

Proceedings of Four Day Course in Agriculture

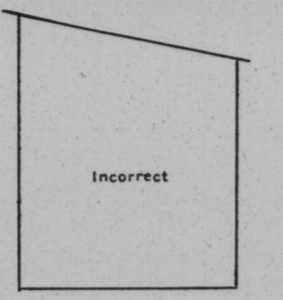
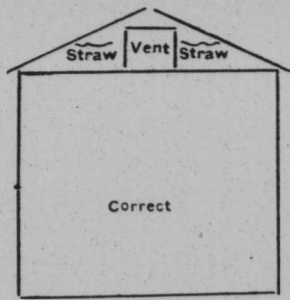
The Subjects Each Day Were Very Interesting and Invaluable to the Farmers--The Classes While Small Were Very Appreciative, and Valuable Information was Gained

The four days course in agriculture, which began in the Town Hall on Tuesday morning, Dec. 1st and ending on the 4th, given under the auspices of the New Brunswick Department of Agriculture, were not attended by the number of farmers and others as the department had hoped would attend.

These courses, covering as they did every department of agriculture, were of such a nature that they were deserving of the hearty approval by the attendance on one day at least. If not the four, of every farmer in the four northern counties in whose interest they were given.

At no time in the history of this department has so much time and money been spent as at the present for the advancement of agriculture, and it cannot be anything else than disappointing to the heads of the department when they see the lack of interest shown on the part of the farmer.

The different branches taken up were handled by men thoroughly conversant with the subject placed in their hands and those who were in attendance had opened to them a great field of knowledge which will have most beneficial results.



TUESDAY MORNING
Poultry—Seth Jones—Mr. Jones, who is an expert poultryman, gave a very interesting lecture on this subject, and in explaining to his hearers the proper and improper way to build a poultry house, showed an outline drawing of each. Large windows, the lecturer said, admitted too much heat in day and too much cold at night and no ventilation at all. Cotton was better than glass for windows, because it lets in both sun and ventilation. The location of the poultry house was a very important item, because if not erected in a suitable place it would have its ill-effects. It should be on sandy soil, because the rain would drain off very easily. On clay the rain soaks into the ground leaving it always damp. A correct poultry house should be six squares feet per hen, which prevents crowding. 100 hens should yield \$200, above cost of keeping. The foundation of a poultry house should be trenched. The trench should be dug to a solid pan filled with cobble stones, then a concrete wall built six feet high. The wall should be 12 inches at the bottom and six inches at the top, they fill for the roof. The floor should be cobble stoned and covered with sand. A wood floor should not be used, as it is always damp. The sand should be cleaned off and new sand put on three or four times a year. Houses should not be too high, as the heat goes up, leaving the floor damp. Draughts are very dangerous and should be avoided as hens require to be comfortable when on the roost. Ventilators are essential. Feed should be scattered in litter on the floor. Poultry should be kept dry. The cold does not affect them so long as it is a dry cold. The windows should be about 18 inches from the floor and built as high as you like. The object in having them low is to admit of the sun shining on the roof. If straw is placed between the floor and the ceiling it will absorb all the moisture in the house. The nests should be 18 inches from the floor. The roosts should be 18 inches above the nests, and the dropping board level with the roosts.

Twenty-five hens are plenty in one flock. The dropping board should be level, so droppings will not fall into the litter. Roosts should not be nailed, as it is necessary occasionally to take them out to be cleaned. The roosts should be sprinkled with ordinary lamp oil, and all crevices sprinkled with sulphur. This kills all vermin. Poultry should not be kept too long on the same ground, as it becomes foul. The poultry house is the most important part of poultry raising. Cotton is much better for windows than glass, because it does not allow enough wind in to make a draught and does not collect ice and frost at night. For general purposes the hens most adapted to this climate are the American breeds

such as Barred Rocks, Plymouth Rocks and Wyandottes.

