



Published under direction of the Board of Agriculture of Nova Scotia.

VOL. I.

HALIFAX, N. S., JULY, 1868.

No. 41.

CONTENTS :

The Season and Crops.....	PAGE. 345	How to Raise Turkeys.....	PAGE. 350
Work for the Season—Field Crops—Live Stock—Flower Garden and Pleasure Ground—Fruit Garden.....	346	Light Stables for all but Fattening Animals.....	350
COMMUNICATIONS:		Our Plan of Making Currant Jelly.....	351
Potato Blight, By A. B., Halifax.....	348	AGRICULTURAL SOCIETIES:	
MISCELLANEOUS:		North Sydney Agricultural Society.....	351
Blank Spaces in the Turnip Field.....	348	Milford Haven Agricultural Society.....	351
Cost of Keeping Hens.....	349	Upper Stewiacke Agricultural Society.....	351
Feeding of Stock as a Branch of Farm Management.....	349	Amherst Agricultural Society.....	352

THE SEASON AND CROPS.

Halifax, July 27, 1868.

We have already noticed some of the remarkable effects of the severe frost and frosty winds of last winter,—and the progress of the season has served to show them more fully. A large number of apple trees in all parts of the country have been winter killed. Garden strawberries, in rich and wet soils, have been very much injured, and in many places completely destroyed. Winter wheat was totally killed wherever there was not protection of some kind. Clover has been scarcer this season than for many years past, and even Timothy, a very hardy grass, has been killed out in large patches.

We hear from all parts of the country doleful accounts of the hay crop. The winter killing would indeed have prevented many farmers having a crop at all, had the spring and summer not been remarkably favourable for the growth of grass,—for we have had none of the drought and summer fires which have

been devastating the western provinces. The information we have received seems to show that the hay crops in Cumberland are this year better than in any other part of the province.

Spring wheat, oats and barley never looked better than they do this season, and field peas, a crop now coming into use through the exertions of the Board of Agriculture, will yield a heavy crop. We observe that the wheat aphid, which attacked the Canadian wheat crops a few years ago and spread consternation among the farmers, has begun to appear in this province; but it is not a seriously injurious insect unless it happens to come in great swarms. The pastures are as yet everything that could be desired, and garden vegetables and root crops have never had a better season. Fruit trees generally are showing well.

We hope that our correspondents in different parts of the province will enable us next month to offer a detailed statement of the probable results of the harvest.

Let us again remind our readers that the time for the GREAT PROVINCIAL EXHIBITION of All our Industries is rapidly approaching. Much preparation is being made in King's County, and some of the other good agricultural counties of the province; animals are being fed, and root crops are being watered with liquid manure, and preparations of other kinds are going on. Some of our horticulturists are training beautiful specimens for the Exhibition tables; and the fruit growers will not be wanting in their efforts to maintain the character of Nova Scotia as the great apple country of the world. It is hoped that in our workshops efforts of a different kind, but not less energetic, are being made. We have already notices from some of the great implement makers of the United States, that they will be "on hand" at the appointed time. Messrs. Allen of New York purpose to send a selection from their extensive stock of agricultural and mechanical tools and implements; Messrs. Fairbanks will not only exhibit their weighing machines

adapted for various purposes, but will have some special articles to be placed at the disposal of the Exhibition Commissioners for use during the Exhibition, and many other manufacturers will, no doubt, be equally ready to send contributions. It is hoped that our own mechanics will send in timely notice, so that space may be secured for the effective display of their handiwork.

WORK FOR THE SEASON.

At this busy season of the year it is well for an Agricultural Journal to exhibit a practical turn. It is time for work. We have therefore selected from the *American Agriculturist*, the *Gardeners' Monthly*, the *American Stock Journal* and other sources, their hints for farming and gardening operations for the present time:—

FIELD CROPS.

July and August are months of hard work; haying presses upon hoeing, and this has to be neglected too often for the grain harvest. Then turnip and buckwheat sowing, cabbage setting, and a score of other necessary or desirable things fill every moment of the long days, and may cause sore perplexity if the plans are not well thought over for each day and for several days ahead.

Weather.—We expect hot weather, with some two or three weeks very hot and dry. We must be prepared to take advantage of a few rainy days early in the month to transplant cabbages, fill out tobacco, or vacant spots in the rows of ruta-bagas. Thunder storms must be looked out for, and hay and grain shielded from damage as well as possible.

Hay.—Cut, cure, and mow away by horse power if possible. Steady and rapid drying of the hay, as when the hay tedder tosses it up every few minutes until it is cured, is best; curing in the cock after having been twice turned, and cocked up while hot, next best, and makes better hay than that sunned and dried, and raked up after the dew falls, in the usual way. Cotton stuffs are cheap enough to make hay caps now, and they often pay for themselves in one rainy week. Upon shocks of

Grain, caps of cloth are often very useful, as it takes no longer to put them on than to put on the cap sheaves. Cut when nearly ripe, and if the straw is short or dry, it saves time and labor to take to the field dampened, long rye straw for bands.

Pastures must be well looked to, and if they begin to get short, the cattle should be fed daily with green corn fodder, or

other green feed. Top-dress with guano, ashes, plaster, or any fine compost.

Root Crops.—Ruta-bagas sown last month should be well hoed and thinned. Hoe other roots. So turnips any time during July. A full crop of Ruta-Bagas cannot be expected, but a very good one may be, excellent for the table. Sow Strap-leaf or Cowhorn turnips only, after the 25th. They will do well sown among corn at the last hoeing

Potatoes.—Keep weeds pulled; scatter turnip seed or set cabbage plants, when hills are wanting.

Corn.—Keep down the weeds with the plow and cultivator until the corn is too large; do as little hand-hoeing as possible, but pull the weeds close in by the hills, and work the rest of the ground by horse power. Sweet corn will mature "roasting ears," if sown as late as the 4th of July, and corn may be sown for green or dry fodder up to 20th.

Stacks for hay, grain, and corn fodder, are best made long and narrow. For such, the horse-fork attached to a pair of large shears may be used.

Cabbages.—Set on rich land, where early potatoes, peas, etc., were taken off. Top-dress with lime, and water freely when first put out; when well established and beginning to grow, a few waterings at evening with liquid manure, (barn yard lye) will give them a grand start, and do much towards securing a large crop. Hoe very frequently.

