.

Two Varieties

There are two common varieties of sweet clover—one with a white blossom and the other with a yellow. They are much alike, and both biennial in their habits. In two years the plants would disappear from the one seeding were it not for the fact that natural seedling takes place. In this way a stand once established may be maintained indefinitely.

There is perhaps but little difference in the desirability for the two varieties. The white one naturally grows a trifle more vigorously and seed of that variety is generally more readily obtained. The plants usually start seed. During the blossoming season, (which is a long one) the plant furnishes splendid pasture for bees; and a crop of sweet clover should make profitable returns in the way of honey.

YAKIMA: According to a dispatch from Prosser, the Pacific Power & Light Company has served notice on the City Council of Prosser, Benton County, of intention to abandon its water franchise in that city, announcing that it will give the city sufficient time to protect itself.

PORTLAND, Ore.: R. P. Butchart, president of the Oregon Portland Cement Company, was fined \$5,000 by Federal Judge H. S. Bean, following conviction of violation of the Sherman anti-trust law. Clark Moore, manager, was fined \$2,000. The government alleged conspiracy to divide Western territory with a view to restraint of trade.

PORTLAND, Ore.: E. W. Ellis, former manager of the Hazelwood Company of Portland, a dairy products concern, pleaded guilty yesterday in court to a day of selling butter made from rancid fats without proper labeling. He was fined \$1,000.

World Items

LONDON: The question of the plebiscite in Upper Silesia, to determine whether the district shall go to Poland or Germany was taken up at yesterday's allied conference here. The official communiqué says an agreement was reached that the plebiscite should be held the same day for both residents of the district and qualified voters from outside it.

BERLIN: The German government will include in the budget an appropriation of 50,000,000 marks for feeding undisciplined children.

TOKYO: At the annual meeting of the International Press Association the president, M. Zumoto, urged the press of Japan, America and England, "the three countries controlling the destiny of the world," to devote their energies to peace.

OMAHA, Neb.: Trial night flights in the transcontinental air mail services between New York and San Francisco are to be started next Tuesday morning, air mail officers announced.

LONDON: A wireless message from Berlin says that according to Swiss reports the Montenegrins have declared a holy war against the Serbians. The Serbian regiments have occupied Cetina.

NEW WESTMINSTER, B. C.: All schools reopened here this morning, the school teachers' strike, which lasted just one week, having been called off. All teachers were reinstated by the school board and the teachers' association has been formally recognized as representing the teachers. Salaries will be adjusted by a joint committee. Failing agreement, arbitration will be resorted to.

MOVIES

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BARTLETT PEARS GROW WELL HERE

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BY CANNERIES**

**Farmers Should Set Out Bartletts.
Must Be Sprayed and Taken
Care of to Produce**

More than a thousand tons of Bartlett pears were shipped from eastern Washington to the co-operative cannery at Puyallup last season. The money for these pears should all have been spent on this side of the mountains.

It takes four years for pear trees to come into bearing and that is the one fact that has stood in the way of greater pear acreage in this district. Pears grow better here and are a more normal crop than they are in the eastern part of the state, but the Puget Sound farmer has had to get returns on his logged off land faster than the pear business permitted.

The time has come when Puget Sound farmers should begin raising pears, at least on a small scale and increasing the number of trees from year to year. An acre of bearing pear trees is an anchor to the windward in a poor berry year, or a poor potato year, or some other crop.

Like every other crop pears require care. They should have a least three sprayings every spring for scab and moths. Dilute lime sulphur should be applied just as the buds are turning pink and before they open, again after the petals fall and a third about three weeks later.

Don't plant pears with your berries, except perhaps strawberries. The ground will not furnish material to properly feed both. Cultivate them carefully during the growing season. Prune them to grow a low stately tree, high headed trees are weak and more costly to care for than low ones. Pruning is best done late in the winter or early in the spring to insure quick healing of the wounds.

An acre of Bartletts ten years old should produce from eight to ten tons of pears. There are crops that cannot be grown on this side of the mountains and must be shipped in from the irrigation section, but pears is not one of them. Put in a few trees and help declare your independence of the specialized fruit grower east of the mountains.

2585 SOURCES OF GRIEF

WASHINGTON: Examinations for the appointment of 2585 second lieutenants to the Army will be held beginning April 25. The War Department has announced. The commissions will be distributed among various branches, the majority being in the infantry and field artillery.

TREES AND SHRUBS

Fruit trees budded from bearing orchards. Apple, Pear, Cherry, Peach, Plum, Prune, Apricot, Quince, Grape Vines, Strawberry, Flax, Raspberries, Blackberries, Logan, Dewberries, Asparagus, Rhubarb, Flowering Shrubs, Roses, Vines, Hedge, Nut and Shade Trees. Carriage paid. Satisfaction guaranteed. Salesmen everywhere. More wanted.

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Eggs—Puget Sound select ranch, 30c per doz; mixed colors, 28c per doz; pullets, 25c per doz; Eastern Washington, Oregon and Idaho, nominal.

Butter fat—F. o. b. stations, 56c per lb; raw milk, \$2.25 per cwt.

Poultry—Broilers, 2 lbs and under, 30c per lb; springs, over 2 lbs, 30c per lb; hens, 3@3 1/4 lbs, 22c per lb; 4 lbs and up, 27c per lb; 1d roosters, 18c per lb; geese, live, fat, 26@28c per lb; ducks, live, fat, 35c per lb; Belgian hares, 3 1/2 lbs and up, 17c per lb; guinea, \$9 per doz; squabs, \$4 per doz; pigeons, \$2 per doz; turkeys, fat, 8 to 20 lbs, 45@50c per lb.

Hogs—Choice block, 50 to 150 lbs, 13@15c per lb; do heavy, 11@14c per lb.

Beef—Steers, fat, 8@10c per lb; rough, 4@5c per lb.

Veal—Fancy light, 16@18c per lb; do medium, 9@15c per lb.

Mutton—Fat, 8@9c per lb; spring lambs, fat, dressed, 15@16c per lb.

WEEKLY BANK CLEARINGS

NEW YORK, Feb. 25: The bank clearings of the principal cities of the United States and Canada for the week ending today, as compared with the corresponding week of 1920, as reported by Bradstreet's, are as follows:

City	1921	1920
New York	\$3,004,894,000	22
Chicago	440,945,000	20
Philadelphia	335,557,000	16
Boston	211,454,000	27
Kansas City	133,690,000	31
St. Louis	103,354,000	30
San Francisco	101,700,000	28
Pittsburgh	148,008,000	5
Cleveland	133,551,000	24
Detroit	64,973,000	21
Atlanta	34,520,000	39
Richmond	4,074,000	27
Omaha	32,717,000	38
Los Angeles	67,670,000	6
Minneapolis	17,233,000	30
Seattle	22,223,000	40
Portland, Ore.	23,477,000	18
Denver	7,489,000	41
Milwaukee	22,676,000	16
St. Paul	13,085,000	11
Louisville	21,641,000	48
Spokane	7,489,000	29
Montreal	105,488,000	19
Toronto	102,891,000	8
Winnipeg	17,323,000	1

—Post-Intelligencer.