Field Crops—B. T. Reed—In taking up this subject, the speaker referred to forage crops. Corn, he said, would not prove very successful in New Brunswick, as the season is too short. What is wanted in corn is an early maturer, one that will ripen early. A late corn is very little value as a fodder. The New Brunswick corn is the earliest specie we can raise. It is a twelve row specie. The Longfellow has eight rows and is a very late maturer and is not adapted to this climate. The North Dakota and Cromptons are very late maturers and are especially adapted to the U. S. A. The land should be manured in the fall, and eight or ten quarts of corn sown to the acre. The soil should also be well cultivated. Millet should be grown in the early spring, as it is very valuable as a food for dairy cattle. Root crops are the most important in New Brunswick. The roots the first year store up enough food to feed the seed the next year. The feeding matter in any root depends largely upon the dry matter that particular root contains. One pound of dry matter in roots equals one pound of oats or wheat. In New Brunswick the Swedish turnips produce more to the acre than any other root. Mangels are very hard on land; the soil must be deeper and dryer than for turnips. Roots should be chosen to suit the soil, for if the soil is shallow, the flat turnip or mangel should be used. The land should also be plowed in August, harrowed a couple of times, and then plowed again in September. Seeding should be done about the first of May. Turnips should be thinned as early as possible. The only reason for having turnips sixteen inches apart is that they grow larger and easier handled than smaller ones, the weight per acre being much the same. Where the land is heavier, turnips should be planted in drills, but where the land is light they should be grown flat as the drills stop the moisture from reaching the plant. Root crops need phosphoric acid. Mulch is a very valuable fertilizer for roots as it is very rich in phosphoric acid.

Mr. Gordon did not agree with Mr. Reed about sowing turnips early. The reason for sowing turnips later is that we can get our land in better shape before sowing. Get manure out early. If weeds are kept out until the middle of June they will be destroyed altogether. To grow a good crop the land must be in good condition. From 20 to 25 loads of manure is plenty per acre to put on your root crops. Lime will grow a smooth turnip which is very pleasing to the eye. The most productive turnip is the globular specie. The best way to get good seed is to grow it yourself. Select the best turnips in your field, let them run to seed, and in the course of a few years you will have a seed that will repay you abundantly. Select for a seed turnip one with a single top root. To keep turnips for seed all winter, keep them in a cool place so they will not sprout. To keep turnips from spoiling in winter, cover them with dry sand or black peat. This also keeps the rats and mice from eating them.

AFTERNOON SESSION
Horticulture—D. B. Flewelling—At 2:35 Mr. Flewelling took up his subject. The Family Orchard apple is one of our most important orchard products. It is claimed that apples are very beneficial to the health. In order that old trees may bear fruit they must be cared for the same as for any other vegetable crop. Many people think that trees should grow after planting, but this is not altogether the case. Trees should be pruned every year, for if they are left to grow, many branches will grow which not only spoil the looks of the trees but will also affect their bearing qualities. Trees may be pruned two ways. First by leaving the central leader and taking away all side limbs; second, by taking out the central leader and leaving the centre open. All dead wood should be removed. This destroys the insects, as they live in the dead

wood. A perfect tree should yield one apple per six inches on limb over tree. Care should be taken to cut off all limbs that cross each other, as rubbing together forms a scab which allows diseases to enter. Apples should not be allowed to grow inside of the tree, as the leaves stop the sun and does not allow the apples to ripen. The proper time to prune a tree is in the early spring before the leaves come out. This allows a better chance to see the work and how it looks. It is not deemed advisable to prune a tree after August, as the sap is then up in the tree and the wound will not heal so rapidly. The sap goes up through the centre of the tree to the leaves, and comes down between the wood and the bark. A limb cut off should be cut close to the tree. To train a tree to grow in a certain shape, cut off the limb to a bud pointing in the direction in which you want it to grow, and that bud will mature into a limb in the desired direction. The bark should be scraped and all loose bark taken off, as this is the chief hiding place of the insects. Canker on a tree should be cut off to new wood; the bark will then heal over and protect the tree. For a spraying material use a lime and sulphur solution to kill moss, and then scrape. To cultivate old trees, plow shallow, as soon as the snow goes off in the spring, then harrow thoroughly. Farmyard manure is a good fertilizer for apple trees. Phosphoric acid and ash is more important than nitrogen to apple trees. Cultivate to the first of July, then sow a cover crop such as clover, rape, etc., and allow it to grow all fall. This protects the tree during winter. When plowed down in the spring it makes a splendid fertilizer, and also holds the moisture. A tree will grow from early spring until July. When trees are in a place where they cannot be got at to cultivate, the best thing to do is to manure freely, cut the grass around the tree and leave it on the field. A slope towards the north is better than the south for orchards, as the sun does not have the chance to get at the tree too easily and bring the buds out before the frost is all out; it also stops the sap from coming up too early and freezing in the tree.