Buckwheat may be sown any time during the month. It is one of the most profitable crops we raise, occupying the ground but a very short time, doing fairly on land not in the best heart, and well on any land not enriched with rank manure and not too wet. It makes so dense a covering as to choke down all common weeds, and yields a very good return for the labor it requires, in grain and straw, which latter is a valuable addition to the manure heap. An old practice, rarely followed of late years, so far as we know, yet not to be overlooked, is the sowing of buckwheat as late as the last of this month or first week of August with wheat. This crop matures before frost, or not at all, and being removed the wheat has the ground the rest of the season and is not perceptibly injured.

Orchards.—It is often a problem what crops to put in an orchard, which should be tilled for the benefit of the trees. Potatoes seldom do well on a sod, and weeds will grow badly under the trees. Corn or grain should be out of the question, because they make their strong growth just when the trees do theirs, and are a serious damage. "No white crop in an orchard," is the old English rule. Potatoes, roots, cabbages, and clover, are beneficial. On rather light loams, the sward turned over flat, rolled, and harrowed so as not to tear the sod, buckwheat

will make a fair crop. The sod will rot, the grass be kept under, and if the stubble be manured and plowed after the crop is off, the land will be in good condition for potatoes or root crops the next year if not too much shaded.

Manure Making.—If the weather be dry, employ every spare hour in ditching and draining swamp holes and mucky places, to get out a good supply of material for composts. All peaty matter, bog grasses, ferns and rushes, sods, wherever found, and in the absence of these, good surface soil, or even sand, ought to be freely used to compost with stable and yard manure. This is more important during the warm weather than at any other time. It is best to lay up the materials in compact rectangular heaps, having drainage secured under the whole bottom. The hog pens should be well supplied with weeds and green vegetable matters of all kinds, which they rapidly convert into manure. It is the saying of an old farmer: "Anything that grows in the summer will rot in the winter." This may not be exactly true, but sufficiently well indicates the kind of material to put into hog pens.

Animals.—All kinds of animals do better for being well fed. Young stock grow much more rapidly for a little meal; oil-cake porridge is grand feed for hogs, and they need but little to keep them well growing. Bees ought to get grain in addition to the best grass; they do much better for it, and it costs less to fit them for market. Be sure that there is no lack of water, and it is best to keep salt where all the stock can always get at it.

Weeds.—Maintain constant warfare; cut those in blossom, whenever seen, and throw them into the hog pen. Any that go to seed should be burned.

Irrigation.—This subject is constantly exciting more interest. It is especially valuable for the production of grass, though its application is by no means limited to forage plants. The great value of the hay crop naturally leads us to wish to double it. Wherever an opportunity occurs, turn a gentle stream of water upon fresh-mown grass land, and so distribute it that it shall trickle over as wide a surface as possible. Let it stay on a day or two at a time, and report the result.

Drainage.—The importance of drainage is only imperfectly understood. It is the best agency we can employ as a protection against protracted droughts. Those especially interested should read *Draining for Profit*, or that epitome of the subject in the *American Agricultural Annual* for 1867.

LIVE STOCK.

We all find the intense heat of the Summer oppressive, and so do the farm animals. Give them some shelter from the sun. We have seen arguments designed to

prove that animals at pasture were better off without any shade, but we think such arguments convince few persons.

Give to all animals a plentiful supply of water—good water, if attainable. There are farmers who, during each season of drought, drive their stock one, two or even three miles daily to give them water. Wells or cisterns would certainly prove profitable investments in these cases.

When either driving horses on the road, or working them in any way, be careful that they are not overheated.—This may readily be done, and fatal results often follow. Flies are very annoying to horses, and the use of nets, or some preparation that will keep away the flies, is well repaid.

Drive milk cows carefully to and from the pastures. They are often injured by being driven rapidly by boys or dogs.—Give them a change of pastures if possible, and when the grass gets dried or parched, give them a fresh supply of green feed from the corn, sorghum, or millet, sown for the purpose.

If you wish your poultry to return you a good profit, feed them well—this is a law of animal economy. That unless there is a good supply of wholesome food you can not expect much in return. A hen cannot manufacture eggs out of sunshine and atmospheric air, however much these may conduce to her health and ability to produce the desired article. If hens are confined, give them as much space as possible, throwing them fresh sods daily, as at this season grass will be a good part of their living. Provide clean gravel and lime, and a good dusting box. Wheat screenings is the best article of food for raising a brood of chickens that we ever tried. Corn will go nearly twice as far if steamed or otherwise cooked. To gratify the secretiveness of hens, make nests where they cannot be seen by other fowls when they are laying or sitting. If nests are too deep the eggs will rest on each other, which should not occur.

Provide some *rock salt* for sheep, and place the lumps where they can have daily access to them. When salted only occasionally, they consume too much at once for their health. Protect from cold storms for some weeks after shearing; indeed, this advice may be extended to the whole year to great advantage. Apply a little pine tar to their noses to repel the fly; this should be repeated frequently. Designate the age and character of each sheep by significant marks on the shoulders or rumps. A figure (1, 2 or 3, &c.) on the shoulder, may designate a ewe and her age, and on the rump, a wether and its age.

Pigs designed for pork next fall should be separated from the sows so soon as they will eat readily. Keep them in moderately close quarters; as, when run-

ning about in large enclosures, they will expend too much material without adding proportionately to their growth. There is nothing better than milk; next, corn well cooked. The oat is not a profitable feed for swine.

FLOWER GARDEN AND PLEASURE GROUND.

The Rhododendrons, Spruces, and some other things, which looked rather miserable on the advent of spring, have been found to be more frightened than hurt. A friend, who commenced to cut his Rhododendrons down, supposing they were killed, was interrupted in his charitable labors, and never found time to renew them. The balance unpruned are now beautifully in bloom, although nearly leafless. Such a remarkable awakening to life we never saw and had no conception of. It is refreshing, however, to feel that our climate is not, after all, as bad as we thought. Yet it is well to bear the fact in mind, in planning out beds for rare things, to keep them as much as possible from cutting winter winds.

