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

Omnium rerum, ex quibus aliquid acquiritur, nihil est agriculturâ melius, nihil uberius, nihil homine libero dignius.—Cicero: de Officiis, lib. I, cap. 42.

VOL. II.

HALIFAX, N. S., MAY, 1876.

No. 122.

Halifax, May day, 1876.

SINCE 10th November last, when Mr. Duggan knocked down 17 lots of thorough bred Cattle from England, our farmers have not been idle. Every number of this *Journal* has lately contained records of additions to our Herds of a very important character. These animals have been either bred or imported by the farmers themselves. We know that our record is not quite full, but so far as it goes it is highly instructive and encouraging, and a sure testimony to ambition and activity. In the course of four months we have been called upon to record 2 Jersey males, 2 Devon males and 5 females, 11 Short Horn females and 2 males, 6 Ayrshire females and 3 males, total 31 thorough-bred pedigree animals, all, with a single exception, raised and imported by individual farmers at their own personal risk and expense. Ten years ago there was not a single thorough-bred pedigree animal in the Province, now the absence of such from a district is felt to be a reproach. Paper pedigrees, when genuine, have their face value like paper money.

We have much pleasure in recording another happy domestic event in the Short Horn family. Mr. J. B. Fraser's thoroughbred Short Horn Cow Rose Gwynne 4th, imported by the Board last fall, dropped a very fine roan Bull Calf on the 17th April. This calf is by Gwynne of the Forest, imported at the same time, and now in Cornwallis. Both Rose Gwynne 4th and Gwynne of the Forest were from the Whitehall Herd.

WE desire to call the special attention of our readers to the advertisement in the present number, of the Manager of the Wellington Tannery, who is prepared to supply a limited quantity of Ground Bones of a quality superior to any hitherto used in the Province. The immediate efficacy of Ground Bone depends upon the fineness of the grinding, and the improved machinery now enables the Manufacturer to produce a very superior article.

WE observe, by press telegram from Ottawa, that the Dominion Government have acted in accordance with the suggestion contained in the January number of the *Journal of Agriculture*, by making provision for the inspection of Cattle arriving from Europe, so as to prevent the importation of Foot and Mouth disease.

WE understand that Alexander Anderson, Esq., has a very fine yearling Jersey Bull, said to be finer even than Earl of Seaford.

MAMMOTH OX.—We saw Messrs. Etter, Buckley & Co.'s big ox weighed yesterday. His weight is 2720 lbs., girth 9 feet. He is six years old, was raised by Mr. George Etter, Westmorland, and is probably the largest in the Dominion.—*Amherst Gazette.*

[We hope he will be fed up to a still more gigantic size, and shown at the Provincial Exhibition, to come off at Toronto during the second week of October.—Ed. J. OF A.]

THERE is issued quarterly in London a pamphlet of about 130 pages, most carefully edited, titled THORNTON'S SHORT HORN CIRCULAR. The latest number, which has just reached us, contains an account of all Short Horn transactions from 1st October to 31st December, 1875. There are some particulars of special interest to us here in Nova Scotia. In the first place there are lists of prize short horn oxen at the London and Birmingham shows. None of the prize oxen were quite five years old, most of them from two to three and four years. The butcher's prize was given to a white ox 4 years and 2 months old, weighing 2863 lbs. The average weight for prize three year olds, appears to be about 2000 lbs., but the heaviest in the different classes are not usually the prize takers. Let judges at the forthcoming Exhibition take note of this. The next part of the Circular consists of Catalogues of English Herds sold by auction in 1875. There were 55 auction sales, 2355 head changed hands, at an average price of £93,11s.1d, total £220,321.13s. In the account of "Exports" we find one batch (6) taken by Mr. Crane to Durham Park, Kansas, another by Mr. Streator to Cleveland, Ohio, another (14) by Hon. Senator Cochrane to Compton, and Mr. Beattie to Scarborough, Ont., another (10) by Mr. John Hope to Markham, Ont., another batch sent partly to Mr. Chapman, San Francisco, the remainder taken out by Mr. R. Ashburner, School House Station, St. James County, California. To Santiago, Mr. Long sent six-

teen; three went to M. Colombat, Alhier, France; five to Mortens, Schleswig; five to Mr. Brydone, Otago, New Zealand, and two to Mr. Row of the same place. Lastly, ten to Nova Scotia, of which a full account is given in the Circular. We find, for the first time, references to the volumes of the English Herd Book, containing the ancestors of our Nova Scotian cattle, and give them here for the information of the owners: Rose Gwynne and Polly Vaughan, vol. xviii, page 704. Carwood's Rose, vol. xix, page 432. Princess Mary, vol. xvi, page 653. Baron Lightburne, 2nd, vol. xix, page 789. Gwynne of the Forest, vol. xx, page 511. Captain Carwood, vol. xx, p. 483. Kent Gwynne, vol. xix, p. 478. Viscount Oxford, vol. xx, p. 486. Skiddaw, vol. xx, p. 783. We now know what volumes of the Herd Book we require to consult.

Twelve American Short Horns were imported, viz., five from Mr. Cochrane and seven from Mr. Renick; these were for Earl of Dunmore and Earl of Beattie.

Leaving 1875, we find that the sales of the present season of 1876 are numerous. At Mr. Outhwaite's sale we notice a reserve price of 5000 guineas (!) placed upon the bull Royal Windsor. One active breeder assigns as a reason for selling out that he is 82 years old. The sales that were deferred last autumn on account of Foot-and-Mouth, are coming off this spring, and are already nearly past.

The array of Short Horn births during the year is very formidable, but more puzzling is the list which follows of "private sales and lettings," in which the names of Rev. P. Graham's Second Mary and her or his cow calf, Mr. Cragg's Lucretia the Second's bull calf, Lady Pigot's Don Diego and her Amy sold to Mrs. Pery, Mr. Morley's Sprightly Maid and his Blissful Bride, and the Duke of Devonshire's favourite Duchess sold to Mr. Foster, are all so delightfully mixed up that, whilst everything is perfectly clear to an expert, yet we fear many people will hardly know which are cattle and which are lords and ladies. Twenty-six deaths of cattle are recorded, and this record is followed by an obituary of seven breeders. This last indicates that Short Horn Breeding and speculation tend not to shorten life, for one old gentleman dies at 81, another at 85, and a third at 93, all in harness or under the yoke.

The condition of the Short Horn market, and the causes that affect it, are very well expounded in the following summary by Mr. Thornton:—

"It will always now be found difficult to ascertain the effect which any season may have had upon the value of Short-horns, so continually do the boundaries enlarge within which customers may be expected, and, hence, so many are

the new forces in operation which help or hinder the ordinary influences of supply and demand. But, this year (1875), such uncommon agencies have been at work at home, that, without considering the foreign elements at all, to form a trustworthy opinion seems well nigh impossible. The number of occasions where a succession of wet days kept away company, and also took off the bloom from the lots to be sold, were enough to disarrange the average for the whole year. And, in other directions too, besides marring a sale by unfavorable weather on the day for auction, the rainy, gusty, summer, acted against a good demand. It produced a short crop of inferior wheat, hard to turn into money, even at a low price, and much of which was used as food for stock; it stained the barley and made this difficult to sell; it entailed bad fodder for cattle, and bad times for all occupiers of the land. And, as there was, in addition, an unsettled labour market, with incessant and apparently inevitable outbreaks of contagious disease—it is no wonder that large classes of farmers were discouraged, who might, otherwise, by the high price of meat, have been tempted to begin to breed. Such a combination of unfavorable circumstances can hardly occur again. The auctions have been held under difficulties from the very outset. Scanty hay and roots in 1874 made the markets, for store stock, sluggish in the spring; and the early sales of bulls in Ireland, which are every year increasing in importance, were seriously hurt in consequence. When the grass had come, business greatly improved; and, for a time, the prospects of a brilliant season were very good, especially for animals of those tribes with whose pedigrees all large buyers have been willing to acquaint themselves, and whose reputation has got itself generally accepted. For such, nearly up to mid-summer, the extraordinary standard of recent years was readily exceeded. Then, the other unfavourable causes were seen to be at work; and, with three or four exceptions, all the autumn appointments turned out to be lotteries, where the chances were greatly against the vendor. If, before the day fixed, his own cattle did not get the epidemic, those of some intending purchaser did. Often both would-be-seller, and would-be-buyer had, on briefest notice, to alter their plans, and repeated alterations impaired the readiness to attend. The list of sales, moreover, was very heavy. All these things must be taken into account before the total of the average of 1875 is compared with those of previous seasons. The great rise in the average is attributed to the still increasing value of many tribes of Bates blood in fashionable herds, selections from which are now coming

every two or three years into the market, and which includes some of the most excellent specimens from these herds. The late Mr. Torr's very large herd and enormous average, more than doubling the anticipations of the public, had also a great influence on the sum total and average for the year.

	£	s	d.
In 1873, breeders sold in public, 1022 animals,			
at an average of	68	16	4
In 1874, " " " 2165 " "	64	10	0
In 1875, " " " 2366 " "	68	11	1

This exceeds, by nearly one-half, that of the previous season, though this was in itself greatly in advance of any predecessor. Yet it should be added that all sales of bulls only, whether at public market (as at Birmingham and Cocker-mouth, Dublin, Cork, or in Scotland), or on private premises (as at Blennerhasset, Duncombe Park, &c.,) have been excluded from the list. The steady upward movement in value of the females—not merely of the tribes tracing to Mr. Bates' own herd, but of those which originated in the herds of the Messrs. Bell—has continued throughout the year. It was very conspicuous at the beginning, at Col. Kingscote's very successful draft sale; and it was to be seen at Messrs. Tunnicliffe's, Robinson's and Meatrin's at the end. I noticed, animals of fashionable descent in well known herds were more than ever in request. An American importing company bought largely at the spring sales, and during the summer; and at the early autumn sales, several Canadians were buyers, of good looking and fashionably bred animals, at high prices. Several good private sales were also made by American purchasers; a number of animals left the country for New Zealand, and a few for the continent; but the Australian ports are still closed against English stock; yet, notwithstanding the serious outbreak of disease last autumn, there are reports that it is in contemplation to allow live stock to be introduced into the Australian Colonies, at the close of 1876, after undergoing a strict and lengthened quarantine. The climax for admirers of the Bates blood was reached on the 25th of August; when the Earl of Dunmore's thirty nine animals made £672.8s. each, the highest average on record—one, Duchess bull fetching the unprecedented price of 4500 guineas (Lord Fitzhardinge), whilst another was bought for 3000 guineas (Mr. J. W. Larking). Great excitement was also caused among breeders generally by the Aylesby sale, one week later. The intimation that it was coming off, had improved the prices of cattle, tracing to Mr. Torr's herd, all the summer; and when eighty four lots sold at an average of £510.19s.; and the number, and the facts that all were home bred, that the names of some of the purchasers were very suggestive, and that the price

for one cow (Bright Empress, 2100 gs., Mr. L. C. Booth), was the highest ever given, in public, in England, for a female,—when all these circumstances were taken into account, an enthusiasm was created certainly not less than that evoked by the great Scotch sale. It is curious, but true, that the Scotch breeders bought little at Dunmore, and the Lincolnshire breeders nothing at Aylesby. Extraordinary as were some of the prices fetched by odd lots, here and there, in the course of the year, no other sale can be bracketed with these two great events of 1875.