Weeds—S. J. Moore—The seed control act, said the lecturer, was not very carefully observed. There were four grades of seed, viz: extra No. 1, Nos. 1, 2 and 3. The standard is becoming higher in grading each year, and farmers should assist the seed inspectors to control the seed retailing. No seed is inspected by the government except that marked C. S. G. A. This is grown by the Canadian Seed Growers' Association. It will not be safe to buy Western grain for seed this year. The best place to buy seed this year is on Prince Edward Island. There is too much bad seed sown. Worst weeds are wild mustard and wild oats.

Poultry—Seth Jones—This was the last lecture for the afternoon session. In opening Mr. Jones said there were too many breeds of hens. For profitable poultry raising, good healthy breeds were necessary. A good hen produces about 25 pounds of eggs per year and consumes about 40 pounds of dry matter in food. Feeding is one of the most important items in keeping live stock. Some hens are not bred for laying in winter. Old hens are not good layers; they are lazy and fat. Under-feeding and the wrong kind of feed prevents a hen from laying during the winter. Eggs can be produced by proper feeding from \$1.3 to 9 cents per dozen, the rest obtained from them being all profit. A hen should have plenty of exercise. The food should be scattered in the straw so that will have to scratch for it. It is entirely wrong to feed poultry with a warm mash in the morning thrown on the floor in a pile, and not making them work for their breakfast. A good feed is cracked corn, wheat, oats and buckwheat in equal parts scattered in the straw. It is always best to select eggs for breeding from hens that are always stretching and working. There are two systems of feeding mash, the wet and the dry. He would not advise feeding a wet mash. A dry mash made up of the following would be found to be the best: 1 1/2 parts wheat bran, 1 of middlings, 1 of corn and 1/2 corn meal. Idle poultry are more apt to eat eggs than those that are scratching all the time. Fresh water, sunshine, and fresh air are very important to hens. Charcoal and grit or shells should be before them all the time. When hens are too fat they lay 3-formed eggs, if they lay at all. A warm drink is very good in the morning in cold weather.

with double-action cutaway machinery, etc.

Then Mr. Newton showed how seed can be tested, to see what seed from what fields would germinate quickest.

Early start counts. Careful cultivation has great effect on root system of plants, roots are so far-reaching, that while a little fertilizer in drill is good, it should be spread over the whole field.

Mr. Newton then showed slides of oats. The slim 50 lb. black oats were coarse in hull and rather late in season and easily shelled on ground. The Banner oats were medium spreading oats—a very spreading type—were perhaps the best. The wild oat was not common here, as in West. To avoid it farmers had better grow their own seed in the East.

The short white Dutch clover is sown in all pastures.

Alsike—A perennial—is good. Red Clover—being a perennial—is not dependable after second year. Alsike grows higher, but gives only one cutting. Red clover, if soil properly attended to, will profitably give two cuts a year. By cutting early, thus preventing going to seed can be prolonged. All plants try to live long enough to reproduce themselves.

Alfalfa, which we are trying to introduce to this country, has a very big root system. It would perpetuate itself, or leave ground in fine condition for other crops.

The agricultural free courses in Woodstock or Sussex should be attended six weeks in each. Hoped to soon have such a school on the North Shore. (Applause.)

R. P. Steeves, Director of Elementary Agricultural Instruction, was the next speaker. He urged a school garden in every district, and opportunity for the reducing class to get as good an education as now obtainable by the small percentage who attend college and for which small number even there are not enough positions in this country. Pupils come to school with great expectations, but over half leave school before they begin to realize what education means. Only 5 per cent of pupils remain long enough to go through High School. Plant analysis, etc., should be taught in school. School ground should be the best acre of land in district. As Inspector for twenty years he had never heard a lesson given in the neighborhood. Teach the pupil to appreciate his own country and he will not want to leave it.

There are now fifty school gardens in New Brunswick and enquiries for more. A Dominion fund pays \$50 first year to trustee for garden work, and \$30 each succeeding year. Teachers get an additional allowance. At summer schools their traveling is paid, and a bonus to those who actually garden afterwards.

1 1/2 hours a week are set aside for garden work in schools—not too much at all.

(Great applause.)

WEDNESDAY MORNING
 The session opened at nine o'clock Wednesday morning with a discussion on Horticulture by Mr. D. B. Flewelling.

Does Salt Water Affect Orchards?
 Yes, to some extent. If there is too much fog off the water it puts them back in budding in the spring. Salt water spray on orchard trees that are too close to the coast will kill them. A slope gives both air and water drainage. Trees won't grow on wet land.

How far Apart Would you Set Young Trees?
 About thirty feet apart. Air is needed in the soil to change certain ingredients in the soil into plant food.