The wet spring has sadly interfered with flower garden operations. Most of the planting has had to be done in wet soil. It is difficult to get earth well about the roots when wet. When the dry weather comes, many plants will die. The best way to save a weakened tree is, to prune away a little—and as soon as the ground gets dry, the earth about the trees should be loosened up a little, and then pounded down hard with a paving rammer. This should also be done with flower beds. Hard surfaces soon dry, and the plants in them rapidly dwindle away.

It is a matter of surprise that hardy climbing vines are not more used in lawn decoration than they are. Their general use is confined to walls and screens. They are pretty objects trained as pyramids through our grounds. Rejected evergreens make good trellises. Larch trees afford the very best. A trellis maker could not turn out a better one. Of course the lower branches should be left a little longer than those above them.

Amongst the best of vines, are *Clematis azurea*, *C. viticella*, *C. flammula*, *C. Virginiana*, *C. vitalba*, *Akebia quinata*, *Bignonia capreolata*, *Caprifolium brachypoda*, *C. Halliana*, *C. flexuosum*, *C. flavum*, *C. sempervirens* (scarlet coral), *C. Magnavilla*, *Celastrus scandens*, *Periploca græca*, *Wistaria frutescens* and *W. magnifica*.

Wistaria sinensis is too strong for anything but a strong trellis. For growing over trees it is admirable. Over some old Hemlock trees, in Germantown, it roams from fifty to sixty feet high, making a magnificent spectacle when in blossom. In making trellises, it is necessary to fix two cross-pieces near the ground,

or, of course, the weight of vines will drag the stakes out of perpendicular.

Recently we recommended our lady readers to thin out their annual flowers. A few plants grown well do better than many stalks coming up in one place. Perennials are also improved by this practice. Especially the *Chrysanthemum* should be examined, and if the shoots thrown up are thickly together, some of them should be rooted out. If the flower shoots are layered into four or six inch pots, they make very pretty dwarf plants, that are well adapted to neatly ornament a room or small conservatory, where larger plants would be objectionable.

Fuchsias in pots should have the coolest position of the flower garden assigned to them. They usually suffer much from Red Spider, which makes their leaves drop. The various remedies we have so often recommended should be applied. Frequent heavy syringings are particularly grateful to the Fuchsia.

Hollyhocks will be coming into bloom at this season. They have now become so much improved as to be one of the most popular flowers for the summer decoration of the flower garden. If the kinds are kept carefully separate, any particular variety will reproduce itself from seed. They may be more certainly kept pure by cuttings of the flower stem; each bud will make a plant. The seed should be sown as soon as ripe in a light rich soil, in the open air. If retained till late in the season they will not, probably, flower the next year.

The raising of new varieties of florists' flowers is an interesting occupation to the amateur. The process of hybridization, applies to all plants as well as to grapes; but good improved kinds of some things may be obtained from chance seedlings. The finest and doublest of Roses, Petunias, Dahlias, Carnations, &c., should be selected, and as soon as the petals fade, they should be carefully removed, or they will cause the delicate organs of reproduction to decay before maturity. A flower may be so very double as not to bear seed at all, as in the case of the Gillyflower or Stock; but if the pistil remains perfect, as it usually does, seed will ensue.

Dahlias will require watering in hot, dry weather, which is done by making a small basin about the plant, filling it with water, and when it has thoroughly soaked away, some hours afterwards, the soils should be drawn back as lightly as possible into the basin. All plants that require watering should be similarly treated.

Amateurs may have some rare or choice shrub they may desire to increase. They may now be propagated by layers. This is done by taking a strong and vigorous shoot of the present season's growth, slitting the shoot a few inches from its base, and burying it a few inches under

the soil, or into a pot of soil provided for the purpose. The young growing point of the shoot should be taken out in the operation. By the English mode of making the slit, a great number of the shoots will be broken and spoiled. Anything can be propagated by layers; and it is an excellent mode of raising rare things that can be, but with difficulty, increased by any other.

We need scarcely repeat our frequent instructions how to trim hedges—if they have not been attended to, do it now. Make the base about four feet wide cutting with a sharp scythe up to an angle at the top five feet or so from the ground, so that there are but two faces.

Gladioluses are very liable to a disease like rust in wheat, which destroys the foliage. Sulphur is the best remedy; and if this does not check its progress the leaves should be cut away as soon as the affection is seen, as it soon spreads through a full collection.

FRUIT GARDEN.

Where new Strawberry beds are required to be made that will bear well the next season, the very first runners of the season should be selected, and layered into small pots. In about three weeks they should be cut from the parent stem, and left to a separate and independent existence for a few days. After preparing the ground properly for their reception, the pots should be well watered and the plants turned out into the spots designed for them. They will then grow finely the present season, and bear surprising crops of fine fruit the next Spring.

A warm sandy loam is the best for a Strawberry bed. A low and damp one is, of all the most objectionable. Though warm and dry in one sense, it should be rendered capable of retaining moisture in the driest weather, and this can only be perfectly accomplished by draining and subsoiling. If the latter is done three feet deep, all the better.

Unless in a very sandy soil, a very heavy dressing of stable manure is objectionable. Wood ashes, ground bones, and matters of a mineral nature are far more advantageous.

Strawberries for forcing are treated in pots, as we have already described; but instead of being transferred to the open ground, when well rooted in small pots, are repotted into five or six inch pots, and these latter plunged in the ground to their rims in the most favorable to Strawberry growth.

After having grown well, and when they show signs of having formed a good strong crown, they are to be taken out of the open ground and gradually ripened by withholding water,—taking care that it is not done so suddenly as to make the plants wither, or they will suffer much. Towards winter they can be set in a cold

frame and covered with dry leaves for a slight protection from the frost till wanted. Many commence to force at the beginning of the new year, when they are brought into the greenhouse and must be set near the glass. A high temperature is fatal, 45° to 50° is sufficient for a few weeks, and 55° to 60°, when the fruit is fairly set. They love to be frequently syringed and guarded against Red Spider, which is their greatest pest. Where there is not the convenience of a greenhouse to force Strawberries, they may be had a few weeks earlier than usual by making a piece of ground slope to the south-east, planting out as already described, for garden culture, and then setting a glass frame over them. The nearer the frame and glass can be brought to the soil, the better and earlier will the crop be. Protecting from frost in winter also adds to the earliness of the crop. The earliest variety to be had in the locality should be employed.

