

ly employed in the Eastern States—is one that has many valuable features to commend it. The usual application is about 300 lbs. per acre, though for "intensive" work 500 to 600 lbs. per acre are frequently employed.

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In Praise of Sweet Clover.

Editor "The Farmer's Advocate":

I notice in your issue of the 14th, ulto., you give an account of what some of the state colleges have to say about sweet clover. Would it not now be in order for some of our colleges to tell the farmer what great benefits can be derived from growing it in Canada, and not leave it for the general farmer to find out on his own notion? It is a fallacy to suppose that the science of farming, as our friend says, must remain forever in the rut of the easy going Hodge Podge. Agriculture to-day calls for active brains, and good practical as well as scientific knowledge, strong hands and a strong determination. In the beginning the Lord placed an abundant deposit in the soil to the credit of the husbandman, but spendthrift that he is, he has well nigh exhausted deposit and credit, fortunately for the community he cannot run away with the bank.

By growing sweet clover the farmer is always depositing to his credit, for no matter how rich in fertilizer a soil may be, it cannot do its best unless filled with humus. When humus is added to the soil its texture is improved; this, the most costly plant food element, is greatly increased. Sweet clover is very thrifty and hardy, and able to grow on the poorest soil with very little preparation, it can also stand more drouth and also more moisture than any other clover. It never winter-kills. It lives but two years, its large fleshy roots and stalks when plowed under decay rapidly admitting the air deep into the sub-soil. If there is any leguminous crop equal to sweet clover for green manuring, pasture and hay combined, we should like to know it. We know that it is a darling thing to suggest to many farmers that sweet clover has an agricultural value. Even at this day many people deem it a nuisance simply because they see it growing where it is not wanted. In such places it is a weed. I was taught when a boy that a weed is a plant out of place; we all know that turnips are the worst weed that can grow amongst turnips.

ITS DISTRIBUTION AND HISTORY.

Although sweet clover is comparatively so new to us that very few people have thought of its value as a farm crop, a knowledge of its value is as old as history. Its native home is Western Asia (as its name "Bokhara clover" indicates), the same as that of the human race. Its use as a forage plant seems to have been common from the first. Homer notes it as growing on the plains of Greece and Asia Minor, and tells us that the steeds of the Greeks fed upon it during the siege of Troy. But the best record of this plant is preserved to us by Pliny in his Natural History. He refers to it several times, describes the plant, gives its distribution and uses, and tells more about it than most of our modern botanists. In his day it was held in high esteem, both for a honey plant and its medical uses. I have no seed for sale. WM. LINTON.

Farm Drainage—Cost and Advantages.

Thorough under drainage may cost from \$20 to \$40 per acre but it will pay for itself in from one to three years because:

- (1) Land is ready for seeding earlier in the spring.
- (2) The soil is warmer in the early spring. The seed, therefore, germinates more promptly and begins a healthy growth at once.
- (3) There is no drowning out of crops due to heavy and continued rains.
- (4) Fertilizers are not lost by surface washing.
- (5) More air circulates through drained than through undrained soils, and all crops require air for their best growth.
- (6) Roots of plants go deeper in drained than in undrained land. This not only gives them greater feeding range, but makes them more drought-resistant, because they are nearer the water line in dry seasons.
- (7) Frosts do less injury to crops. The drains make it possible to get better catches of grasses and clovers and minimize the losses from late spring and early fall frosts.
- (8) Drained land is more easily worked than undrained. The cost of man-power, horse-power and machinery is thus materially reduced.

—Central Experimental Farm Bulletin.

Forage and Ensilage Corn.

"In thirty years experience in farming in the Ottawa Valley," says J. H. Grisdale, Agriculturist, Central Experimental Farm, Ottawa, in a bulletin on "Corn for Forage or Ensilage," "the writer has seen all kinds of grain crops utter failures, he has seen hay so light as to not pay for the making, and roots and potatoes practically nil, but in all that time he has never seen a failure in the corn crop. There has always been a fairly profitable return from the fields in corn."

The above is the last of ten reasons for growing forage corn, which form a preface to the bulletin proper. The bulletin itself, No. 65, gives clearly and concisely a mass of information on corn culture, touching on preparation of soil, planting, cultivation, harvesting, ensiling, feeding, etc., and is quite profusely illustrated. Among the other reasons given why corn should be grown are, that it is the best crop for silage that can be produced in Canada, that it is without an equal for the large amount of valuable forage it will yield, that it is a cleaning crop, that it is a grass feeder, making good use of rough green manure and decaying vegetable matter, and that it permits the keeping of more cattle with the resultant benefits of increased revenue and augmented manure supply.

SOIL PREPARATION.

In the rotation, says Mr. Grisdale, corn should follow clover hay, pasture or meadow for best results. Barnyard manure is the best possible fertilizer. It should be applied at the rate of 12 to 15 tons of green manure per acre. Land may be plowed either spring or fall—though spring plowing is preferable for light land—and manure either turned under or applied on the surface and disked in.

The thorough preparation of the seed-bed by means of the disk, roller and smoothing harrow, before planting is begun is emphasized.

PLANTING.

From the middle to the end of May is the time when corn should be planted as a rule. If the land is weedy drill planting is advised, in order that cultivation may be given both ways. If sown in drills these should be, at least, 42 inches apart. It is better to sow rather thickly, and after corn is up to 6 or 8 inches high to thin out with a hand hoe to a distance of 8 inches apart in the row.

It is unnecessary to even summarize the directions given regarding cultivation, harvesting and feeding of the corn crop. While the bulletin is packed close with valuable information, yet, as might be expected, there is little in it that is really new. It aims rather to present in compact, convenient form, present day methods on which there is general agreement. As a book of reference it will be found very useful, and all interested are advised to apply for it to the Agricultural Department at Ottawa.