And other noteworthy features of the season were the continued good competition and good prices for fine thick fleshed animals of short pedigree; even when these were not yet eligible for the Herd Book. At the late Mr. T. Harrison's and at Mr. W. S. Cragg's (Cawood's Roses) and at other sales in the Lake district, cattle of this class brought a brisk sale at steadily increasing value. Neither English nor foreign buyers, are, at present, at all favourably disposed to anything exceptional. Cattle, which one can see at a glance to be heavy fleshed and of good colour; cattle, which a glimpse at their pedigrees shows to be of fashionable descent, are still even at increasing prices,—readier of sale than ever. The stranger purchasers follow the home fashions. Anything tracing to Messrs. Bates' or Booth's herds, or the late Sir Charles Knightley's, has improved in demand and in price during 1875. Next to these, anything, which—in walking the ring, or in its paper pedigree—at once catches the eye, has made the greatest advance. But all Short-horns are worth more money. Pure breeding is still the remunerative breeding; and a wise disposition for such breeders not to grapple with too many kinds at once—is even more displayed than last year; and so is the odd inclination to go out of one's own neighbourhood when one means to buy."

At a recent meeting of the Nova Scotia Institute of Natural Science, the following Botanical Notices were read by Professor Lawson:—

1. *Calluna vulgaris* ("Scotch Heather").—This plant was found about fourteen years ago in Massachusetts, and a discussion ensued as to whether it was indigenous to America, or had been intentionally planted or accidentally introduced. In an old bundle of dried plants bought by Mr. H. C. Watson at a clearance auction at the Lignean Society's rooms in London, a dried specimen of heather was found that had been collected by Mr. Cormack in Newfoundland many years ago. In August, 1864, whilst travelling through the Island of Cape Breton, Professor Lawson heard of

the existence of Heather on Mr. Robertson's farm at St. Ann's, and, repairing thither, found the plant growing in a wet spot among native spruce trees. Specimens sent to England were found to differ slightly from the European plant, and the late Dr. Seeman gave the new name of *Calluna Atlantica* to distinguish the American form. Professor Asa Gray was satisfied that the *Calluna* was indigenous, and thought that the small patches found were the mere remnants of what had at one time been a more abundant and more widely diffused plant on the American continent,—that in fact the species was diminishing or slowly becoming extinct. Doubts having been expressed respecting Cormack's specimen, Mr. Murray searched for and found the plant growing in Newfoundland. Then a lady in Halifax produced a specimen gathered some years before on the Dartmouth hills, and another lady patiently searched for the spot and brought a fresh specimen with the information that only one plant remained. It became known that there were several patches at a particular spot in Point Pleasant Park. This habitat was carefully examined by Mr. Jack and Professor Lawson, and they found that the place had been originally a camp garden or cultivated plot, so that the heather could not be native there. A new locality, near East Bay, Cape Breton, was made known by the Hon. Mr. Fergusson, the Member for the County, who stated that the traditional history of the Heather there was that the early emigrants from the West Highlands had brought heather beds with them, the debris of which, when scattered around their dwellings, gave a profuse crop of heather in the following year. This seemed to show that the plant was not native at East Bay. Serious doubts were now entertained as to whether the Heather was not, after all, a plant foreign to the American soil. Meeting the Rev. Mr. Harvey as a fellow-passenger on board the "Nova Scotian," Prof. L. asked him to investigate the Newfoundland station, which he has obligingly done. He finds that: "at a place called Caplin Bay, 2 miles from Ferryland, which is about 35 miles south of St. John's, there is a bed of heather of no great extent, but healthy and flourishing. Ferryland is one of the oldest settlements in the Island. There Lord Baltimore built a house, 200 years ago, and made it the seat of Government. The tradition is, that some Scotch settlers, or possibly Irish, brought out beds filled with Heather, and the seeds produced the present growth. At all events it has been growing there for some generations. At Renew's, about 20 miles from Ferryland, there is also a quantity of heather, supposed to have been derived from the Caplin Bay growth, but this is only

conjecture. I am told that the heather is as fine as any on the hills of Scotland and shows no signs of degeneracy."

During the present winter, Prof. L. and Mr. Jack, examined another locality on the Peninsula of Halifax, and found that the heather was growing on land that had never been cultivated and that was covered with alders, kalmias, ledums, cranberries, and other unquestionable natives. The presumption is that the plant is native there. At another place, in the northern part of the Tower Woods, where the original cradle hills have never been disturbed, and where there is no trace of anything but indigenous vegetation, Mr. Robert Hoak, Senior, found the heather 35 years ago.

The conclusions that seem to be warranted by a careful consideration of all the facts are that the *Calluna* is really a native indigenous plant in Nova Scotia, and probably so in Newfoundland, that some of the stations are artificial, but that the plants were probably obtained from native patches, and that the popular local traditions attributing to the heather a foreign origin are mere conjectures, and not sufficiently sustained by historical facts to invalidate its claims to be considered indigenous.

2. *Sarothamnus Scoparius* ("Scotch Broom").—Whilst making enquiries respecting the alleged occurrence of Heather in various places, Prof. Lawson obtained information respecting several other interesting plants. One of these is the English Broom (*Sarothamnus Scoparius*), which Professor Macdonald informed him grew in some abundance on Boularderie Island, Cape Breton, on the property of Mr. Gemmell, at Little Bras d'Or. He subsequently heard from Judge Smith and Mr. Stephens of Halifax, of its occurrence to the westward, either in Queen's County or Shelburne. Judge Smith had seen it growing, and Mr. Stephens had seen bunches of it brought to Halifax on board the "M. A. Starr." Prof. Lawson's latest informant was Mr. Peter Jack, who has visited the place, and has kindly furnished the following particulars:—

"Having heard that Broom was growing rather plentifully in the neighbourhood of Shelburne, I took the opportunity of visiting the place last fall when waiting for the steamer for Halifax. The place is about two miles from Shelburne on the road to Halifax. The property is owned by a colored man who was from home, but his wife, Mrs. Jackman, took me to the spot. She takes a great pride in the broom, and is well pleased to shew it to visitors, of whom there are several each year, for its fame has gone abroad. It grows principally in one place at some distance from the road and in a sheltered position, covering about a quar-

ter of an acre. The cellar of the house of the original settler, by whom the broom is said to have been planted, and who had been dead about 70 years, still remains, and in it the Broom was growing. It evidently has fallen on congenial soil, for some of the clumps measured about four feet across and were fully that in height. It had also taken full possession of this spot, from which it passed to a considerable distance, now in large patches, now in small ones. There are numbers of last year's seedlings growing, shewing that it is not likely to die out. The colored lady says that it has spread fully four miles off in the direction of Jordan River Mills. Mr. Cunningham—evidently a Scotchman—is supposed to have planted the Broom some 80 years ago. Whether he was one of the original settlers I could not learn. The old colored lady said that when in flower the Broom was a beautiful sight, that she frequently went to where it was growing to look at it, and that she would stand for a long time admiring it. Her son, a young lad, also took a great interest in it, as well as in the trees growing around. He had a very good idea of how the broom grew, and spoke of the plants as tame or wild according; as they were transplanted or not.

Shelburne also is noted for two fine large Willow trees. They are growing in the streets—each of them measures about 15 feet in circumference and the spread of the branches is about 80 feet. They were planted by the late Mr. Cockaigne, Collector of Customs there, and are about 80 years old."

3. *Rhododendron maximum*. Professor Lawson then gave an account of the discovery near Sheet Harbour of *Rhododendron maximum*, of which Robert Morrow, Esq., had obtained a living plant. An extensive correspondence on the subject was laid on the table, the most instructive of which consisted of letters from Mr. D. W. Archibald to Mr. Morrow and Mr. Jack. These have already been published in the *Journal of Agriculture*.

WE have received the following communication respecting the Ayrshire Bull imported by the Halifax County Agricultural Society:—

*Meadowbank Cottage, }
Strathaven, 1st April, 1876. }*

DEAR SIR,—I beg to inclose to you pedigree of yearling Ayrshire Bull, forwarded to you last week. He is the one that I referred to in my last letter to you. His price to you is twenty-six pounds (£26), and, the Railway people here not being able to tell me his fare to Liverpool, I wrote to Messrs. De La Parolle & Co., to pay it, so that you will have it to pay to them. I think him a really first class

animal, and have as yet seen nothing approaching him in quality this season. I hope he will reach you safely and give satisfaction. I have been mostly from home for the last fortnight or I would have wrote to you sooner.

I remain, Yours faithfully,
JOHN FLEMING.

PEDIGREE OF AYRSHIRE BULL "YOUNG ROYALTY."

Bred by Mr. Vallance, Greathill, calved in March 1875. Got by "Emperor" out of "Empress." "Emperor" was exhibited at Strathaven when two years old, and gained first Prize, also Medal for the best male animal of the cow kind. "Empress" was exhibited uncalved at Wishaw Christmas Show in 1874, and gained first prize for best cow either in calf or in milk. "Young Royalty" having been exported before showing season, has had no opportunity of being exhibited.

JOHN FLEMING.

THE following thoroughbred animals have been registered in the Nova Scotian Stock Register since last month:—

AYRSHIRE BULLS.

CXXXVI.—THRIFT, brown and white, about $\frac{3}{4}$ white, triangle of white on forehead, white band about girth, muzzle and switch black. Calved March 4, 1875.

Sire—Wauhakum, No. 230 N. A. A. R.
Dam—Tilly, No. 491 N. A. A. R.

Raised by Messrs. Sturtevant Bros., South Framingham, and purchased from them by Colonel Starratt, Paradise. In writing to Col. S., Messrs. Sturtevant remark, in reference to the bull: "You may say to your friends that we are willing you and your neighbours should think the animal a sample of our Herd."

WAUSHAKUM, calved July 31, 1871.

Sire imported Habbie Simpson, 595 A. H. B., bred by Robert Lees, Esq., Cairngillan, Tarbolton, Scotland, imported by J. H. Morgan, Ogdensburg, N. Y., in July, 1870. His sire was bred by Mr. Parker, Broomlands; his dam by Mr. Rodger, Attiquin. Habbie Simpson gained the three first prizes at the shows of Kilmarnock, Ayr, and Glasgow. His sire and grandsire were both flecked red and white, while his dam and grand-dam were of the same colour.

TILLY, 794 A. H. B., calved July 6, 1863, sire imported Eglinton, 21 A. H. B., bred by John Parker, Nether Broomlands, imported in 1859 by H. H. Peters, sire the Carrick bull, taker of several prizes, dam Goldie, of Mr. Parker's celebrated Goldie family. Dam of TILLY, imported Maggie, 132 A. H. B., bred by James Peate, of Browcastle, Lanarkshire, sire Lawrence Drew's Sandy, dam the best cow in Mr. Peate's herd, which has been noted for good milkers for 30 years; imported in 1859 by H. H. Peters.

