HORTICULTURE Cover Crops in Orchards

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The development of the fruit grow-ing industry in Canada during the any industry in Canada during the past fifteen years, has been marked by, or I might say, has in a large measure, been the outcome of, cer-tain advances in the rational treat-We all recog ment of our orchards. We all reconize that much has been accomplia ed through the adoption of improved ed through the adoption of improved methods of picking, sorting and packing, by better storage, and trans-portation of the fruit; but, this ack-nowledged, we must realize that the recently introduced methods of soil treatment in the orchard, and the keeping in check of insect and functions pests by spraying, have had very much to do in the production, both as to quantity and quality, of

both as to quantify and quality, of our marketable fruit. In these matters or soil manage-ment and spraying, fruit growers are much indebted to scientific researchmuch and, speaking generally, we have been slow to put into practice methods indicated by the renot the Its of investigations carried on in America—I use the term in its geo-graphical sense—agricultural institu-tions. Very much good has been done in the experimental stations of tions. Very much good has been done in the experimental stations of the United States, but we have also in Canada contributed our part to-wards that knowledge that we now possess regarding the rational grow-ing of fruit. The Canadian agri-cultural institutions, both Federal and Powingiel have recognized that and Provincial, have recognized that our conditions necessitated in many instances modifications of the gen-eral plan, that our problems called a special solution, and as a re-they have, I believe, done mos-

suit they have, I believe, done mos., useful work towards putting fruit growing on a paying basis. It must not, however, be lost sight of that it is necessary each one for himself to do a certain amount of experimental work. The principles can be established from the research. experimental work. The principles can be established from the research es of the trained expert, who has all the necessary apparatus at hand to assist him, but in the application of these principles, if we would obtain the best results, there must be brought to bear the intelligent study by the individual, for there are many oils, and many climates, in our fruitgrowing districts. I am careful to emphasize this aspect before mento ioning the data of our experiments, lest any should suppose we are lay-ing down a hard and fast plan of procedure suitable to all alike.

It is my purpose to present in brief rm certain of the chemical data form we have obtained on the the control of its moisture, through

FARM HELP and any kind of help supplied free of charge by the Labor Information Office for Italians (99 Lafayette Street. Tele-phone 1198 Franklin), New York Oiry, Free Labor Office. Send for circular and ap-plication blanks. PICTORIAL PRACTICAL CARDENING

Heeseeseseseseseseseses the use of cover crops. shall let the facts speak for them-lves, indicating merely the deduc-ons that may be made therefrom, elves, indications that may the broad principles they sup port.

The term "cover crop," was, I believe first used by Protessor Bai-ley of Cornell University, in 1802, who was then advocating the break-ing away from the old plan of keep-ing orchards in sod. His suggestion ing of narves in soc. This suggestion was to grow a crop in the late sum-mer and autumn, which would af-ford a whiter protection to the roots of the trees, and, at the same time, enrich the soil. Such a crop he de-signated a "cover crop." Prior to that time the general practice no signated a "cover erop," Prior to that time, the general practice, no doubt was to utilize the soil of the young orchard for some vegetable or farm crop; when the trees had ob-tained such a size that this was no loncer possible, or profitable, the orchard was allowed to grow a soid, thend, according to the fancy of the owner. Occasionally the orchard reowner. Occasionally the orchard re-ceived a dressing of barn yard manure, but this, unfortunately, was the exception, rather than the rule, it being scarcely realized that our or-chard trees required to be fed, as other farm crops. There are, no other farm crops. There are, no doubt, to-day, many good orchards in sod, but their number is steadily lecreasing; we find the majority advanced orchardists abandoning the old method, and employing some modification of the cover crop system.

DISADVANTAGES OF SOD

There are several reasons against There are several reasons against a permanent sod in the orchard. One is that the grass is robbing the trees of that moisture and plant food acc-essary for their legitimate growth, and the preduction of fruit. I shall show you later from our experiment's that sod, and, especially an old esthat sod, and, especially an old es-tablished sod, very rapidly exhausts a soil of its moisture. The loss takes place partly by transpiration through the leaves of the grass, and partly through capillarity and surface evaporation. In consequence of this the trees suffer in seasons of insuffic-ient rainfall. In an orchard covered with sod, it is true that the tree roots are nearer the surface than in a culare nearer the surface than in a sur-tivated orchard, but, nevertheless, it is an unequal battle between them and the grass, with the result that the moisture is entrapped and used by the grass, and this, as a rule, just at that time when the trees are needing it most, viz., from May to July. As to the extraction of the ele-July. As to the extraction of the ele-ments of fertility from the soil by the grass, I have only to point out that a yearly yield of two tons of timothy hay per acre will remove in ten years about 600 lbs, of nitrogen, 400 lbs, of phosphoric acid, acd 900 lbs, of potash. There are, I know, los. of potash. There are, I know, soils so well supplied with moisture, and so rich in plant food, that the newer method of which we are speaking is not necessary-but such soils, we are assured, are by no means common