The thinning of fruit,—watching of insects, especially borers in Dwarf Pears, Quince, Apple and Peach,—and summer-pruning, are the main subjects of attention at this particular season. Where the soil is not very good, as may be noted by a weak growth of the trees, a surface manuring may be yet given with advantage. Every day's experience more decidedly shows the great advantages to the pomologist of this method of applying manure.

Communications.

To the Editor of the Journal of Agriculture.

POTATO BLIGHT.

Halifax, July 27, 1868.

Either observation or experiment is required in order to ascertain the nature of this destructive pest. If the disease be in the plant itself it is rather a bad, if not a hopeless case; but the chances are in favor of the destruction being caused by parasitic insects. In this case the investigation must be either direct or deductive, or both. An examination of the plant will, at this season, when it comes into flower, exhibit the presence of a green aphid, which is probably a peculiar kind infesting the potato, and has the power or function, at a particular phase of its existence, of exuding a saccharine gum. It is possible that either the potato aphid (green fly, plant louse, &c.) exudes an acrid poison, or else that the potato plant is peculiarly obnoxious to its action. In most plants it results from confined air; its generation in the potato would probably be a good deal checked by planting in drills wider apart, and removing the lower leaves before the plant flowers.

Insect poison is one remedy indicated, and its successful use would be a deductive proof, but the vermin are always on

the underside of the leaf, and the application of solutions, &c., is consequently difficult; very corrosive mineral poisons are of course out of the question. The two most active mineral insect poisons are mercury and phosphorus; metallic mercury is not corrosive, and can be applied to plants in a considerable proportion without injuring them. The mode is, to take the unguent of mercury, incorporate it with yellow or soft soap, and make suds of it, there will be little or no sediment of the mercury, providing that it is distributed in the suds which can be thrown over the plants. Cerate or unguent of phosphorus may be applied in the same way, but with caution, as it evolves phosphoric acid gas in the sun's heat; this, if in a dose sufficient to kill the insect without injuring the plant, would be more effective from the phosphoric fumes reaching the under side of the leaves.

The pest first appears when two or three of the lower leaves turn yellow, as observed about the period of flowering. Sometimes these leaves have the black blotch so characteristic of the blight, when it afterwards strikes the whole plant.

Little is known, certainly, about the natural history of the aphides, but like the other parasites, they seem to be self-generated, in the first instance, after which their increase is prodigious. It is said that males are only produced every tenth generation, fecundation being hereditary to that extent, and that the species differ with the plant they feed on. Their presence is indicated by the leaves curling and being occasionally perforated by them. They are a large insect of their class, and easy to be seen without a glass; they are also stated to be viviparous. It is not unlikely that the young brood, in a microscopic state, causes the mischief; however, it is not impossible the disease may be the result of a succeeding insect preying on the aphides.

Everything seems to indicate that the blight is a subtle poison, not the effect of anything feeding on the plant, the sudden large black blotches, the rapid progress through so many widely different organs, and the effects different in each though destructive in all, are such as no creature is known to produce on any other vegetable by the mere process of feeding on it. This is the season for experiment and investigation.

A. B.

Miscellaneous.

BLANK PLACES IN THE TURNIP FIELD.

Owing to defect in the seed, or to fly ravages there will often be blank places in the turnip field. These to a farmer of

neat instincts and habits are a great eyesore. Moreover, they involve waste of rich land, valuable manure, and costly labour. When these blank places amount to a considerable proportion of the field, the loss of crop thereby occasioned becomes a serious item. It is therefore every way desirable that these blank places should be filled up and turned to some useful account. This may be done in a variety of ways. The best, were it practicable, would be to transplant from rows that have an excess of plants, and so occupy the vacancies and make the field complete. But this can hardly be said to be practicable, though we believe it is done to some extent by British farmers. [It is a successful practice in Western Canada.—Ed. J. A.] The turnip does not transplant kindly, and only submits to the process in a mild climate, or during a remarkably wet time. Even under such conditions, the plant is checked and the bulbs stunted. Mangolds are much more docile under transplantation. Indeed, during a spell of moist weather, they can be transplanted almost without their knowing it. Hence there need be no blank spaces in a mangold patch—ought to be none.

Blanks in the turnip field may be filled up by sowing Yellow Aberdeens, White Globes, Stubble or White Stone turnips. These mature in a much briefer time than the Swede, and though not so valuable, are by means to be despised. They may be fed in the late fall or early winter, and made to help materially in eking out the supply of roots. The Yellow Aberdeen is the best of these late varieties, and will come to a very respectable size if the season be good, though sown three or four weeks after the general crop of Swedes. A good supply of White Stones is by no means bad filling for a bin in the cellar, or for the pot on days when there is "boiled dinner" preparing in the kitchen. It is very little trouble, when the turnip crop is gathered, to separate the different kinds, and convey them to their proper destination.

There is another mode of filling these vacancies, which may be mentioned, though the suggestion is rather late to be of practical value the present season. It can, however, be made a note of, and acted on another year. We refer to filling up with another kind of forage crop, namely, the cabbage. There is no better expedient than this, and none that can be more easily carried out. More or, cabbages are greatly relished by cattle in the winter time, and are especially valuable for milch cows. Being of easy culture, the wonder is that they are not more extensively grown as a field crop. The plants require to be grown until fit for transplantation in a seed bed, which should be located in some sheltered and sunny spot, and the seed sown in early

spring. The soil of the seed-bed should be very rich, well-worked and mellow. In sowing a quantity for field culture, of course a good sized bed will be required, and it is the better plan to sow in drills, as the plants can then be more readily hoed and weeded. They will also require thinning, and if the plants can be used at different intervals, it will be well to take the larger and stronger ones first, leaving the feebler ones to grow into more vigorous condition. A moist time should be chosen for transplanting, and the work done with a tool known among gardeners as a "dibble." This tool is usually made of an old broken spade handle. The top part of the handle, about eighteen inches in length, is what is used for the purpose. A gradually tapering point is made to it, which is pushed into the soil, and withdrawn with a turn of the hand. Into this dibble-hole the young plant is set, and the dirt firmly pressed around it. The most expeditious way of doing the work is for one person to make the hole and drop the plant beside it, while another sets the plant. This is an operation in which the "young folks at home" can be employed to advantage, as their backs are short and their fingers nimble.