Tilly received a premium at the New England Agricultural Society's show.

CXXXVIII.—ROYAL CONNAUGHT, red and white, calved June 8, 1875.

Bred by and the property of Rev. Henry Pryor Almon, Fairfield, Windsor, N. S.

Sire—Lord Raglan (imported).

Dam—Nora C. F., CII. (bred by H. Mc-Monagle), by Coburg Farmer.

g. d.—Nora (672).

CXXXIX.—HARRY MOORE, red and white, calved 17th April, 1876.

Bred by and the property of Rev. Henry Pryor Almon, Fairfield, Windsor, N. S.

Sire—Lord Raglan.

Dam—Nora C. F., CII. (bred by H. Mc-Monagle), by Coburg Farmer.

g. d.—Nora (672).

CXXXIX.—YOUNG ROYALTY, calved March, 1875. Bred by Mr. Vallance, Greathill, Scotland. Imported by and the property of the Halifax County Agricultural Society.

Got by Emperor, (1st prize at Strathaven as a 2 year old, and medal as the best male animal of the cow kind.)

Dam—Empress, (1st prize at Wishaw in 1874 as best cow either in calf or milk.)

SHORT HORN HEIFERS.

CXXXIV.—BEAUTY, red and white, calved March 6th, 1874. Bred by and property of Edwin Chase, Cornwallis.

Sire—Ben Butler, 40 N. B. H. B.

Dam—Lily, by Constance Duke, 7753 A. H. B.

g. d.—Fairy Queen, by Oswald Gray, 514 C. H. B.

g. g. d.—Dairy Spot, by Snowball, 696 C. H. B.

g. g. g. d.—Queen, by Dallimore, 400 A. H. B.

CXXXV.—FLORA, color red, calved June 1st, 1875. Bred by and property of Edwin Chase, Cornwallis.

Sire—Lord York, 63 N. S. S. H. Reg.

Dam—Lily, by Constance Duke, 7753 A. H. B.

g. d.—Dairy Queen, by Oswald Gray, 514 C. H. B.

g. g. d.—Dairy Spot, by Snowball, 696 C. H. B.

g. g. g. d.—Queen, by Dallimore, 400 A. H. B.

CXXXVI.—MISS MAUD, red, calved June 24th, 1875. Bred by Edwin Chase, Cornwallis. The property of John W. Margeson, Esq.

Sire—Lord York, 63 N. S. S. H. Reg.

Dam—Rose, by Brunswick, 831 C. H. B.

g. d.—Dairy Queen, by Oswald Gray, 514 C. H. B.

g. g. d.—Dairy Spot, by Snowball, 696 C. H. B.

g. g. g. d.—Queen, by Dallimore, 300 A. H. B.

SHORT HORN BULL.

CXXXVII.—SECOND GWYNNE OF THE FOREST, roan, calved 17th April, 1876. Bred by and the property of Jno. B. Fraser, Shubenacadie.
Sire—Gwynne of the Forest, CXIX.
Dam—Rose Gwynne 4th, CXXIII, by Duke of Cumberland, 21584.
gr. d.—Rose Gwynne 2nd by Gen. Jackson 2nd, 17954.
g. g. d.—Rose Gwynne by Gen. Jackson, 14604.
g. g. g. d.—Rosebud by Maugo, 4359.
g. g. g. g. d.—Cowslip by Wallace.
g. g. g. g. d.—By Tom Gwynne, 5498.
g. g. g. g. g. d.—By Marmion.
g. g. g. g. g. g. d.—Bred by Mr. Matthews of Durham.

INTERNATIONAL EXHIBITION.

To the Editor of the N. S. Journal of Agriculture:

BUREAU OF AGRICULTURE,
Philadelphia, 28th March, 1876.

SIR,—The Centennial Commission are erecting a special annex for the exhibition of fruits; the dimensions of the structure, situated on the east of the Agricultural Building, and connected with it by a covered way, are one hundred and eighty by two hundred feet, affording room for the display of eight thousand dishes of fruit at periods of special displays. Although the exhibition of Pomological products will extend over the entire term of the Exhibition affording most marked manifestation of the wide range of our soils, and climates, still there will be certain periods especially designated for the display of particular fruits, which have special seasons, under the influences that more immediately pertain to the States near to Pennsylvania, and which from their proximity to the point of display, will afford the material for large and expressive exhibits.

The periods decided upon for these special displays are as follows, though any of the fruits enumerated will be received for exhibition either preceding or subsequent to these dates:—

Pomological products... May 16th to 24th.
Strawberries..... June 7th to 15th.
Raspberries & Black'ries. July 3rd to 8th.
South'n Pomo'l products. " 18th to 22nd.
Melons..... Aug. 22nd to 26th.
Peaches..... Sept. 4th to 9th.
North'n Pomo'l products. " 11th to 16th.
Nuts..... Oct. 23rd to Nov. 1st.

The Pomological annex will also be used for the exhibition of Vegetables, continuously and at the stated dates of June 20th to 24th for early summer vegetables, Sept. 19th to 23rd for autumn vegetables, and Oct. 2nd to 7th for Potatoes and Feeding roots.

Tables and dishes for both Fruits and Vegetables will be furnished by the Com-

mission free of charge, producers being simply requested to pay the charges for transportation.

You are respectfully requested to advance the display of Fruits and Vegetables as much as possible both at terms of stated displays and at all intermediate dates.

Yours respectfully,

BURNET LANDRETH,
Chief of Bureau of Agriculture.

Per C. Henry Roney.

PRUSSIA contains four high agricultural academies, with about 80 unpaid professorships; 41 lesser colleges, all connected with model farms; five special schools for the cultivation of meadows and for the scientific study of irrigation; one special school for the reclamation of swamp lands; two special schools for industrial agriculture; one school for horse-shoeing; one school each for silk raising, bee, and pisciculture; 20 agricultural stations (laboratoriums) for experiments and for garden culture; three higher colleges, and 12 secondary schools in which the culture of the grape vine is made a speciality. All these schools are connected with model farms for the practical education of students. That of the Academy of Proskau contains no less than 2450 acres of farming land, and 14,700 acres of forests. Bavaria, a country of 5,000,000 people, has 26 agricultural colleges, 269 associations for the advancement of agricultural scientific knowledge, and the celebrated polytechnic school at Munich contains a separate branch for higher agricultural instruction. The small kingdom of Württemberg (population 1,700,000), has 16 colleges, among them the school of Hohenheim of European fame, and 76 educational associations. Saxony (population 2,000,000), besides the agricultural college of the University of Leipsic, has 20 more schools and four higher colleges, one veterinary academy, several sub-stations for experiments, a very great number of agricultural associations and of evening schools for the instruction of farmers' youths. Baden, with a population of 1,400,000, has an agricultural college connected with the University of Heidelberg, 13 other colleges, four schools for garden and tree culture, one school for irrigation and drainage, one school for horse-shoeing, and 77 agricultural associations. Hesse-Darmstadt, whose population is not quite 850,000, contains nine agricultural colleges, among them that of the University of Giessen. Oldenburg (population 320,000) has three colleges. Saxe-Weimar, with 230,000 inhabitants, supports 15 professorships in the great University of Jena, another college at Toarzen, a model farm of practical in-

struction at Berka, a school for tree-culture at Marienhöhe, 75 associations, and a large number of evening schools, which are instructed through series of lectures, held by learned travelling professors. Similar conditions prevail in the rest of the smaller States. The whole of the German Empire to-day contains 184 agricultural colleges, of which number eight are connected with the great Universities of Leipsic, Halle, Göttingen, Berlin, Königsberg, Heidelberg, Giessen, and Jena; five colleges for horticulture, 75 practical middle schools for agriculture, 28 middle-schools for garden culture, 16 colleges for special branches, besides an immense number of larger and smaller associations, evening schools for the further education of farmers' youths, lecture courses by travelling professors, &c.

It is a fact shown before the British Parliament, that "while the rental of land in Ireland had doubled during the previous hundred years, and that of England tripled, the rental of Scotland had sextupled itself in the same time." This is attributed mainly to the vastly superior school system which Scotland has possessed, and the skill and enterprise it has fostered among the people. It is a fact that a truck-farmer within a dozen miles of any of our large cities, will get clean profit of two or three hundred dollars from an acre of land, while the average old style farmer, hardly gets that amount of profit from his hundred acres or more. These facts are worth studying by the still large class who do not see the use of agricultural papers and teaching, etc., think muscle is the main thing in successful farming. The truck-farmer studies his market, knows what is wanted, learns how to raise it, when and where to sell it, believes in manure, buys it, believes in knowing all about his business, takes his paper, reads and thinks, don't kick at facts because they are printed, keeps his eyes open, and drinks in knowledge from men and books. He keeps learning and succeeds in his business. There is still a large class of our farming population completely stereotyped. Many take no agricultural paper, attend no fairs, no farmers' club, try no experiments, have no faith in improved tools and stock, and are hardly able to tell at the end of the year whether they lose or gain in their business. Success in cultivating the soil is already, and is to be more and more, dependent upon brains. Men who read and think most, plan most wisely, and execute most skillfully, will succeed best. We need all the help we can get from the teachings of science, from journals, from fairs and clubs, as well as from the daily experience of the fields.—*American Agriculturist.*

VISCOUNT OXFORD, by Sixth Baron Oxford, out of the five hundred guinea cow Graceful Duches, is in service this season at Lucyfield Farm, within two miles of Beaver Bank Station. Fee \$5.00. Cows may remain in pasture for three or four weeks.

GENERAL REGULATIONS AND PRIZE LIST
FOR THE
PROVINCIAL EXHIBITION,

To be held at Truro, Nova Scotia,
ON
Monday, Tuesday, Wednesday, Thursday,
and Friday.

October 9th, 10th, 11th, 12th and 13th, 1876.

Held by authority of the Provincial Government and Legislature and under the auspices of the Central Board of Agriculture, under the immediate direction and management of the Colchester Exhibition Committee.

GENERAL COMMITTEE.

W. M. Blair, Esq., Chairman; Israel Longworth, Esq., W. N. Dickson, Esq., J. B. Fraser, Esq., C. P. Blanchard, Esq., G. A. Layton, Esq., Gardiner Clish, Esq., J. F. Blanchard, Esq., Treasurers. W. D. Dimock, Esq., Secretary, with the Presidents and Secretaries of all the Agricultural Societies in the County.

SPECIAL COMMITTEES FOR CONDUCTING EXHIBITION.

CLASS. I. II. III. IV. V.—J. B. Fraser, Esq., W. N. Dickson, Esq., W. M. Blair, Esq.

CLASS. VI. VII. VIII.—W. M. Blair, Esq., C. P. Blanchard, Esq., W. N. Dickson, Esq.

CLASS. IX. X.—J. F. Blanchard, Esq., Geo. A. Layton, Esq., Gardiner Clish, Esq.