As you are well aware, by this system the land is part of the year under a crop, and part under culti-vation. We seek thereby to (1) en-rich the soil in humus and nitrogen ; (2) to regulate or control the soil moisture; (3) to furnish protection to the trees' roots during the en-suing winter; and, (4), to arrest the loss through the leaching of nitrates in the autumn. It is only with re-spect to this the force to meet the PUCIDINAL LYACTIDIAL CARLIE-MUC BY WAITER P. WRIGHT The object of this useful manual fis to present of the device of this useful manual fis to present or practical manual introducts is to present or practical manual introducts in the autumn. It is only with re-sent some interactions accomparing the text. "A Plotorial Garden Calendar," given this and Hustrations for every mont of prace the classic fire on the autumn. How the local transmission accounter the text of the source of the analysis fillestrations accounter the text of the local field interactions accounter the text of the man and Paramite World Perebore. Complete catalog of books set: free on request. loss through the teaching or intrates in the autumn. It is only with re-spect to this the first named fea-tures that this paper deals. The data have been obtained in the or-chard and laboratory during the chard and taboratory during the past ten years, and in all this work I have had the advice and co-opera-tion of my colleague, Mr. W. T. Macoun, Horticulturist of the Exhas

Nova Scotia Fruit Crops

Walter E. Eaton, Kings Co., N. S.

In apple, Kings have set a very heavy crop; Gravensteins and Bald-wins, fair; Blenheims and Ribstons, light; all other varieties, fair. All appear quie free of black spot. Canker worms have done a lot of drawage heims worse than for many damage, being worse than for many years. They have ruined many or-chards, not a leaf being left.

July Canadian Horticulturist

July Canadian Horticulturist Among the many fruit topica dis-cussed in the July issue of The Can-adian Horticulturist, are the follow-ling: "Peach Culture, Thiming and Marketing," "Growing Cherice," "Root Praning for Fruit," "Fertilik-ing Ortenical, "Chanadian Pears," "Bortying," Mattares,"" "Gertilik-"Braving," Mattares," "Carantis, "Braving," Mattares," "Burging Apple Barrels," and other topics. A score of letters from correspondents in all parts of Canada, give the fruit news of the provinces. The fruit crop prospects in all our fruit dis-tricts, are pointed out by reports from men who know. An excellent letter by Mr. D. Johnson, of For-etter by Mr. D. Johnson, of the from the most out of their fruit, make the most out of their fruit, make the most out of their fruit. fruit.

uit. For those who grow vegetables, here are articles on "Commercial ertilizers," "Growing Squashes," Fertilizers," "Growing "Sweet Potatoes," "S Protection of Cabba "Seening for the age Seed Beds." The ornamental ase of garden-ing receives attention in excellent ar-ticles on "Flow Shrubs and Their Care," for Flower Lovers," "Lawn ing and Manage-ment," "Car of Azaleas," "The Worth of Gardening," and about fifty hints on work that can be done this month.

month. Altogether the issue is a creditable one. It maintains the standard of excellence that The Canadian Hori-culturist is noted for. Readers of the Dairyman and Farming World, when renewing their subscriptions, will be sent The Canadian Horitculturist for a year, the regular subscription price of which is 60 cents, if they will enclose 30 cents extra with their renewal subscription renewal subscription

Marketing Muskmelons

A bulletin has been issued by the Agricultural Experiment Station, of Illinois, on "Marketing the Musk-melon." The following is a summary

mary: The leading type of muskmelon grown in Illinois for the general mar-ket is the Netted Gem, and the mat-ter presented in the bulletin has spec-ial reference to the marketing of this

Illinois Gem melons intended shipment to the Chicago market should, as a rule, be picked as soon as the fruit will part readily from the stem, but not before.



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ary factor which determines its grade. The relation between the netting of a melon and its quality, makes it pos-sible to grade melons with extreme accuracy as to quality, on the basis

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meions to present an «trractive ap-pearance upon the market. Different styles of pack should be adopted for meions of different sizes. A convenient packing shed facili-itates proper grading and packing. To handle the meion crop property, the warking force must be thorough-

organized, and each person trained or his particular duty.

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retailer in each city. The safest plan to follow in ship-ping melons to a large city market is for the grower to make arrange-ments with some trustworthy commission firm to handle his entire pro-

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