COST OF KEEPING HENS.

BY J. C. THOMPSON, TOMPKINSVILLE,
STATEN ISLAND, N. Y.

As there is a constant clamor against "bidly" about her "eating her head off," "poultry don't pay," etc., permit me to say a few words in behalf of the ever faithful "bidly." In the first place "bidly" is charged with everything that is bad,—she is noisy, mischievous and gluttonous; in the next place, she is seldom indeed credited with an ounce of the nice food she daily produces for our tables; she is often half fed and less cared for, and yet under such unfavourable circumstances will give her careless owner at least 100 eggs a year, and often 125 to 150 lbs. But say only 100 at 8 to the pound is 12½ lbs. of food, returned to her careless owner, for less than a bushel of grain consumed in a year, (if she is lucky enough to have it set before her). Allowing her to weigh 5 lbs., she returns her weight in food two and a half times, and is yet on hand at the close of the year ready to reproduce her kind, and repeat her weight in eggs more than twice in the coming year.

Quite unlike the "grunter" she is not "done for" "salted down" and converted in a "non-producer" for the future. She still lives, to give a good account of herself in daily supplying our tables with food of the best quality, while poor Porkey is "done gone" for ever. Now I repeat that "bidly" gives more weight

of food (and of the best kind too) for the grain consumed than any other animal kept on a farm. What I ask is that a strict account be kept of all the eggs laid as well as the food consumed, and if, at the close of the year, the result is not satisfactory then all would be justified in discarding "Bidly's" society and turning their grain over to the "swinish multitude."

For the information of them that don't know, let me say that no hen that has a decent run, eats a bushel of grain a year,—all my tests have been made when they could get only the grain fed daily. Large fowls like Brahma, eat 2½ oz. per day; small birds like Leghorns, eat less than 2 oz. per day.—that is about seven half-pecks of grain for the smaller birds, and a bushel for the large kinds; and then too we must not forget that "bidly" gives us a fresh mess every day, besides furnishing us with a companion for the pot or oven once or twice a week, while poor "porkey" gives us fresh only once a year.

I must close by stating what my stock gave in eggs for Jan. 1868. 120 hens gave 620 eggs at 50 cents per dozen, wholesale price, 51½ cents dozen, \$25.75; cost, third of a bushel of corn per day, at \$1.50 per bushel, \$15.50. To biddies credit for January, \$10.25.—*Gardeners' Monthly.*

FEEDING OF STOCK AS A BRANCH OF FARM MANAGEMENT.

The feeding of stock is one of those subjects which can be most successfully advanced by studying the principles on which it depends; and, though these involve many most complex chemical and physiological questions, we have obtained some foundation on which to go. The food which an animal consumes is partly assimilated and partly excreted, but, if it be properly proportioned to its requirements, its weight remains constant, and hence we learn that the food does not remain permanently in the body. If, now, an animal be deprived of food, it loses weight, owing to the substances stored up in the body being used to maintain the process of respiration and the waste of the tissues. The course of events within the body is, so far as known, somewhat of this kind. The food is digested, absorbed into the blood, a certain quantity being consumed to support respiration. If the food be properly adjusted to the requirements of the animal, its weight remains unchanged—the quantity absorbed and that excreted exactly correspond to one another; but, if we increase the food, a part of the excess will be deposited in the tissues to add to its weight. Now, the quantity absorbed depends upon the state of the animal—a lean beast thoroughly exhausting its food, while, when it is nearly fat, it takes only

a small proportion. So, likewise, if the quantity of food be greater than the digestive organs can well dispose of, a certain quantity escapes digestion altogether, and is practically lost. The problem which the feeder has to solve is, how to supply his cattle with such food, and in such proportions, as to ensure the largest increase with the smallest loss. In solving this problem we must in the first place consider the general nature of the food of all animals, the constituents of which may be divided into three great classes—the nitrogenous matters, which go to the formation of flesh; the saccharine and oily, which support respiration and form fat. It is sufficiently obvious that as the two great functions of nutrition and respiration must proceed simultaneously, the most advantageous food will be that which supplies them in the most readily assimilable forms, and in proper proportions. In regard to the first of these matters, it will be obvious that if two foods contain the same quantity of nutritive matters, but in one they are associated with a larger quantity of woody fibre or other non-nutritious matter, the latter will have considerably less value than the former. The necessity for a proper balance of the two great classes of nutritive constituents is also sufficiently obvious, for if, for example, an animal be supplied with a large quantity of nitrogenous matters, and a small amount of respiratory elements, it must, to supply a sufficiency of the latter, consume a much larger quantity of the former than it can assimilate, and there is practically a great loss. We may determine the proper proportion of these substances in three different ways—1st, We may determine the composition of the animal body; 2d, We may examine that of the milk, the typical food of the young animal; and, 3d, The results of actual feeding experiments may be examined. But, however valuable the data derived from these experiments may be, they are less important than those derived from actual feeding experiments. In fact, it by no means follows that the proportions in which the different substances are found in the animal are exactly those in which they ought to exist in the food. On the contrary, it appears that while one-tenth of the saccharine and fatty matters are assimilated by the animal, only one-twentieth of the nitrogenous compounds, and one-thirty-third of the mineral substances in the food, are assimilated by the animal. On the other hand, however, it must be remembered that the particular compounds also exercise a very different influence. Thus a pound of fat in the food, when assimilated, will produce a pound of fat in the animal; but it requires about two and a half pounds of sugar and starch to produce the same effect. The broad general principle ar-

rived at is, that we must afford a sufficient supply of readily assimilable food, containing a proper proportion of each class of nutritive substances. But there are other matters also to be borne in mind, for the food must not only increase the weight of the animal, but also support respiration and animal heat; and the quantity of food required for this purpose is large.