CLASS. XI. XII.—J. B. Calkin, Esq., D. H. Muir, Esq., M. D., Israel Longworth, Esq.

LODGING.—Jas. D. Ross, Esq., R. Craig, Esq., Allan Loughhead, Esq., Wm. Dickson, Esq., Geo. P. Nelson, Esq., W. B. Alley, Esq., Geo. Ross, Esq.

JUDGES.—W. M. Blair, Esq., W. D. Dimock, Esq.

POLICE AND BANDS.—Geo. A. Layton, Esq., W. M. Blair, Esq., Gardiner Clish, Esq.

TICKETS AND ADVERTISING.—Israel Longworth, Esq., W. D. Dimock, Esq.

PROGRAMME, CEREMONIES, &c.—J. B. Calkin, Esq., Sheriff Blanchard, His Worship the Mayor.

FODDER AND REFRESHMENTS.—Geo. A. Layton, Esq., J. F. Blanchard, Esq., C. P. Blanchard, Esq.

RAIL AND BOAT ARRANGEMENTS.—Luther B. Archibald, Esq., W. M. Blair, Esq., W. D. Dimock, Esq.

N. B.—All communication relating to matters connected with the Exhibition, must be addressed to

W. D. DIMOCK,
Sec'y Exhibition Committee.

Competition open to the whole Province.
GENERAL REGULATIONS.

1. The exhibition grounds and buildings will be opened on Monday, October 9th, at 9 o'clock, a. m., and continue open during the day till sunset, for the reception and arrangement of exhibition articles and animals. Exhibitors on arrival will immediately report themselves at the Secretary's office, who, with assistance of Committee of Management, will allot appropriate pens or space for their exhibits. This day none but members of the Exhibition Committee, officials, exhibitors and necessary attendants will be admitted.

2. Live animals, flowers and perishable articles will be received on Tuesday morning from sunrise up to 9 o'clock, unavoidable delays to be dealt with, at the discretion of the Committee.

3. The exhibition will be open to the public on Tuesday, the 10th, at 2 o'clock, p. m., when an opening address will be given. The grounds and building will be open each succeeding day to visitors from 9 a. m. Admission 25 cents. Children 10 cents. Bands of music will be in attendance daily.

4. The Judges will meet at the Secretary's office on Tuesday, the 10th, at 9 a. m., obtain entry books, and proceed to award premiums. On completing their work, which must be finished by Wednesday, they will personally show their books to the Secretary and will be furnished with the requisite Prize Tickets, which it will be their duty to place carefully, and as soon as possible, upon the various articles, before giving up their books and report.

5. Exhibits may be removed from the grounds on Friday afternoon at 3 o'clock, immediately after the closing address has been delivered. The Treasurer will commence to pay premiums on the grounds at 9 a. m., on Friday.

6. Every intending competitor must transmit to the Secretary, not later than the dates mentioned below, an entry paper, containing a correct list of the animals or articles which he intends to exhibit, together with certificate of pedigree in the case of thorough-bred stock, or else a reference to the registry numbers of the Nova Scotia Stock Register. Any competitor failing to transmit his entry certificate at the proper time will be excluded from competition. No fee is charged for the entry of animals or articles.

7. Horses, cattle, sheep, swine and poultry, must be entered on or before Saturday, 9th Sept., one month preceding the show, and the age of each animal should be stated in years and months, at date of exhibition; the precise date of birth to be given when necessary.

8. Plants and Flowers, Grain, Roots,

Vegetables, and other Field and Garden products, Agricultural Implements, and manufactures of all kinds, articles not elsewhere enumerated, may be entered up to Saturday, 30th September, one clear week preceding the show.

9. Exhibitors of bulky articles, requiring extensive or unusual accommodation, should communicate with the Secretary on or before Monday, 11th September, in order that there may be time for the committee to make the requisite arrangements.

10. All articles for exhibition must be on the grounds on Monday, 9th October, after which day none will be received, except live stock, fruit, flowers, and other perishable articles, which will be received up to 9 a. m., on Tuesday, 10th. All necessary erections, and bulky articles requiring to be put together on the grounds or in the buildings, must be finished, and all waste material and rubbish removed, not later than 12 o'clock, on Saturday, 7th Oct., as no such work can be permitted during the show week.

11. Exhibitors will in every case give the necessary personal attention to whatever they exhibit. Necessary attendants upon stock, and workmen actually required to attend to machinery, will be furnished with admission tickets with their names written upon them, which tickets will be good at the Exhibitor's Gate only during the show; such tickets to be obtained from the Secretary by personal application.

12. All articles for competition shall be the production or manufacture of the Province, except where otherwise mentioned; field produce must be the growth of 1876 and all live stock must have been owned and kept in the Province not less than three months prior to the Exhibition.

13. Articles from other countries, and especially from other Provinces of the Dominion, are solicited, but not for competition. The judges will have the power of granting a limited number of honorary prizes for such articles.

14. All expenses incurred in the conveyance of articles or animals to and from Truro, placing them in the Exhibition, and maintaining them while there, shall be borne by the exhibitors, who must likewise undertake all risk of loss or damage. Articles must in every case be delivered and unpacked free of expense to the committee.

15. Each exhibitor will receive from the Secretary an entry ticket for every article to be exhibited by him, and he is required to affix such ticket upon the article or animal which he exhibits, or on the stalls.

16. When fewer than three competitors appear for any prize, and where the articles exhibited are of inferior merit,

the judges shall have the discretionary power of awarding or withholding prizes or reducing their values. No articles can take two prizes or be exhibited in two collections, unless the contrary is distinctly expressed in the prize list. In estimating the merits of live stock the judges are requested to take age into consideration where animals of different ages are competing against each other.

17. In case of ties, the judges will award the highest prizes to animals from largest herds on the ground and to roots and grains from largest areas, upon proof furnished Secretary by exhibitors upon entering animals, &c., for exhibition. The committee are required to reject articles which they shall consider unworthy or unfit for exhibition.

18. No person shall be allowed to enter for exhibition more than one specimen (or required quantity) in any one section or class. This rule is not to apply to animals, but to apply to all kinds of grain, vegetable products, plants and flowers, fruits, implements, home manufactures, &c.

19. During the Exhibition all vegetable products and manufactured articles shall be under the control of the Exhibition Superintendents, and all live stock shall be taken charge of by their owners, —the Superintendents giving all practicable assistance in providing the necessary accommodation and food. Hay, straw, oats, and roots will be supplied on the grounds at reasonable prices, and there will be a free supply of water.

20. All articles exposed for sale shall have the prices affixed, and be sold by the owners, or by parties appointed by them for that purpose. No auctioneer will be allowed to sell animals or articles on the grounds or in the building without the written permission of the Chairman or Secretary of the General Committee, and the time and place of sale specified in such permission must be strictly adhered to.

21. Articles sent for competition or exhibition shall not be removed from the exhibition rooms or grounds till the time appointed, under forfeiture of any prizes or awards that may have been made to the respective exhibitors.

22. Any person who shall attempt to interfere with the judges while in the discharge of their duties, or who shall attempt to influence their decisions by his presence or remarks, or who shall afterwards, within the limits of the show grounds, use any contemptuous or abusive language, in consequence of any award made, shall forfeit his right to any premiums to which he might otherwise be entitled, and be otherwise dealt with as the Committee may determine.

23. An exhibitor who may feel aggrieved in consequence of any accidental irregularity, is requested simply to draw

the attention of the Superintendent of the Department, or of some member of the Committee, to such, without entering into any discussion apt to cause hindrance or distraction. Should he not receive what he may consider sufficient redress on the spot, he must, nevertheless, abide by the decision given, but he may, at the close of the exhibition, bring the matter before the Committee by written statement, with a view to full enquiry.

24. No animal can be admitted within the enclosure that has not been previously entered in accordance with Regulations 6 and 7, and animals of an inferior character, unworthy of a place in the exhibition, will not be admitted under any circumstances.

25. Space will be provided for any article that may be forwarded for exhibition, subject to approval of Committee, apart from such as are mentioned in the Prize List. Awards of merit will be offered for such, all of which exhibit. must be entered on the Secretary's Book in the manner prescribed for those that come within the Prize List.

PRIZE LIST.

Class 1—Horses.

In awarding the prizes for Horses, the Judges are requested to take into account the size, training, style, and soundness, as well as breed, and not to award any prize unless they consider the animal worthy of it.

Colls exhibited with their dams in sections 6, 7, and 8, are eligible to compete in section 17; but no other animal will be allowed to compete in more than one section.

Stallions.

Section.

1. Best thorough-bred stallion, 4 years old and upwards.....	\$40 00
2nd do do.....	25 00
2. Best stallion to breed horses for agricultural and draft purposes, 4 years old and upwards.....	40 00
2nd do do.....	25 00
3rd do do.....	15 00
3. Best stallion to breed horses for trotting, carriage, or road, 4 years and upwards, to be shown in carriage....	35 00
2nd do do.....	20 00
3rd do do.....	15 00
4. Best stallion to breed horses for agricultural and draft purposes, 3 years and under.....	25 00
2nd do do.....	18 00
3rd do do.....	12 00
5. Best stallion to breed horses for trotting, carriage, or road, 3 years and under.....	25 00
2nd do do.....	18 00
3rd do do.....	10 00

Mares.

Brood Mare and Colt, or evidence that a Colt has been reared.

6. Best thorough-bred brood mare.....	30 00
2nd do do.....	20 00
7. Best brood mare for breeding horses for agricultural purposes.....	30 00
2nd do do.....	20 00
3rd do do.....	15 00
8. Best brood mare for breeding horses for trotting, road, or carriage purposes, to be shown in carriage.....	30 00
2nd do do.....	20 00
3rd do do.....	15 00

Saddle, Carriage, and Draft Horses.

Section.

9. Best saddle horse, mare or gelding, under saddle.....	20 00
2nd do do.....	15 00
10. Best pair matched carriage horses in carriage.....	25 00
2nd do do.....	20 00
3rd do do.....	15 00
11. Best single carriage horse (not one of a pair) driven in carriage.....	20 00
2nd do do.....	15 00
3rd do do.....	10 00
12. Best pair draft horses.....	30 00
2nd do do.....	20 00
13. Best single draft horse.....	15 00
2nd do do.....	10 00

Colls.

Stud Book Pedigree.

14. Best thorough-bred colt, 3 years old....	18 00
2nd do do.....	10 00
15. Best thorough-bred colt, 2 years old....	15 00
2nd do do.....	12 00
16. Best thorough-bred colt, 1 year old....	12 00
2nd do do.....	10 00
17. Best thorough-bred sucking colt.....	10 00
2nd do do.....	8 00

Other than thorough-bred.

18. Best colt, filly, or gelding, 3 years old	15 00
2nd do do.....	12 00
3rd do do.....	10 00
19. Best colt, filly, or gelding, 2 years old	12 00
2nd do do.....	8 00
3rd do do.....	4 00
20. Best colt, filly, or gelding, 1 year old	10 00
2nd do do.....	8 00
3rd do do.....	4 00
21. Best sucking colt.....	8 00
2nd do.....	6 00
3rd do.....	4 00

Class 2—Cattle.

