judicious selection and admixture of seeds, top-dressings of suitable manures both natural and artificial, care in admitting stock only at proper times, timely alternation with other crops, and culture of grass for green manure—are points upon which a great deal of thought and attention may and ought to be expended by every intelligent and prosperous tiller of the soil. Drainage is one of the best antidotes against the evil effects of drought. A meadow or pasture that is closely swarded over will bear continuous dry weather far better than one in which the grass is bunched or tufted; while top-dressing acts both as a mulch and a fertilizer. While we cannot wholly prevent those fluctuations in the grass crops, which discourage many from going largely into them, it is possible much more nearly than is generally supposed, to equalize the yield from year to year.

Care in the selection of suitable and clean seed, of good quality, is also a very important matter. Our farmers are pretty well acquainted with the merits of timothy and clover; but there are other grasses valuable to mix with these, and well suited to the soil and climate of Canada, which are not much used in this country. To these and other matters connected with grass-growing, we shall have occasion to draw attention in future issues of the CANADA FARMER.

SHRINKAGE OF HAY.—The loss upon hay weighed July 20th, when cured enough to be put in the barn, and again February 20th, has been ascertained to be 27½ per cent. So that hay at $15 a ton in the field is equal to $20 and upward when weighed from the mow in winter.

GOOD WHEAT.—J. J. Mechi, of England, writes to the *Mark Lane Express* that he has threshed three fields of wheat: the first two yielded 58 bushels per acre, and the third field 52 bushels per acre. Part of it was red wheat, and part white wheat. The red wheat weighed 66 pounds, and the white wheat 64 pounds per bushel.

TOP-DRESSING MEADOWS.—A farmer in this neighbourhood says he top-dressed a three-acre meadow, a year ago last fall, by way of experiment. He allowed the cattle to remain on it till the 28th of May, when they were taken out; and in five weeks from that time he cut two tons of good hay per acre. He thinks there is no way of using manure more profitably than as a top-dressing for grass.—*Genesee Farmer.*

SORGHUM vs. WHEAT.—A writer in the *Wisconsin State Journal* tells of a Dane County farmer who kept an exact account of all his farming operations during the past year. He found his sorghum and wheat crops to compare as follows:—After paying labour, rent of ground, expenses of marketing, &c., his wheat crop paid $2.50 per acre net profit; sugar cane, $14.00; thus making the net profit of cane as compared with wheat in the ratio of five and three-fifths to one.

SORGHUM AT THE WESTERN STATES.—Owing to the great drouth of the past summer, and the early frost, the crop of sorghum at the West has turned out badly. Mr. Mason, of the Illinois Central Railroad, planted 250 acres, and obtained from it only 105 barrels of syrup and 400 barrels of vinegar. The cost of raising and manufacturing was $2,300. After deducting the market value of the vinegar, the cost of the syrup would be about 40 cents a gallon. In an ordinary season he would have had 1,000 barrels of molasses, instead of 105 barrels, and the cost per gallon would have been very trifling. Notwithstanding the unfavorable results of the past season, Mr. Mason has concluded to plant this year from 250 to 400 acres.—*Genesee Farmer.*

PREMIUM TURNIP CROPS.—The Hamilton and Wentworth Agricultural Society having offered prizes for the best four fields of turnips, of not less than two acres, the following award was made by the judges after due examination of the crops entered for competition:—The first prize was awarded to Thomas Stock, of East Flamboro', for a field of eight acres. The yield was twenty-five tons six cwt. and forty five lbs. per acre. The second prize was awarded to John Weir, of West Flamboro', also for a field of eight acres. The yield was twenty-five tons, no cwt. and eighty-five pounds. The third prize was awarded to W. A. Cooley, of Ancaster, for a field of five acres of Purple-top Swedes. Yield, twenty tons, eighteen hundred and ninety-five pounds per acre. The fourth prize was awarded to John Kelly, of Ancaster, for two acres of Skirving's and Laing's Swedes. Yield, twenty tons, fifteen cwt. and ten pounds per acre.

RAISING BEANS.—Beans can be raised where other crops fail. The white bean will cover your barren knolls, and benefit your pocket—and be not much trouble either. The worst is to dry them, to those who are not initiated in the mysteries; and these mysteries are simple—only to get your beans when ripe *above the ground, with a chance for the air to circulate readily.* This secures your bean. The usual way is, to drive a stake into the ground, and put your beans around it, raising the column as high as you like, and can do with safety from the wind. This is shelter, air and freedom from the ground. Uniformity of *size and ripening* should be aimed at in selecting seed. This uniformity will be seen in the crop if fairly cultivated. A uniformity of size gives a good appearance to the beans—so does equal ripening. In a word, every bean clear and hard—all alike—this is what is wanted. Select them accordingly.—*St. Louis Farmer.*

GREEN CORN AS MANURE.—The following mode of increasing the fertility of land might prove useful where it is difficult to get manure:—

A farmer in Bucks Co., Pa., a few years since, made some experiments going to show the value of growing corn for manurial purposes. On a field of forty-seven acres—part of a farm that had been rented for more than ten years, and had become as most rented farms do, very much impoverished—he sowed ten acres to corn in July, at the rate of two bushels per acre. It was left to grow until it was four feet high, and then ploughed under about ten inches deep. No manure was put on this part, but the remainder of the field was heavily manured, and the whole sown to wheat. The crop averaged 34 bushels per acre, that on the ten acres fully equal to that dressed with manure. We believe that lime was applied to the whole field before sowing on the grain—assisting, with the deeper ploughing, very materially in restoring the soil to a highly productive state

The Apiary.