A ration recommended for a cow in milk may be quoted:

Corn silage	45 lbs.
Straw	6 lbs.
Clover hay	4 to 6 lbs.

Meal mixture: bran, oats, gluten or oil-cake; meal or cotton-seed meal, equal parts. One pound meal to three or four pounds milk per day. Rations for yearling heifers, dry cows, steers running over winter and fattening steers are also given.

A table showing cost of growing one acre corn and putting same in silo is as follows:

Ploughing	\$2 00
Disc harrowing, 1/2 day	1 25
Harrowing, 1/2 day	0 62 1/2
Seed, 20 lbs. at 2 cents per lb.	0 40
Planting one-tenth day with team	0 25
Harrowing and cultivating (10 times)	2 50
Hoeing, 1 1/2 days	2 25
Cutting, 1/2 day, with team	0 62 1/2
Hauling, one day, team	2 50
Men loading, unloading and ensiling, 3 days	4 50
Use of power for cutting, etc.	1 00
Use of machinery and twine	50
	\$18 40

To this might be added \$3 for rent and \$3 for part of manure used up. This would make a total cost of \$24.50. From an acre of corn worked as indicated, from 14 to 20 tons ensilage might be expected. Supposing an average crop, say 16 tons, then one ton corn in the silo, ready to feed, would have cost \$1.53.

The principal points made are given in short form in a summary at the close:

1. Corn will grow on any well drained and well manured soil.
2. Thorough soil preparation is absolutely necessary.
3. Corn should not be sown closer than 3 ft. apart in the hills, or if in rows, 3 1/2 ft. apart, 8 inches between plants in the rows.
4. Sow varieties suitable for district. Varieties that will mature fairly well are necessary.

5. Keep field well cultivated and free from weeds.
6. Cut in dough stage.
7. Preserve in silo if possible.
8. Mix chaff or cut straw with ensilage when feeding.

What Interests Essex Farmers.

If daily conversations are any criterion in determining the factors which are deemed essential to agriculturists in Essex, then one whose aural appendages are acute cannot long remain ignorant of the same. That subjects of an interesting and important nature are occupying the minds of farmers, can be ascertained by listening to discussions carried on by groups of men at auction sales, on street corners, or wherever the opportunity for so doing presents itself. Some of these subjects are by no means of recent introduction, but new light is being shed upon them continually, and the vaster possibilities for financial increases invests them with a brighter halo. Among many others, corn growing apparently holds the foremost position, for which two reasons can be assigned. First, the large area devoted to its production. Second, increased demand for its finished product, i.e., pork.

Few Eastern farmers have any clear conception of what enormous quantities are produced in this Western Peninsula, or the number of porkers fattened and shipped. While corn had considerable struggle to hold its way in the earlier part of the season, yet there has been an abundant harvest, with some phenomenal yields. Mr. Woodbudge, South Gosfield, heads the list, so far, with 190 bushels per acre. Mr. Riley, North Gosfield, reports 145, and Pearson Bros., Tilbury West, 690 bushels from 5 acres. The latter also harvested from 7 1/2 acres sugar beets 116 tons, for which they received \$4.90 per ton. Although there was a reported scarcity of hogs, nevertheless the buyers are shipping in considerable numbers. One firm, S. B. Green & Son, of Leamington, forwarded to Eastern points, on November 28th, 13 carloads of choice hogs, and in one week their local buyer, Mr. Bailey, shipped from Blytheswood (a station on Leamington branch of M.O.R.) 808 hogs at 8 cents per lb., paying out to farmers the sum of \$18,197.70. In connection with those branches of farming, comes the question of better drainage and shipping facilities. Another subject of vital interest to a lesser (but rapidly increasing) number of farmers is that of tomato growing. The suitability of soil and climate to the production of aforesaid article of food, together with increased demand for finished product, is causing farmers occupying lands in Southern Essex to seek the co-operation of Canning Co.'s in assisting them to place before the consumers larger quantities of canned goods. There are many points in this country where factories could be erected and profitably maintained, and none perhaps more favorably situated than the district surrounding the village of Blytheswood. During past tomato season, the farmers in that vicinity demonstrated what they could do by shipping 37 carloads of choice tomatoes to the factory at Tilbury, while thousands of bushels spoiled on the ground, owing to failure on part of the canning company to provide means for handling same. Not only is the section suited to tomato and sweet-corn growing, but it has what is lacking in many localities—good drainage and likewise soil, the fertility of which may be greatly increased by using as manure the offensive refuse which accumulates at every factory.

Scarcity of farm laborers is largely under discussion this autumn. There are many fields of corn still unhusked and hundreds of acres which might have been turned to good account as valuable fodder still uncut owing to the stringency of labor market. Farmers have been offering from \$2 to \$3.25 per day, or 5 cents per bushel, for huskers without success, while in many instances aged men, delicate women, and tender children were commandeered into service. Many farmers without families are being driven out of business owing to scarceness of farm help. The need of cheaper and better systems of transportation is also a vexing question. With all due respect to the members of government at Railway Commissions, the farmers are justified in asking what benefits are being received that will adequately remunerate for the enormous outlay of maintaining such commission. There is no county in Ontario that is more seriously handicapped than Essex, compelled, as we are, to place ourselves at the mercy of grasping express and freight companies. Despite the fact that fair promises have been made, and in some respects carried out, yet we discover the evil still unmitigated. The individual who may be able to ship or purchase in large quantities is given preference over the average retailer or consumer. The reason for high cost of living may be laid at the doors of railroad companies and large retail dealers in the necessities of life. As an illustration, we will give one item, viz., onions. Few dealers find it possible to utilize a carload of soil product, yet