THOROUGH-BRED STOCK.

Certified Pedigree.

Short Horn Durhams.

BULLS.

Section.

1. Best thorough-bred Durham bull, 3 years old and upwards.....	\$30 00
2nd do do.....	20 00
3rd do do.....	15 00
2. Best thorough-bred Durham bull, 2 years old.....	15 00
2nd do do.....	10 00
3. Best thorough-bred Durham bull, 1 year old.....	15 00
2nd do do.....	10 00
4. Best thorough-bred Durham bull calf....	10 00
2nd do do.....	8 00

COWS.

5. Best thorough-bred Durham cow.....	20 00
2nd do do.....	15 00
3rd do do.....	10 00
6. Best thorough-bred Durham heifer, 2 years old.....	12 00
2nd do do.....	10 00
7. Best thorough-bred Durham heifer, 1 year old.....	12 00
2nd do do.....	10 00
8. Best thorough-bred Durham heifer calf 10 00	10 00
2nd do do.....	8 00

Ayrshires.

BULLS.

9. Best thorough-bred Ayrshire bull, 3 years old or upwards.....	25 00
2nd do do.....	18 00
3rd do do.....	15 00
10. Best thorough-bred Ayrshire bull, 2 years old.....	15 00
2nd do do.....	10 00
11. Best thorough-bred Ayrshire bull, 1 year old.....	15 00
2nd do do.....	10 00
12. Best thorough-bred Ayrshire bull calf 10 00	10 00
2nd do do.....	8 00

COWS.

Section.

12. Best thorough-bred Ayrshire cow, 3 years old	\$20 00
2nd do do	15 00
3rd do do	10 00
14. Best thorough-bred Ayrshire heifer, 2 years old	12 00
2nd do do	10 00
15. Best thorough-bred Ayrshire heifer, 1 year old	12 00
2nd do do	10 00
16. Best thorough-bred Ayrshire heifer calf	10 00
2nd do do	8 00

Devons.

BULLS.

17. Best thorough-bred Devon bull, 3 years old and upwards	25 00
2nd do do	18 00
3rd do do	15 00
18. Best thorough-bred Devon bull, 2 years old	15 00
2nd do do	10 00
19. Best thorough-bred Devon bull, 1 year old	15 00
2nd do do	10 00
20. Best thorough-bred Devon bull calf	10 00
2nd do do	8 00

COWS.

21. Best thorough-bred Devon cow	20 00
2nd do do	15 00
3rd do do	10 00
22. Best thorough-bred Devon heifer, 2 years old	12 00
2nd do do	10 00
23. Best thorough-bred Devon heifer, 1 year old	12 00
2nd do do	10 00
24. Best thorough-bred Devon heifer calf	10 00
2nd do do	8 00

Alderneys or Jerseys.

BULLS.

25. Best thorough bred Alderney bull, 3 years old and upwards	25 00
2nd do do	18 00
3rd do do	15 00
26. Best thorough-bred Alderney bull, 2 years old	15 00
2nd do do	10 00
27. Best thorough-bred Alderney bull, 1 year old	15 00
2nd do do	10 00
28. Best thorough-bred Alderney bull calf	10 00
2nd do do	8 00

COWS.

29. Best thorough-bred Alderney cow	20 00
2nd do do	15 00
3rd do do	10 00
30. Best thorough-bred Alderney heifer, 2 years old	12 00
2nd do do	10 00
31. Best thorough-bred Alderney heifer, 1 year old	15 00
2nd do do	10 00
32. Best thorough-bred Alderney heifer calf	10 00
2nd do do	8 00

Herds.

A herd to consist of one bull and five females, two of which must be cows.

33. Best herd thorough-bred Durhams	50 00
34. do do Devons	40 00
35. do do Ayrshires	40 00
36. do do Alderneys	40 00

Grade Cattle.

BULLS.

37. Best grade bull, 3 years old and upwards	12 00
2nd do do	8 00
38. Best grade bull, 2 years old	12 00
2nd do do	8 00
39. Best grade bull, 1 year old	8 00
2nd do do	5 00
40. Best grade bull calf	5 00

COWS.

41. Best grade cow, 5 years old and upwards	15 00
2nd do do	14 00
3rd do do	12 00

Section.

42. Best grade cow, 3 years old and under 5	15 00
2nd do do	14 00
3rd do do	12 00
4th do do	10 00
5th do do	8 00
43. Best grade cow, under 3 years	15 00
2nd do do	12 00
3rd do do	10 00
4th do do	8 00
5th do do	6 00
14. Best grade heifer, 2 years old	10 00
2nd do do	8 00
3rd do do	7 00
4th do do	6 00
5th do do	5 00
45. Best grade heifer, 1 year old	10 00
2nd do do	8 00
3rd do do	6 00
4th do do	5 00
5th do do	4 00
46. Best grade heifer calf	8 00
2nd do do	6 00
3rd do do	5 00
4th do do	4 00
47. Best fat cow of any age	20 00
2nd do do	10 00

OXEN.

48. Best pair of oxen, largest and fattest	50 00
2nd do do	40 00
3rd do do	25 00
49. Best single ox or steer, largest and fattest	20 00
2nd do do	10 00
50. Best pair of steers, 4 years old	25 00
2nd do do	15 00
3rd do do	10 00
51. Best pair working oxen, 4 years old and upwards	30 00
2nd do do	25 00
3rd do do	15 00
4th do do	12 00
52. Best pair steers, 3 years old	25 00
2nd do do	15 00
3rd do do	10 00
4th do do	8 00
53. Best pair steers, 2 years old	20 00
2nd do do	14 00
3rd do do	10 00
4th do do	8 00
54. Best pair steers, 1 year old	15 00
2nd do do	12 00
3rd do do	10 00
4th do do	8 00
55. Best pair steer calves	12 00
2nd do do	10 00
3rd do do	8 00
4th do do	6 00

The following Prizes are offered for Grades obtained by crossing our native cattle with thorough bred animals of particular breed; but any mixture of Short Horn or Durham blood will disqualify from competition for these Prizes:—

56. Best Grade Devon Cow, 3 years old or upwards	14 00
2nd do do	10 00
57. Best Grade Devon Heifer, under 3 years	10 00
2nd do do	8 00
58. Best Grade Ayrshire Cow, 3 years old or upwards	14 00
2nd do do	10 00
59. Best Grade Ayrshire Heifer, under 3 years	10 00
2nd do do	8 00
60. Best Grade Alderney or Jersey Cow, 3 years old or upwards	14 00
2nd do do	10 00
61. Best Grade Alderney or Jersey Heifer, under 3 years	10 00
2nd do do	8 00

Class 3—Sheep.

Short Wool.

Thorough-bred.

Section.

1. Best Down or Shropshire ram, 2 shears and over	8 00
2nd do do	6 00
2. Best Down or Shropshire ram shearing	7 00
2nd do do	5 00
3. Best Down or Shropshire ram lamb	6 00
2nd do do	4 00

Section.

4. Best 2 Down or Shropshire ewes, 2 shears and over	8 00
2nd do do	6 00
5. Best 2 Down or Shropshire ewes, shearing	7 00
2nd do do	5 00
6. 2 Best Down or Shropshire ewe lambs	6 00
2nd do do	4 00

Long Wool.

Thorough-bred.

7. Best ram, 2 shears and over	10 00
2nd do do	8 00
8. Best ram, shearing	8 00
2nd do do	6 00
9. Best ram lamb	7 00
2nd do do	5 00
10. Best 2 ewes, 2 shears and over	10 00
2nd do do do	8 00
11. Best 2 ewes, shearing	8 00
2nd do do	6 00
12. Best 2 ewe lambs	7 00
2nd do do	5 00

The judges will be guided by purity of blood in awarding the above prizes.

Grades, Crosses, &c.

Section.

13. Best ram, 2 shears and over	10 00
2nd do do do	8 00
3rd do do do	6 00
4th do do do	5 00
14. Best ram, shearing	9 00
2nd do do	8 00
3rd do do	5 00
4th do do	4 00
15. Best ram lamb	7 00
2nd do do	6 00
3rd do do	4 00
4th do do	2 00
16. Best 2 ewes, two shears and over	10 00
2nd do do do	8 00
3rd do do do	6 00
4th do do do	4 00
17. Best two ewes, shearings	8 00
2nd do do do	6 00
3rd do do do	4 00
4th do do do	3 00
18. Best two ewe lambs	7 00
2nd do do do	6 00
3rd do do do	5 00
4th do do do	4 00
19. Best wether, not over three shears	9 00
2nd do do do	7 00

Class 4—Swine.

Berkshires.

Thorough-bred.

1. Best boar, two years and over	8 00
2nd do do do	6 00
2. Best boar, 1 year and under 2 years	7 00
2nd do do do	5 00
3. Best boar, under one year	6 00
2nd do do do	4 00
4. Best sow, two years and over	8 00
2nd do do do	6 00
5. Best sow under two years	7 00
2nd do do do	5 00

Yorkshires (Ellesmere.)

6. Best large White Ellesmere Boar	8 00
2nd do do do	6 00
7. Best large White Ellesmere Sow	8 00
2nd do do do	6 00

White Chesters.

Thorough-bred.

8. Best boar, over two years	8 00
2nd do do do	6 00
9. Best boar, one year and under two	7 00
2nd do do do	5 00
10. Best boar, under one year	6 00
2nd do do do	4 00
11. Best sow, two years and over	8 00
2nd do do do	6 00
12. Best sow, under two years	7 00
2nd do do do	5 00

Suffolk and Small Yorkshires.

Section.		
13. Best boar, over two years.....	28	00
2nd do do do	6	00
14. Best boar, one year and under two	7	00
2nd do do do do	5	00
15. Best boar, under one year.....	6	00
2nd do do do	4	00
16. Best sow, two years and over	8	00
2nd do do do	6	00
17. Best sow, under two years	7	00
2nd do do do	5	00

All other Breeds and Crosses.

18. Best boar over 2 years old.....	3	00
2nd do do	6	00
19. Best boar, 1 year and under 2 years...	8	00
2nd do do do	6	00
20. Best boar, under 1 year old.....	7	00
2nd do do	5	00
21. Best sow, over 2 years old.....	8	00
2nd do do	6	00
22. Best sow, 1 year and under 2 years...	8	00
2nd do do do	6	00
23. Best sow, under 1 year.....	7	00
2nd do do	5	00
24. Best fat hog	15	00
2nd do	10	00
3rd do	8	00
25. Best breeding sow & litter (not fewer than five pigs) of any breed or age...	18	00
2nd do do do	13	00

Class 5—Poultry.

A trio means one male and two females.

The exhibitors of Fowls must attend to feeding, watering and cleaning, as in the case of other live stock.