What is the Cost of a well made Drain per rod.
 A well made drain 3 feet deep costs about thirty cents per rod with ditching. Machine drainage is the chief part of orchard growing. A wind break is very important where (Continued on page 3)

PROGRAMME

Tuesday, December 1st.

10.05-11.00—Poultry Seth Jones
 11.10-12.05—Field Crops B. T. Reed
 1.30-2.25—Weeds S. J. Moore
 2.35-3.30—Horticulture D. B. Flewelling
 3.40-4.35—Poultry Seth Jones
 7.30—Crop Rotation and Soil Cultivation (Illustrated) R. Newton
 Agriculture in Rural Schools R. P. Steeves

Wednesday, December 2nd.

9.00-9.55—Horticulture D. B. Flewelling
 10.05-11.00—Business Farming R. Newton
 11.10-12.05—Poultry Seth Jones
 1.30-2.25—Farm Sanitation W. D. Ford
 2.35-3.30—Building and Ventilation R. Newton
 3.40-4.35—Field Crops B. T. Reed
 7.30—Live Stock (Illustrated) W. D. Ford
 Horticulture (Illustrated) D. B. Flewelling

Thursday, December 3rd.

10.05-11.00—Horticulture D. B. Flewelling
 11.10-12.05—Dairying C. W. McDougall
 1.30-2.25—Field Crops B. T. Reed
 2.35-4.30—Live Stock Judging W. D. Ford and R. Robertson
 7.30—Plant Diseases (Illustrated) W. McIntosh

Friday, December 4th.

9.00-9.55—Soil Drainage R. Newton
 10.05-11.00—Dairying C. W. McDougall
 11.10-12.05—Field Crops B. T. Reed
 1.30-2.25—Dairying C. W. McDougall
 2.35-4.30—Live Stock Judging W. D. Ford and R. Robertson
 7.30—Insect Pests (Illustrated) W. McIntosh
 Educational Work of Department of Agriculture R. Newton

TUESDAY EVENING
 The evening session opened with an illustrated lecture on crop rotation and soil cultivation by Mr. R. Newton.

Mr. Newton strongly advised fall plowing in all cases in order to get as early as possible a start in spring. Valuable time was lost by spring plowing.

Rev. Fr. Dixon: "Is not double plowing good?"

Mr. Newton said it was. But spring plowing rather injured texture of soil. Plow a shallow furrow right after haying, then roll it same day and then cultivate with any kind of harrow or a springtooth, as the latter tears ground too much. Cultivate as often as possible, and then plow deeply into in the fall. Unless soil is light, put manure on before the second plowing.

In spring give all the land a cut with the harrow as soon as it is dry, in order to make a mulch on top, to keep the ground uniformly moist, and the moisture from escaping. This is particularly necessary with root crops.

At seeding time, harrow to get soil pulverized as thoroughly and deeply as possible and made compact, to keep moisture equally distributed. Then seed, preferably with a drill seeder. Roll the land just after seeding, then harrow again, to leave mulch on top to prevent evaporation. If thoroughly cultivated and rolled beforehand, ground will not be rough. When grain is 4 to 6 inches high, roll again, to break the crust that keeps out the air and to compact a new mulch. Roll with medium weight roller. If clover or grass seed is not sown with grain, a tilling harrow will help grain 4 to 6 inches high. If not seeded down, cut with harrow after harvest, to set fallen grain and weeds germinating, so that next plowing will cover in and destroy them.

Rotation of Crops
 Grain crops take much from soil, and give back in stubble, very little. They are soil exhausters.

Red clover, etc., leave more in soil than they take out. They have on their roots machinery for extracting nitrates (the most valuable part of all fertilizers) directly from the soil. They are soil enrichers, and leave the soil, also in splendid physical condition because of the great mass of roots which loosen the land.

Hoed crops—roots—are soil cleaners.

Following is a good rotation, then: First—Sow grain, seeding down with timothy and clover. The second crop will be clover (a soil enricher). The third year the timothy will be the prevailing crop, mixed with clover. This may be cut for one or two years, and will put by its roots, a lot of vegetable matter (humus) in the soil, which should be planted as a root crop, to clean the soil again. Such a rotation will keep the farm always in good condition. If grain is sown on sod land or new land a heavy crop of straw is obtained—just what is not wanted in grain.