It appears, from Boussingault's experiments, that in a cow eighteen ounces of nitrogenous matter are required to counterbalance the waste of the tissues—a quantity contained in about ten or twelve pounds of wheat flour; and it is well known that an ox expires four or five pounds of carbon daily, to supply which one hundred pounds of turnips are required. We see from this the large quantity relatively to that used up which is required for the maintenance of these functions and the importance of adopting such measures as, by restraining them within the narrowest possible limits, produce a saving of food. The diminution of muscular exertion, and keeping the animals warm, so that a small quantity of food may be required to act as a fuel to maintain the animal heat, are the most important considerations. Although the presence of a sufficient quantity of nutritive matters is an essential qualification of all foods, their mechanical condition is not unimportant, for unless its bulk be such as to admit of the stomach acting upon it properly there must be an appreciable loss; and there is no greater fallacy than to suppose that the best results are to be obtained by the use of those which contain their nutritive matters in a very small bulk. As a practical question, the principles of feeding are restricted to determining how the staple food produced on the farm can be most advantageously used to feed the cattle kept on it, and on this point much requires to be said. It appears that they can be best made use of when combined with more highly nutritious food, such as oil-cake or rape; and, when this is properly done, a very great advantage is derived. It appears from experiments that sheep, which, when fed on hay only, attain a weight of ninety pounds, reach a hundred when rape is added. The subject cannot be completed without referring to the value of the dung produced, which has been very variously estimated. The experiments appear to show that, of food generally, about one-third to one-fourth of the money value, and seven-eighths of the valuable matter, appear in the dung. Dr. Anderson concluded by saying that he had by no means attempted to exhaust the subject, but had given only a sketch, trusting that the observations of others might fill up the details.—*Dr. Anderson.*

The wheat harvest has already begun in the vicinity of Chicago.

HOW TO RAISE TURKEYS.

In the first place, select a good kind. The autumn or early in winter is the most favourable time for that—just before the birds are sent to market. Keep them well during the winter; make pets of them if you like. Mine eat from my hand, and answer to my call. In the spring, a few days before they begin to lay (which is about two weeks after moulting), put them in an enclosure, where it is most desirable to have their nests, and where they cannot get out.—After they have made their nests, they may be set at liberty without any fear of roaming or straying. Next, take good care of the eggs. They should be gathered carefully every day, and placed between layers of flannel or cotton, in a place of uniformly cool temperature, and turned over every day. In spring, after the turkeys begin to lay, it is often cold enough to freeze the ground, when, if the eggs are suffered to lie out, they will become chilled, and will not hatch. In warm weather, it is not so necessary to protect the eggs. As soon as the birds are hatched, feed them with warm bread and milk, well peppered, with boiled eggs added: or with loppered milk, thickened with cooked corn meal, or canaille (wheat middlings) which is better. A little care in these matters will repay all efforts.—Before I knew how to take care of the eggs, I set 30 in one year, and but one of them hatched! The next year I set 40 eggs, and nearly all of them hatched, and the birds lived. At present prices, raising poultry is a much more pleasant and easy occupation than the slavish drudgery of making butter and cheese. At least, such is the opinion of a Cayuga Co. farmer's wife.—*Am. Agriculturist.*

LIGHT STABLES FOR ALL BUT FATTENING ANIMALS.

Light is as essential to the healthiness of the eye, as good food is for the stomach. Light strengthens the eye. Darkness, and especially sudden changes from darkness to light, tend to weaken the vision of both men and animals. When a horse is taken from a dark stable, he walks as if he were blind, and the light that meets his eyes appears to cause pain. Every stable should have glass windows, wherever the climate is too cold to admit of open windows. When it is not convenient to have a glass window in the walls, panes of glass may be fitted to holes sawed in the door; or a sash containing a single row of panes may be set in a frame over the door. When stock stand in their stalls facing a barn-floor or large feed-room, if their mangers are not boarded up tight, light may be admitted through windows above, or in the barn-doors.—But if they stand with their heads to the

wall, light may enter at any part of the stable, except in front of them. Farmers often saw round holes through the boards of frame stables before each horse, which are closed with slides, and these allow pure air to enter as well as light. This is a poor plan, but better than nothing. There should be windows at the ends or rear, enough to make the whole stable as light as a family sitting room. They should be capable of being opened for free air in summer, and situated so that draughts of air will not fall upon the bodies or legs of the animals, but circulate above their backs. Perfect ventilation must be otherwise obtained, when the weather is so cold that the windows must be closed. When window glass has been broken out, wooden panes are often inserted, and cobwebs and dust too frequently intercept the light. For the benefit of the eyes of all animals, stable windows should be well glazed and frequently washed. Most of the stables in the country are not provided with suitable windows, while a large proportion have none at all, the stables being almost as dark as midnight. Light and sunshine in winter are essential to healthy vital action of all our animals. But the desirable quiet of fattening animals is better attained in dark apartments, and no perceptible bad effect upon their health is noticed in the few months of stall feeding which usually precede their sale for slaughter.—*ib.*

OUR PLAN OF MAKING CURRANT JELLY.

A lady tells us that she continues, every year, to make Currant Jelly after a recipe we gave in a former number, and that she has never met with any plan that anywhere near equals it. So many, she says, know nothing of it, and she is so often asked for a copy of it, that she thinks we would be favouring most of our lady readers by publishing it again.

She says she feels an interest in the matter of currant jelly, as she is one of that "eccentric class who will not permit intoxicating liquors of any kind to enter her house, and yet is not opposed to delicious summer-cooling drinks," and that a spoonful of this jelly in a glass of ice water is far more refreshing, she is sure, "than the sherbets, or other fancies of wine inflamed writers."

She adds, "If you do republish it, say to your readers that, for making the jelly in this vicinity (Philadelphia), the Currants ought not to be gathered later than July 10th. Late crops make the poorest article."

We cheerfully reprint the recipe, thanking our friend for her compliment and additional instructive hints. This is the way it is made:

Squeeze the juice out of the currants;

strain and measure it. Put it in a copper or brass kettle, and boil it until the scum ceases to rise; then without taking the juice off the fire, stir in one pound of well refined sugar to every pint of juice; and as soon as the sugar is fully dissolved, (which will be in less than a minute,) take it off and pour it into the vessels prepared to receive it. This jelly retains the beautiful crimson color of the currant much better than the old mode.—*Gardeners' Monthly.*

Reports of Agri. Societies.

NORTH SYDNEY AGRICULTURAL SOCIETY.