Section.		
1. Best trio turkeys.....	5	00
2nd do	3	00
2. Best trio of geese.....	5	00
2nd do	3	00
3. Best trio of ducks	4	00
2nd do	2	00
4. Best trio Cochín China fowls	3	00
2nd do do	2	00
5. Best trio Brahmas (light).....	3	00
2nd do do	2	00
6. Best trio of Brahmas (dark).....	3	00
2nd do do	2	00
7. Best trio of Game.....	3	00
2nd do	2	00
8. Best trio of Dorkings.....	3	00
2nd do	2	00
9. Best trio Hamburgs	3	00
2nd do	2	00
10. Best trio of Spanish	3	00
2nd do	2	00
11. Best trio of Bantams.....	3	00
2nd do	2	00
12. Best trio of White Leghorns	3	00
2nd do do	2	00
13. Best trio barn door fowl	3	00
2nd do do	2	00
14. Best half doz. Spring Chickens, any breed.....	3	00
2nd do do do	2	00
3rd do do do	1	00
15. Best trio of Guinea fowl.....	2	00
16. Best Peacock and Mate.....	2	00
17. Best pair of Pigeons.....	2	00
2nd do	1	00

Class 6—Roots and Vegetables.

Roots must be cleaned and topped and surplus roots and fibres removed before being taken into the grounds or building.

Section.		
1. Best half bushel table potatoes, early white.....	2	00
2nd do do do	1	50
3rd do do do	1	00
2. Best half bushel table potatoes, blue	2	00
2nd do do	1	50
3rd do do	1	00

Section.

3. Best half bushel table potatoes, other sorts	2	00
2nd do do	1	50
3rd do do	1	00
4. Best bushel stock potatoes, white	2	00
2nd do do	1	50
3rd do do	1	00
5. Best bushel stock potatoes, coloured	2	00
2nd do do	1	50
3rd do do	1	00
6. Best collection of potatoes, half dozen each sort carefully named and raised by exhibitor.....	4	00
2nd do do	3	00
7. Best 3 doz. largest potatoes of any sort or sorts.....	2	00
2nd do do	1	50
3rd do do	1	00
8. Best four kinds of potatoes, a peck of each sort, for table and stock use, varieties to be named, from a field of same not less than three acres. Size of field to be certified by a member of the Board of Agriculture or a Justice of the Peace.....	4	00
2nd do do	3	00
3rd do do	2	00
4th do do	1	00
9. Best collection roots, other than potatoes, 6 of each sort, from field of same, not less than one acre, size of field to be certified by a member of the Board of Agriculture or a Justice of the Peace.....	4	00
2nd do do	3	00
3rd do do	2	00
4th do do	1	00
10. Best six heads white solid celery	2	00
2nd do do	1	00
11. Best six heads red solid celery.....	2	00
2nd do do	1	00
12. Best dozen swedish turnips, green top	2	00
2nd do do	1	00
13. Best dozen swedish turnips purple top	2	00
2nd do do	1	00
14. Best dozen mangold wurtzel, long red	2	00
2nd do do	1	00
15. Best dozen turnip-rooted mangold wurtzel.....	2	00
2nd do do	1	00
16. Best brace of cucumbers	1	50
2nd do do	1	00
17. Best two marrow squash	1	50
2nd do do	1	00
18. Best two hubbard squash	1	50
2nd do do	1	00
19. Best two pumpkins.....	2	00
2nd do do	1	50
20. Best two pumpkins.....	2	00
2nd do do	1	50
21. Best largest pumpkin.....	2	00
2nd do	1	50
3rd do	1	00
22. Best dozen potato onions	1	50
2nd do do	1	00
23. Best dozen Eschallots.....	1	50
2nd do do	1	00
24. Best dozen spanish red skin onions... ..	1	50
2nd do do	1	00
25. Best dozen spanish white skin onions	1	50
2nd do do	1	00
26. Best dozen Altringham carrots.....	2	00
2nd do do	1	50
3rd do do	1	00
27. Best dozen carrots of any variety, not enumerated	2	00
2nd do do	1	50
28. Best dozen long orange carrots	1	50
2nd do do	1	00
29. Best dozen early horn carrots	1	50
2nd do do	1	00
30. Best dozen white Belgian carrots.....	1	50
2nd do do	1	00
31. Best dozen long blood beet (true).....	1	50
2nd do do	1	00
32. Best dozen turnip-rooted blood beet... ..	1	50
2nd do do	1	00
33. Best dozen other sort of beet.....	1	50
2nd do do	1	00
34. Best dozen parsnips	1	50
2nd do do	1	00
35. Best three heads of cauliflower.....	2	00
2nd do do	1	50

Section.

36. Best 3 heads drumhead cabbage.....	1	50
2nd do do	1	00
37. Best three heads Savoy	1	50
2nd do do	1	00
38. Best three heads red cabbage.....	1	50
2nd do do	1	00
39. Best three heads other sort	1	50
2nd do do	1	00
40. Best dozen salsify.....	1	50
2nd do	1	00
41. Best half dozen winter radishes	1	50
2nd do do	1	50
42. Best collection of tomatoes not exceeding six sorts, 3 each.....	3	00
2nd do do	2	00
43. Best dozen tomatoes.....	2	00
2nd do	1	50
3rd do	1	00
44. Best brace of water melons... ..	1	50
2nd do do	1	50
45. Best brace citrons	1	50
2nd do	1	50
46. Best brace musk melons	1	50
2nd do do	1	00

*All Tomatoes, Squashes and Cucumbers must have been grown in the open air, without any protection after the 20th June.

Class 7—Grain and Field Seeds, Grain Manufactures, &c.

Section.		
1. Best bushel winter wheat.....	3	00
2nd do do	2	00
3rd do do	1	00
2. Best bushel spring wheat	5	00
2nd do do	4	00
3rd do do	3	00
4th do do	2	00
5th do do	1	00
3. Best bushel white oats.....	4	00
2nd do do	3	00
3rd do do	2	00
4th do do	1	00
4. Best bushel black oats	4	00
2nd do do	3	00
3rd do do	2	00
4th do do	1	00
5. Best bushel yellow oats.....	4	00
2nd do do	3	00
3rd do do	2	00
4th do do	1	00
6. Best bushel oats of any new or improved sorts, introduced into the Province within the last six years... ..	4	00
2nd do do do	3	00
3rd do do do	2	00
4th do do do	1	00
7. Best bushel barley.....	4	00
2nd do	3	00
3rd do	2	00
4th do	1	00
8. Best bushel barley (Sicilian).....	4	00
2nd do do	3	00
3rd do do	2	00
9. Best bushel rye	3	00
2nd do	2	00
3rd do	1	00
10. Best bushel buckwheat, rough.....	3	00
2nd do do	2	00
3rd do do	1	00
11. Best bushel buckwheat, smooth	3	00
2nd do do	2	00
3rd do do	1	00
12. Best 24 ears Indian corn	3	00
2nd do do	2	00
3rd do do	1	00
13. Best bushel field peas.....	3	00
2nd do do	2	00
3rd do do	1	00
14. Best half bushel coloured beans.....	3	00
2nd do do do	2	00
3rd do do do	1	00
15. Best half bushel white beans	3	00
2nd do do	2	00
3rd do do	1	00
16. Best half bushel horse beans.....	2	00
17. Best bushel timothy seed.....	4	00
2nd do do	3	00
3rd do do	2	00
4th do do	1	00
18. Best bushel red clover seed	5	00
2nd do do	3	00

Section.

19. Best 10 lbs. Swedish turnip seed.....	\$ 3 00
2nd do do do	2 00
20. Best 10 lbs. Blood Beet seed.....	3 00
2nd do do do	3 00
21. Best 5 lb. carrot seed, field	3 00
2nd do do do	2 00
22. Best 10 lbs. mangold wurtzel seed.....	3 00
2nd do do do	2 00
23. Best one dozen heads broom corn	2 00
2nd do do do	1 00
24. Best half bushel flax seed.....	2 00
2nd do do do	1 00
25. Best flour of Nova Scotian wheat ground in a Nova Scotia mill, 1 bbl. 5 00	
2nd do do do	3 00
26. Best flour or meal of N. S. oats, 100 lbs 4 00	
2nd do do do	2 00
27. Best flour or meal of Nova Scotia buck-wheat, 100 lbs.....	3 00
2nd do do do	2 00
28. Best flour or meal Nova Scotia barley, 100 lbs.....	3 00
2nd do do do	2 00
29. Best assortment of Pilot Breads and Fancy Biscuit.....	6 00
2nd do do	4 00
30. Best pot Barley, not less than 25 lb... 2 00	
2nd do do do	1 00
31. Best pearl barley, not less than 25 lb .. 3 00	
2nd do do do	2 00
32. Best honey in comb, not less than 10 lb. 2 00	
2nd do do do	1 00
33. Best clear honey in jar.....	2 00
2nd do do	1 00
34. Best 5 lb. Bees Wax	2 00
2nd do do	1 00
35. Best maple sugar, not less than 10 lb... 2 00	
2nd do do do	1 00
36. Best bundle of flax in rrw state	2 00
2nd do do do	1 00
37. Best scutched flax, not less than 5 lb... 3 00	
2nd do do do	2 00
3rd do do do	1 00

Class 8—Dairy Produce.

Section.

1. Best tub, firkin or crock of butter, salted, not less than 20 lbs	\$ 8 00
2nd do do do	6 00
3rd do do do	4 00
4th do do do	3 00
5th do do do	2 00
2. Best fresh butter in rolls, prints or boxes, not less than 5 lbs	4 00
2nd do do do	3 00
3rd do do do	2 00
4th do do do	1 00
3. Best dairy (home made) cheese, not less than 15 lbs.....	8 00
2nd do do do	6 00
3rd do do do	4 00
4th do do do	3 00
5th do do do	2 00
4th. Best cheese, factory made, not less than 40 lbs	10 00
2nd do do do	9 00
3rd do do do	8 00
4th do do do	7 00
5th do do do	6 00
6th do do do	5 00

Class 9—Woollen Manufactures, Flax and Straw Goods, manufactured by Exhibitor.

Section.

1. Best 5 yards, all wool, dressed and fulled, power loom.....	\$ 6 00
2nd do do do	4 00
3rd do do do	2 00
2. Best 5 yards, all wool, grey twilled undressed, power loom.....	6 00
2nd do do do	4 00
3rd do do do	2 00
3. Best 5 yards, all wool, grey twilled, dressed, power loom.....	6 00
2nd do do do	4 00
3rd do do do	2 00

Section.