"So work the honey-bees,
Creatures that by a rule in nature, teach,
The art of order to a peopled kingdom."

THUS wrote England's greatest poet respecting the insect, which is universally known through one of childhood's simple rhymes, as the "little busy bee." But without stopping to dwell on the lessons in prose or poetry which have been drawn from the ways of this wonderful insect, or the pleasure which may be derived from observing its habits, our present duty is simply to introduce it as one of the workers of the farm, and to speak of its management as a not unimportant branch of rural economy. Bee-keeping may be successfully practised in most, if not all parts of Canada, and made a source of considerable profit. Honey is an important article of commerce, in universal demand, and capable of being put to many useful purposes in every household. There is no other branch of industry which requires less outlay of capital, or brings a better return from the small amount of money and labor expended in its prosecution. The profits of bee-keeping are derived from the vast domain of nature, and may be secured without the least interference with any other operation of the farm. In countries where special attention is paid to bee-keeping, every square mile maintains its hundreds of colonies. A German writer asserts that in Lunenburg, the bees pay all the taxes, and a surplus besides. No doubt the wealth of Canada might be increased by thousands of dollars annually if every family favorably circumstanced for so doing, would keep a few hives of bees. "But the sting,—the dreadful sting?" exclaim a host of readers. Fear of being stung is no doubt the chief hindrance to bee-keeping. But it appears that modern investigations and improvements render all apprehension on this subject needless. Principles have been ascertained by observing which the most timid may handle bees with the utmost freedom, and manage them with the most complete success. Mr. Langstroth, in his recent work on this subject, says.—"Acquaint yourself fully with the principles of management detailed in this treatise, and you will find that you have little more reason to dread the sting of a bee than the horns of a favourite cow, or the heels of your faithful horse."

In future issues, we shall endeavour to inform our readers as to the most approved methods of bee-management, in the hope that they will be encouraged to give this department of rural economy the attention it deserves.

Wintering Bees.

DIFFERENT methods are practised in wintering bees. It is necessary to protect them especially from two things: from being frozen and from being starved. The latter happens when they collect together closely in the coldest weather, and the comb becomes covered with frost and ice, the moisture from their bodies and from the air being there deposited and frozen, excluding them from the honey. The entrance to the hive is liable to be stopped with ice, and the bees thus suffocated. The bee never passes into the torpid state in winter like some other insects; it perishes at a degree of cold low enough to freeze it. As in the case of other kinds of farm stock, it requires less food when kept warm and comfortable. If the hives are to be carried into a house or cellar, the place for them should be cool, dry, and dark. The best method is to house them, unless sufficient protection can be given them on the stands. The Russian and Polish bee-keepers, who manage bees as extensively and successfully as any, winter their hives on the stands; but they make their hives of inch-and-half plank, and wind the upper part with twisted ropes of straw or cordage to increase the protection against extremes of the heat and cold. If left on the stands, hives made of common boards need additional covering; the entrance should also be narrowed, so as to leave only space enough for a single bee to pass. This must not be allowed to become stopped with frost and ice, or dead bees and filth. Light snow may cover the hive without danger. The practice of bee-keepers is about equally divided between these two modes of wintering. The success of out-door wintering would be greatly increased by making better hives, and by exercising more care in protecting them from severe cold, and from changes of temperature. It is easier and preferable, when the number of hives is very large, and there is no danger of theft, to manage them out doors than in-doors. With a small number it may be otherwise.—*New Am. Cyclopedia.*

ACCLAMATIZATION OF HONEY BEES.—Dr. A. Gertsacker, in concluding a very extensive memoir on the distribution of the honey-bee, observes that the most valuable form for Europe would be the Egyptian, partly on account of their beauty, and partly because of their unwillingness to use their stings, which appears to be common to all African bees, and is also one of the recommendations of the Italian bee. The Syrian bee agrees so closely with the Egyptian that it may prove equally valuable; and next to these in value are the bees of the coasts of Asia Minor.

☞ PROTECTING manure by erecting cheap sheds over it, is an item of labour that farmers can work at in the winter very advantageously and profitably. And while they do this work, they are taking a very important step towards introducing a renovating system of farm management, and of improving the fertility of their soil, not only for grain, but for grass or vegetables. Where the water from the eaves of the buildings is permitted to fall into the manure-yard, eave-troughs should be put up as soon as may be practicable, as a few heavy showers will often injure the value of manure enough to pay the expense of good eave-troughs to a barn. The skillful farmer's motto must be, in the winter, to save all the manure, and raise large crops next season.—*S. Edwards Todd.*