This Society held its annual meeting in the Temperance Hall, North Sydney, on Tuesday, the third day of December, 1867. The following accounts were presented:—

EXPENDITURE.	
Paid Henry Davenport, Esq., for potatoes from the Government Model Farm at Truro, and some Canadian field beans, including freight, &c.....	\$18.40
One barrel of Clover seed.....	30.77
Two Rams and two Boars, purchased at the sale of cattle in Halifax.....	68.00
James Munn, for keeping bull for Society..	32.60
Cash on hand, Dec. 3rd, 1867.....	132.84
	\$277.01

RECEIPTS.	
Paid by the Central Board in Nov. 1867...	\$68.00
Balance on hand from 1866.....	61.82
Received for Clover seed sold.....	19.72
Subscriptions from 41 members.....	41.00
Proceeds sale of 4 Berkshire Pigs.....	6.85
Government Grant from Central Board....	60.50
Received from James Munn, service of Bull 7 50	
Due by individual members.....	11.62
	\$277.01

In reference to the crops in this County for the present year, they do not differ much from that of 1866, except the potato crop, which was generally a failure, very little over half an ordinary crop,—far inferior to that of last year, both in quantity and quality. The potatoes received from Truro turned out with most of our members seventy to one, with some more than that; but for the table they seem to be of a very inferior kind. It is possible that after a few year's cultivation they may improve, but our farmers do not seem disposed to expend more time or labour upon them.

Wheat proved a good crop wherever fairly tried; but your directors regret that so few of our farmers now sow any, through fear from the partial failure of former years; but in view of the high price of flour, we conceive that the cultivation of wheat ought not to be given up, as half an ordinary crop would pay the farmer better than either barley or oats. The directors should, therefore, strongly recommend to secure, if possible, from 30 to 40 bushels of the Fife Spring wheat, imported by the Central Board, in the hope that our farmers may be led to turn their attention to a more general cultiva-

tion of wheat than they now do. Oats are, in general, pronounced to be rather light, scarcely an average crop. Barley is a fair average crop. Buckwheat a fine crop, and has been so for the last two or three years; and we are glad to notice that our people are bestowing increased attention on the cultivation of buckwheat, and that it is likely soon to be raised more extensively. Hay has been a full average crop, and was housed in fine condition. Root crops, such as turnips, mangle, carrots, parsnips, &c., did very well, although we regret to say that but little attention is paid to their cultivation in this County on any extended scale; and in view of our long winters, there is surely the greater necessity for raising root crops for our cattle, especially turnips and mangle wurtzel.

It only remains for your directors to add, that as no further importation of live animals will be needed by our Society for some years to come, except one bull for the district of Little Bras d'Or—that immediate steps be taken to provide for an exhibition, to be held in the fall of 1868, and to arrange prizes for such articles as ought to be encouraged.

ALEX. G. MUSGRAVE, *Sec'y.*

MILFORD HAVEN AGRICULTURAL SOCIETY.

The following resolutions were passed at a meeting of the above named Society, held May 13th, 1868:—

Resolved, That when any portion of the funds of the Society is appropriated, by resolution or vote, for seeds, tools, implements, stock, or in any other way for the benefit of the Society, that the said appropriation shall be strictly confined to the benefit of those who were members at the date of such vote or resolution appropriating the same.

Resolved, That any person not being a member at the formation of the Society in 1867, and becoming a member hereafter, according to rule of the Society, may, if he wish, participate in all the advantages and profits of the funds and stock of the Society, from the formation of the same, by his paying into the Treasurer the sum of fifty cents as an initiation fee, in compensation for funds created prior to his membership, whereby said fee shall entitle him to the same privileges as those members have who joined the Society at its formation.

DAVID SCRANTON, *Sec'y.*

UPPER STEWIACKE AGRICULTURAL SOCIETY.

The directors of the Upper Stewiacke Agricultural Society, in presenting their annual report, have to regret that our Society is not increasing any; and as the number of Agricultural Societies is in

creasing in the county, our share of the Provincial Grant is becoming very small.

Your directors have to report the death of the yearling ram owned by this Society, which we deplore very much; the other ram which we have on hand is not in a very thrifty condition, although we have taken the very best care of him. We are about purchasing a very fine boar pig, for the use of the Society for the present season.

We have pleasure in reporting that an Exhibition will be held in the city of Halifax next October, and as an appeal has been made to the different Agricultural Societies throughout the Province, for funds, the sum of twenty dollars is all we thought could be spared in the present state of our finances.

Our acts. for the year are as follows:

Cr.	
To Subscriptions of Members	\$40 00
" Proposed Grant	20 00
Total	60 00
Dr.	
By Keeping of Bull	\$47 25
" Paid for a Boar Pig	20 00
" Secretary's Salary	4 00
	\$71 25
Leaving due	1 25

The Society was then called upon by the President to appoint their officers for the ensuing year, when the following were unanimously elected:—*Pres.*, Hugh Dunlap; *Vice-Pres.*, Hon. S. Creelman; *Treas.*, David McGill Johnson; *Sec'y.*, James S. Tupper; *Directors*, Samuel F. Creelman, Alex. Ellis, Saml. Johnston, William Fulton, Robert Gammel.

In reference to the crops in this locality, I may state that hay is the only heavy crop grown; considerable quantity of it was injured with the wet weather, and some not cut at all.

JAMES S. TUPPER, *Sec'y.*

AMHERST AGRICULTURAL SOC'Y.

The following persons were elected officers of the Amherst Agricultural Society for the present year:—*Pres.*, Hon. R. B. Dickey; *Vice Pres.*, John W. Smith; *Sec'y.*, Cyrus Black; *Treas.*, W. F. Catten; *Directors*, Daniel Freeman, Hood Coates, Edward Bent, David McElman, Charles H. Bent.

ADVERTISEMENTS!

**THE ARAB STALLION
'BALDACCHINO.'**

THIS truly beautiful Gray Horse is a splendid specimen of his famous breed. He is of the largest size, and of a gentle and playful disposition. He is remarkable for courage, speed, bottom and hardihood. So valuable an animal was never before in Nova Scotia, and the owners of Mares have now an opportunity to get Colts equal to the best in the world.

He is the property of LEWIS P. FAIRBANKS, who will not allow this horse more than twenty Mares. His services can be had at Woodburne, Dartmouth. June 1868. JOHN SAULOR, Groom.

**NOVA SCOTIA
PROVINCIAL
INDUSTRIAL EXHIBITION,
1868.**

Official Notice to Intending Exhibitors.