4. Best assorted lot Tweeds, all wool, power loom	\$12 00
2nd do do do	10 00
3rd do do do	8 00
5. Best 5 yards, all wool, dressed and fulled, hand loom.....	6 00
2nd do do do	4 00
3rd do do do	2 00
6. Best 5 yards, all wool, grey twilled, undressed, hand loom.....	6 00
2nd do do do	4 00
3rd do do do	2 00
7. Best 5 yards Women's wear, plain, hand loom	5 00
2nd do do do	4 00
3rd do do do	3 00
8. Best 5 yards, Woman's wear, Fancy Pattern, hand loom.....	5 00
2nd do do do	4 00
3rd do do do	3 00
9. Best 5 yards White Flannel, all wool, power loom.....	5 00
2nd do do do	4 00
3rd do do do	3 00
10. Best 5 yards White Flannel, cotton and wool, power loom.....	5 00
2nd do do do	4 00
3rd do do do	3 00
11. Best 5 yards White Flannel, all wool, hand loom.....	5 00
2nd do do do	4 00
3rd do do do	3 00
12. Best 5 yards White Flannel, cotton and wool, hand loom.....	5 00
2nd do do do	4 00
3rd do do do	3 00
13. Best pair Blankets, all wool, new..... 6 00	
2nd do do do	4 00
3rd do do do	3 00
14. Best Carpet, all wool, new.....	9 00
2nd do do do	7 00
3rd do do do	5 00
15. Best Carpet, rag, new.....	8 00
2nd do do do	6 00
3rd do do do	4 00
16. Best Hearth Rug, all wool, new..... 8 00	
2nd do do do	4 00
3rd do do do	3 00
4th do do do	2 00
5th do do do	1 00
17. Best Hearth Rug, rag, new.....	5 00
2nd do do do	4 00
3rd do do do	3 00
4th do do do	2 00
5th do do do	1 00
18. Best 3 pairs Men's Woollen Socks	2 00
2nd do do do	1 00
19. Best 3 pairs Woollen Stockings.....	3 00
2nd do do do	2 00
3rd do do do	1 00
20. Best 3 pairs Woollen Mitts.....	2 00
2nd do do do	1 50
3rd do do do	1 00
21. Best 3 pairs Woollen Gloves.....	2 00
2nd do do do	1 50
3rd do do do	1 00
22. Best 3 lbs. Woollen Knitting Yarn..... 2 00	
2nd do do do	1 50
3rd do do do	1 00
23. Best Women's Shawls, new.....	6 00
2nd do do do	4 00
3rd do do do	2 00
24. Best Men's Plaid, new.....	6 00
2nd do do do	4 00
3rd do do do	2 00
25. Best pair Men's Knitted Woollen Under Shirts.....	4 00
2nd do do do	8 00
3rd do do do	2 00
26. Best lot 3 Sheep Skin Mats, not plucked, dressed and coloured.....	2 00
2nd do do do	1 00
27. Best 10 yards Flax Sheeting.....	4 00
2nd do do do	3 00
3rd do do do	2 00
28. Best 10 yards Flax Towelling.....	4 00
2nd do do do	3 00
3rd do do do	2 00
29. Best 3 Ladies' Straw Bonnets or Hats 2 00	
2nd do do do	1 00
30. Best 3 Men's or Boy's Straw Hats..... 2 00	
2nd do do do	7 00
31. Best set 6 Straw Table Mats.....	2 00
2nd do do do	1 00

Section.

32. Best lot Straw Picture Frames.....	\$2 00
2nd do do do	1 00
33. Best roll 10 yards Straw Plait.....	2 00
2nd do do do	1 00
34. Best Fleece Wool.....	3 00
2nd do do do	2 00

Class 10—Agricultural Implements and Machines.

Section.

1. Best Iron Plough.....	\$ 6 00
2nd do do do	4 00
2. Best Wooden Plough, iron moulds..... 6 00	
2nd do do do	4 00
3. Best Wooden Plough.....	6 00
2nd do do do	4 00
4. Best double-mould Board Plough..... 6 00	
2nd do do do	4 00
5. Best Sub-Soil Plough.....	5 00
6. Best Double Harrow.....	5 00
2nd do do do	3 00
7. Best Horse Cultivator.....	5 00
2nd do do do	3 00
8. Best Seed Sower, hand.....	5 00
2nd do do do	3 00
9. Best Hay and Straw Cutter.....	5 00
2nd do do do	3 00
10. Best Horse Rake.....	6 00
2nd do do do	4 00
11. Best Ox-Yoke.....	3 00
2nd do do do	2 00
12. Best Root Cutter.....	5 00
2nd do do do	3 00
13. Best Hand Churn.....	5 00
2nd do do do	3 00
14. Best Fanning Mill	6 00
2nd do do do	4 00
15. Best Grain Separator.....	6 00
2nd do do do	4 00
16. Best half dozen Grain Scoops.....	3 00
2nd do do do	2 00
17. Best Hand Rakes, not less than ½ doz. 3 00	
2nd do do do	2 00
18. Best Hay Forks, not less than 3..... 3 00	
2nd do do do	2 00
19. Best Manure Forks, not less than 3.... 3 00	
2nd do do do	2 00
20. Best Dyke Spades, not less than 3..... 3 00	
2nd do do do	2 00
21. Best set Draining Tools for tile draining 6 00	
2nd do do do	4 00
22. Best Hoes, not less than 3.....	3 00
2nd do do do	2 00
23. Best Potato Forks, not less than 3..... 3 00	
2nd do do do	2 00
24. Best Potato Hacks, not less than 3..... 2 00	
2nd do do do	1 00
25. Best Roller.....	6 00
2nd do do do	4 00
26. Best Pitching Machine, or Horse Hay Fork	6 00
2nd do do do	4 00
27. Best Potato Digging Machine, if effective.....	10 00
2nd do do do	8 00
28. Best Box Cart, two wheels.....	8 00
29. do Hay Wagon, four wheels	10 00
30. do Wheel-Barrow.....	2 00
31. do Express Wagon.....	10 00
32. do Harness, single set	10 00
33. do Harness, farm double set.....	8 00
34. do Harness, truck	5 00
35. do Saddle and Bridle.....	8 00
36. do model of Farm Gate.....	2 00
2nd do do do	1 00
37. Best Team and Carriage Collars..... 3 00	
2nd do do do	2 00
38. Best Threshing Machine, small, two horses.....	20 00
39. Best Threshing Machine, large, with cleaner.....	25 00
40. Best doz. Axe Handles (native wood)... 2 00	
2nd do do do	1 00
41. Best doz. Miner's Pick Handles.....	2 00
2nd do do do	1 00
42. Best doz. Mud Pick Handles.....	2 00
2nd do do do	1 00
43. Best Drain Tiles.....	2 00
2nd do do do	1 00
44. Best Mowing Machine (new).....	25 00
2nd do do do	15 00

Class 11—Fruits.

Section.	
1. Best general collection of Fruits from any Province of the Dominion, State of the Union, or Horticultural Society, not fewer than three specimens of each sort, named and labelled, not necessarily grown by the exhibitor.....	\$25 00
2nd do do.....	15 00
2. Best collection of Apples grown in the Province of Nova Scotia, by the exhibitor, not more than thirty sorts, six of each sort, named and labelled.....	10 00
2nd do do.....	6 00
3rd do do.....	4 00
3. Best collection of Autumn Apples, grown by the exhibitor, six sorts, six specimens of each, named and labelled.....	6 00
2nd do do.....	4 00
3rd do do.....	2 00
4. Best collection of Early Winter Apples, six sorts, six of each sort, grown by the exhibitor and labelled.....	6 00
2nd do do.....	4 00
3rd do do.....	3 00
4th do do.....	2 00
5. Best collection of Long Keeping Apples six sorts, six of each sort, grown by the exhibitor, named and labelled.....	6 00
2nd do do.....	4 00
3rd do do.....	2 00
6. Best general collection of Apples, not necessarily grown by the exhibitor, and not more than thirty sorts, six of each sort, named and labelled, from the County of Halifax.....	6 00
7. Best do from King's Co.....	6 00
8. do do from Annapolis Co.....	6 00
9. do do from Digby Co.....	6 00
10. do do from Lunenburg Co.....	6 00
11. do do from Queen's Co.....	6 00
12. do do from Shelburne Co.....	6 00
13. do do from Yarmouth Co.....	6 00
14. do do from Hants Co.....	6 00
15. do do from Colchester Co.....	6 00
16. do do from Cumberland Co.....	6 00
17. do do from Pictou Co.....	6 00
18. do do from Antigonish Co.....	6 00
19. do do from Guysborough Co.....	6 00
20. do do from Cape Breton Co.....	6 00
21. do do from Richmond Co.....	6 00
22. do do from Inverness Co.....	6 00
23. do do from Victoria Co.....	6 00
Apples, single varieties.	
<i>Grown by the Exhibitor.</i>	
24. Best dozen Gravenstein.....	1 50
2nd do do.....	1 25
3rd do do.....	1 00
25. Best dozen Ribston Pippin.....	1 50
2nd do do.....	1 25
3rd do do.....	1 00
26. Best dozen Yellow Bellefleur.....	1 50
2nd do do.....	1 25
3rd do do.....	1 00
27. Best dozen Baldwin.....	1 50
2nd do do.....	1 25
3rd do do.....	1 00
28. Best dozen Greening.....	1 50
2nd do do.....	1 25
3rd do do.....	1 00
29. Best dozen Nonpareil.....	1 50
2nd do do.....	1 25
3rd do do.....	1 00
30. Best dozen Northern Spy.....	1 50
2nd do do.....	1 25
3rd do do.....	1 00
31. Best dozen Blenheim Pippin.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
32. Best doz. King of Tompkin's County... ..	1 00
2nd do do.....	0 75
3rd do do.....	0 50
33. Best dozen Esopus Spitzenberg.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
34. Best dozen Pomme Gris.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
35. Best dozen Emperor Alexander.....	1 00
2nd do do.....	0 75

Section.	
36. Best dozen Calkin's Pippin (late).....	\$1 25
2nd do do.....	0 75
3rd do do.....	0 50
37. Best dozen Flushing Spitzenberg, or Vandevere.....	1 25
2nd do do.....	0 75
3rd do do.....	0 50
38. Best dozen Gloria Mundi or Baltimore Pippin.....	1 00
2nd do do.....	0 75
39. Best dozen Chebucto Beauty.....	1 00
2nd do do.....	0 75
40. Best dozen Canada Reinette.....	1 00
2nd do do.....	0 75
41. Best dozen Talman Sweet.....	1 00
2nd do do.....	0 75
42. Best dozen Pound Sweet or Lyman's Pumpkin Sweet.....	1 00
2nd do do.....	0 75
43. Best dozen Chenango Strawberry.....	1 00
2nd do do.....	0 75
44. Best dozen Early Bough.....	1 00
2nd do do.....	0 75
Pears.	
<i>Grown by the Exhibitor.</i>	
45. Best collection of Pears grown by the exhibitor, six specimens of each, named and labelled.....	4 00
2nd do do.....	3 00
3rd do do.....	2 00
46. Best dozen Bartlett Pears.....	1 50
2nd do do.....	1 00
3rd do do.....	0 75
47. Best dozen Great Britain.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
48. Best dozen Louise Bonne de Jersey... ..	1 00
2nd do do.....	0 75
3rd do do.....	0 50
49. Best dozen Duchess d'Angouleme.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
50. Best dozen Flemish Beauty.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
51. Best dozen Winter Nelis.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
52. Best dozen Buerre Bosc.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
53. Best dozen Sheldon.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
54. Best dozen Frederick Wartemburg... ..	1 00
2nd do do.....	0 75
3rd do do.....	0 50
55. Extras for unnamed varieties, at discretion of the judges.....	5 00
Quinces.	
56. Best dozen grown by the exhibitor.....	1 50
2nd do do.....	1 00
3rd do do.....	0 75
4th do do.....	0 50
Plums.	
57. Best or largest collection, one dish or dozen of each sort.....	3 00
2nd do do.....	2 00
3rd do do.....	1 00
58. Best dish of Plums any sorts, not less than one dozen, grown by the exhibitor.....	1 25
2nd do do.....	1 00
3rd do do.....	0 75
4th do do.....	0 50
59. For sorts at the discretion of the judges.....	2 00
Grapes, open air.	
<i>Grown by the Exhibitor.</i>	
60. Best and largest collection of grapes grown in the open air, two bunches of each sort, named and labelled.....	4 00
2nd do do.....	3 00
3rd do do.....	2 00
61. Best two bunches Isabella.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
62. Best two bunches Concord.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50

Section.	
63. Best two bunches Sweet Water.....	\$1 00
2nd do do.....	0 75
3rd do do.....	0 50
64. Best two bunches Royal Muscadine....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
65. Best two bunches Black Cluster.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
66. Best two bunches Delaware.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
67. Best two bunches Hartford Prolific....	1 00
2nd do do.....	0 75
3rd do do.....	0 50
68. Best two bunches Diana.....	1 00
2nd do do.....	0 75
3rd do do.....	0 50

Hot-House Grapes.