Rotation not only enriches the soil but by changing so often keeps it free from insects and weeds; it provides variety of food that stock need; it lessens risk of loss from failure of any one crop; and distributes farm work over all the year. Different kinds of crops on different fields keep farmer busy at all seasons, instead of having big rush at times and idle seasons between.

A number of slides were then shown.

The value of underdrainage was illustrated. The ideal way was to use big machinery, but this was impossible for individual farmers. But it was hoped it would be taken up by Agricultural Societies and that co-operative farming would be introduced.

Drains can be built by loosening ground with sub-soil plows with mouldboard taken off and six foot chain attached to plow. Thus horse can walk in ditch, or two horses one on each side of a ridge.

Manual labor on farms is too expensive. A farmer can't afford to keep one man driving one horse. Each man should drive 3 or 4 horses

Something Original—that's the Cry of Every Buyer of Printing

If every print shop could or would work character into their product there wouldn't be such common place printing.

We'll be glad of an opportunity to prove to you that when your printing is placed with us, there will be character to it.

Our new type faces will do that alone, but there will be more than up-to-date type faces. There will be care taken in the arrangement of the type—good ink will be used—the proper paper for the work will be selected, and printed in the largest and most modern country printing office in the Maritime Provinces.

The Advocate Job Dept.
 Phone 23 Newcastle, N. B.

THE ROYAL BANK OF CANADA

INCORPORATED 1869.

LIABILITIES

Capital Paid up	\$ 11,560,000.00
Reserve Fund	12,560,000.00
Undivided Profits	610,219.00
Notes in Circulation	10,385,376.69
Deposits	136,729,483.41
Due to Other Banks	3,118,902.03
Bills Payable (Acceptances by London Br.)	3,352,148.77
Total	\$178,316,130.29

ASSETS

Cash on hand and in Banks	\$30,476,000.19
Government and Municipal Securities	3,778,533.88
Railway and other Bonds Debentures and Stocks	12,622,217.20
Call Loans in Canada	9,189,279.16
Call Loans elsewhere than in Canada	10,660,229.65
Deposits with Dominion Government for Security of Note Circulation	578,000.00
Total	\$67,304,260.08
Loans and Discounts	\$105,363,239.92
Bank Premises	5,646,630.29
Total	\$178,316,130.29

HEAD OFFICE, MONTREAL

185 Branches in Canada and Newfoundland

LONDON, ENGLAND NEW YORK CITY
 2 Bank Bldgs., Princess St., E. C. Cor. William and Cedar Sts.

BUSINESS ACCOUNTS CARRIED UPON FAVORABLE TERMS
SAVINGS DEPARTMENT AT ALL BRANCHES.

SAFETY DEPOSIT BOXES

In the Bank's Steel Lined Vault, rented at from \$5.00 per annum upwards. These boxes are most convenient and necessary for all possessing valuable papers such as Wills, Mortgages, Insurance Policies, Bonds, Stock Certificates, etc.

NEWCASTLE, N. BRANCH
E. A. McCurdy, Manager

THE UNION ADVOCATE and Family Herald and Weekly Star

clubbing offer is still good.

The two papers for only \$1.50.

SUBSCRIBE NOW

CAN'T LOSE HAIR

Twenty Years from To-day a Bald-headed Man Will be an Unusual Sight

One of the most prominent druggists of America made a statement a few weeks ago which has caused a great deal of discussion among scientists in the medical press.

He said: "If the new hair grower, Mildredina Hair Remedy, increases its sales as it has during the past year, it will be used by nearly every man, woman and child in America within eight years."

"When Mildredina Hair Remedy is used almost universally, dandruff will disappear and with its departure baldness, itching scalp, splitting hair and all scalp diseases will follow and twenty years from now a bald head will be a rarity."

There is only one way to cure dandruff, and that is to kill the germs. There is only one hair preparation

that will kill the germs and that is Mildredina Hair Remedy. This unusual hair restorer with its record of thousands of cures will grow hair on any head where there is any life left; it will cure dandruff, stop falling hair and itching of the scalp in three weeks or money back.

It is the most pleasant and invigorating tonic, is not sticky, or greasy and is used extensively by ladies of refinement who desire to have and to keep their hair soft, lustrous and luxuriant. Fifty cents for a large bottle druggists everywhere. Mail orders filled by American Proprietary Co., Boston, Mass.

CUT THIS OUT

FREE to show how quickly Mildredina Hair Remedy acts, we will send a large sample free by return mail to anyone who sends this Coupon to American Proprietary Co., Boston, Mass., with their name and address and ten cents in silver or stamps to pay postage.