INTENDING Exhibitors are requested to intimate to the Secretary of the Provincial Exhibition *early as possible*, the nature and extent of their exhibits, in order that the necessary accommodation may be provided. Special attention is called to the following Regulations; but as the dates named for receiving entries have been extended as far as practicable to afford every convenience to Exhibitors, it is *hoped that all those who are in a position to do so, will afford the necessary information long before the days specified.*

1. Every intending competitor must transmit to the Secretary, not later than the dates mentioned below, an entry certificate, containing a correct list of the animals or articles which he intends to exhibit, together with certificates of pedigree in the case of thorough-bred stock. Any competitor failing to transmit his entry certificate at the proper time will be excluded from competition.

2. Horses, cattle, sheep, swine and poultry, must be entered on or before SATURDAY, 5th Sept., one month preceding the show.

3. Grain, field products, manufactures of all kinds, natural history specimens, minerals, fish and furs, fine arts, naval architecture, building materials, carriages, and articles not elsewhere enumerated, may be entered up to Saturday, 26th September, one clear week preceding the show.

4. Exhibitors of heavy machinery and bulky articles, requiring extensive or unusual accommodation, should communicate with the Secretary during the first week in September, in order that there may be time for the committee to make the requisite arrangements.

Copies of the Prize List, containing full details of the arrangements for the Exhibition, may be obtained on application to PROFESSOR LAWSON, *General Secretary*; or to

B. G. GRAY, *Assistant Secretary*,
54, Bedford Row, Halifax.

ALFRED SAUNDERS,
(Late Secretary Royal Jersey Agricultural and Horticultural Society. Formerly of the Royal Botanic Gardens, Kew, London),
SEEDSMAN,
168 Argyle St., opposite J. Northup & Sons,
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CALLS particular attention to his newly imported stock of Alsike and other Clovers, Grass Seeds, Mangles, Sweede and other Turnips, Peas, Beans, Vegetable and Flower Seeds, comprising all the most esteemed varieties in cultivation, which he is prepared to sell at the lowest remunerative prices.

Agricultural Societies liberally dealt with, and all orders promptly executed. Descriptive Catalogues on application.

AGRICULTURAL BONE MILL.

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The Mill is under supervision of the Board of Agriculture of Nova Scotia, and all Bones sold at the establishment are genuine.

PRICES.

Half inch Bone.....\$24.00 per ton.
Finely-ground Bone..... 30.00 "
Delivered free of charge, on board the Cars at Richmond Depot.

Purchasers will save trouble by sending their own bags, which, together with orders, may be left at Stanford's Leather Store, 26 Water Street.

JAMES STANFORD.

Halifax, N.S., June, 1868.

**GREAT
Provincial Agricultural & Industrial
EXHIBITION
OF 1868.**

LIST OF SUBSCRIPTIONS

By County & District Agricultural Societies, towards the Provincial Exhibition of 1868

Western Halifax Agricultural Soc'y, half of grants for two years	\$100 00
Antigonish Agricultural Society	100 00
Windsor Agricultural Society	100 00
Yarmouth County Agri. Society.....	100 00
Egerton Agricultural Soc'y, E. R., Pictou, the Society's annual grant for '68, about	60 00
Dartmouth Agricultural Society.....	50 00
North Sydney Agricultural Society.....	40 00
Pictou Agricultural Society.....	40 00
Parrsborough Agricultural Society.....	40 00
Union Society of East Cornwallis.....	40 00
Sydney Agricultural Society	40 00
Newport Agricultural Society.....	40 00
Lower Musquodoboit Agricultural Society	30 00
Upper Musquodoboit Agricultural Society	30 00
Baddeck Agricultural Society.....	30 00
Middle River of Victoria Agri. Society....	30 00
Boularderie Agricultural Society.....	30 00
Mabou and Port Hood Agri. Society.....	30 00
Shubenacadie Agricultural Society.....	30 00
West Cornwallis Agricultural Society.....	24 00
St. Ann's Agricultural Society, South Gut	20 00
Minudie Agricultural Society.....	20 00
Broad Cove Agricultural Society.....	20 00
Fenwick Agricultural Society of Noel and Maitland	20 00
Bridgewater Agricultural Society.....	20 00
Bridgetown Agricultural Society.....	20 00
Mahone Bay Agricultural Society.....	20 00
Weymouth Agricultural Society.....	20 00
Paradise Agricultural Society.....	20 00
Upper Stewiacke Agricultural Society....	20 00
Merigomish Agricultural Society.....	20 00
Hardwoodland Agricultural Society, Nine Mile River.....	20 00
Chester Agricultural Society.....	20 00
Maxwellton Agri. Soc'y, Co. of Pictou....	20 00
Onslow Agricultural Society.....	20 00
King's County Agricultural Soc'y, Horton	16 00
Digby Agricultural Society.....	15 00
Red Islands Agricultural Society.....	12 00
North East Margaree Agricultural Society	8 00
North Shore St. Ann's Agricultural Soc'y	6 00
South West Margaree Agricultural Soc'y	4 00
Stirling Agricultural Society	
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Amherst Agricultural Society.....	
Wallace Agricultural Society	
Clare Agricultural Society.....	
Eastern Annapolis Agricultural Society...	
Lower Stewiacke Agricultural Society....	
River Philip Agricultural Society	
Glencol Agricultural Society, Guysboro'	
Milford Haven Agricultural Society, Co. Guysborough	
Aylesford Agricultural Society.....	
Lunenburg Agricultural Society.....	
River John Agricultural Society	
Caledonia and Kempt Agricultural Soc'y, Co. Queens.....	
Barrington Agri. Society, Co. Shelburne..	
Yarmouth Township Agri. Society.....	
Publico Agri. Society, Co. Yarmouth.....	

\$1345.00

Intimations of additional Subscriptions by Societies should be sent to PROF. LAWSON, the Secretary, without delay.

The Journal of Agriculture

—is published monthly by—

A. & W. MACKINLAY,
No. 10, GRANVILLE STREET,
HALIFAX, NOVA SCOTIA.

TERMS OF SUBSCRIPTION:—

Fifty Cents per annum—payable in advance. A limited number of Advertisements in connection with Agriculture will be inserted on application to the Publishers.