Grown by the Exhibitor.

69. Best two bunches hot-house Grapes... ..	5 00
2nd do do.....	4 00
3rd do do.....	3 00
70. Best two bunches of Grapes grown in cold grapery.....	1 00
2nd do do.....	2 00

Crab Apples.

Grown by the Exhibitor.

71. Best half peck Transcendent.....	1 00
2nd do do.....	0 75
72. Best half peck Transparent.....	1 00
2nd do do.....	0 75
73. Best half peck Hyslop.....	1 00
2nd do do.....	0 75
74. Best half peck large Red Siberian.....	1 00
2nd do do.....	0 75
75. Best half peck of any other sort.....	1 00
2nd do do.....	0 75

Class 12—Ornamental Plants and Flowers.

Section.	
1. Best collection of Plants and Flowers.....	\$ 5 00
2nd do do.....	3 00
2. Best Bouquet.....	2 00
2nd do.....	1 00
3rd do.....	0 50
Special Prizes contributed by James Vick, Esq., Rochester, New York.	
3. Best collection of cut flowers, (not in bouquet).....	20 00
2nd do do.....	10 00
3rd do do.....	5 00
4th do do.....	Floral Chromo.
4. Best Ornamental Flower Work (either bouquet or floral ornament).....	5 00

A NEW CLASSIFICATION OF APPLES.

BY ROBERT HOGG, LL. D., F. L. S.

ONE of the greatest difficulties pomologists have had to contend with is the want of a classification of the varieties of Apples and Pears, by which they can ascertain the names of varieties in the same way as the botanist is enabled to discover the name of a plant when it is unknown to him. Every other kind of fruit has, up to the present, been arranged according to characters which are sufficiently distinct and permanent to make the classification of real service; but of the Apple and the Pear there is none which can be worked with any kind of assurance that will lead to the desired result. It is not that no attempts have

been made to form a classification—on the contrary, Diel, Doehmahl, and Lucas have each produced one, each of which is a modification or altered form of the other; but the characters upon which they are based are to my mind too varying and not sufficiently apparent to render them as useful as could be desired. In my work on the Apple, which was published five-and-twenty years ago, I gave a kind of classification to assist students in pomology to ascertain the names of the different varieties; but it has never served that purpose. Previous to this I had attempted to apply Diel's system and failed. Ever since that time I have been assiduously observant of every character in the structure of the Apple which I thought served as a basis for a classification, and at last I fixed upon those which I have accepted as the principles of the new system which I am now about to describe.

The characters upon which this system is based are well known, and have been noticed in descriptions of fruit so long as by Diel and other German pomologists; but, just as the pre-Linnean botanists observed the stamens and pistils in plants, and entertained certain views with regard to their functions without employing them as bases for classification, so has it been with the pomologists, who, while aware of the presence of the characters, have hitherto overlooked them as being applicable to classification.

For some years past I have endeavoured to apply the characters I have now adopted. The light I had at first was small and dim, but by repeated application to the subject every recurring fruit season I began to see the foundation of what has now grown up to the structure which I now offer to the world.

My reason for not giving publicity to it before this was that I wished to work it thoroughly before I committed myself to it. To do so I have procured in various years collections of fruits from different parts of the country, from different soils and climates, and also at different seasons of the year; and in every case I was gratified to find that the characters which I observed in each variety of fruit were equally well-marked in that variety from whatever district, soil, or climate it came, or at whatever season the examination took place. For instance, Wyken Pippin from Tweedside, from Chiswick, from Sussex, from Worcester, from Somerset, and from Devon invariably presented the same characters of eye open, seed-cells closed, calyx-tube conical, and stamens median. This I merely give as an example, and it is applicable in every case.

I must remark, however, that in this, as in every other classification of natural objects, the characters are not always

constant, and there are varieties which refuse to submit to any scheme of man's devising. Nature refuses to be bound, and we must adapt our ideas to her laws. In every system it is so, as the botanist well knows. When he would class plants into those which are hypogynous, perigynous, and epigynous, he finds there are some that reject his interference and assert a double alliance. And so it is with fruits. There are those in which some varieties have the eye open or partially closed, seed-cells of the same character, calyx-tubes in which it is difficult to determine whether they are conical or funnel-shaped, and stamens which waver between a marginal and median position, or a median and a basal. But these are difficulties which are easily got over, as I shall show further on.

The characters which I have adopted as the basis of this classification are the eye, the seed-cells, the calyx-tube, and the stamens. These supply the primary and most important divisions; but they may be extended and broken up into fruit round, roundish, or oblate, and fruit conical, oblong, or ovate, and these for convenience may be farther divided into pale, coloured, and russet. I will now treat of the leading characters.

1. *The Eye*.—This is the pomological term used to signify what botanists call the sepals or limb, and mouth of the calyx. In French it is called *œil*.

If we examine a great number of varieties of Apples, we find that in some the eye is wide open, and the segments quite reflexed, in some cases so much so as to be quite flat on the surface of the fruit. This is very apparent in Blenheim Pippin, Wyken Pippin, and Court of Wick. In many cases the segments are erect and spreading or reflexed at the tips, and this form of structure also leaves the eye open though not so much so as in the previous examples. Between the spreading and the erect open eye there are many gradations which will be remarked by any observer who examines the different varieties.

The other form is the closed eye. It will be observed in this case that the segments are erect and connivent at the tips, forming a small cone. In some cases of this form of closed eye the tips are spreading; but there is another very distinct form of the closed eye in which the segments are quite flat and convergent, closing in the eye like a trap-door in five divisions, as is seen in Trumpington. These two characters of eye open, and eye closed, I propose to employ as my primary divisions.

2. *The Seed-cells*.—These constitute what is popularly called the core of the Apple, and contain the seeds or pips. They are usually five, but they vary in number, and are occasionally three, four,

and even six. They differ very much in structure, and are either open to the axis of the fruit or closed; and between the closed and wide-open cells there are as many gradations as in the closed and open eye. Some have perfectly closed cells, some have them open, and in others again they are wide open. In the last are to be found all the Codlins, and varieties having the Codlin character.

The seed-cells form the second great divisions of my system, which are distinguished as cells open, and cells closed.

3. *The Calyx-tube*.—In making a longitudinal section of an Apple, in a line through the centre of the eye to the stalk, a more or less deep cavity will be observed under the segments of the eye and between them and the core. This is called the calyx-tube, or *kelchröhre* of the Germans. It is of very varied form, but all of these are modifications of two, or perhaps three, which may be regarded as distinct, and these I have called the conical and the funnel-shaped. As in the cases of the open and the closed eye and the open and closed cells these run into one another, and there are instances in which it is difficult to distinguish to which of them the individual belongs. In the examples of the conical tube, some are wide and deep, and others narrow and short. The funnel-shaped tube also assumes various forms. The third form is the cup-shaped, which very rarely occurs.

The calyx-tube is the character on which the third division is based, and is divided into calyx-tube conical and calyx-tube funnel-shaped.

4. *The Stamens*.—These are little bristle-like bodies which are found forming a fringe round the inner surface of the calyx-tube, and it is on the position they occupy that the fourth character of this system is founded. On examining a number of different varieties of Apples it will be seen that the stamens are not always in the same position. Some will form a fringe immediately under or near the base of the segments, and these I call marginal. Others occupy a midway position between the margin and the base, and these are called median; and a third are situated near the base, which are termed basal.

Taking the position of the stamens as my fourth great division, we have—1, Stamens marginal; 2, Stamens median; 3, Stamens basal.

To prolong the subdivisions even beyond this point to which we have arrived, we can have—1, Calyx-tube short conical, and deep conical. Then we can have short funnel-shaped, and long funnel-shaped. These may again be further divided into—1, Fruit round, roundish, or oblate; and 2, Fruit conical, oblong, or ovate.

I have already called attention to the

changeableness of the characters in some varieties; how in the cases of the eye and the cells some exhibit them open or closed, or intermediate between the two; also in the interchangeable form of the calyx-tube and the positions of the stamens. In my classification I have provided against any confusion arising from this cause, and have given additional references when a variety is to be found in more than one division. For example, in Scarlet Nonpareil the eye is sometimes open and sometimes closed, though the calyx-tube is always short funnel-shaped, and the stamens marginal. This variety is therefore placed in class 1, section 2 (§§), and division 1 (+); but to provide for the case of the eye being closed, it is entered thus—"Scarlet Nonpareil iii., §§, +," showing that it is also found in class iii, section 2, and division 1.

It is important that perfect specimens of fruit be used when the classification is applied, and especially that the eyes be perfect; and, to observe the calyx tube correctly, the longitudinal section should be made directly through the centre.—*Journal of Horticulture.*

TEMPERATURES IN SETTING MILK.

Mr. Rensselaer Day, a successful butter maker, who lives in the Susquehanna Valley, near Otsego village, Otsego county, sends me the results of some of his dairy experiments during the last season. He is in the habit of weighing his milk at intervals and of setting it in deep pails at a temperature of about 58 degrees. In skimming, he takes off not only the cream, but a portion of the milk, calculating to lower the contents of the pails about one-third. What is taken off is churned in a common dash churn.

June 15 he had 410 pounds of milk and got 23 pounds of butter—an average of 17 pounds 13 ounces of milk, plus five ounces, to make a pound of butter.

June 21 he had 439 pounds of milk and got 25 pounds of butter—an average of 17 pounds 4 ounces of milk to a pound of butter.

Aug. 8 he had 394 pounds of milk and got 21 pounds of butter—an average of 18 pounds 12 ounces of milk to make a pound of butter.

Aug. 24 he had 387 pounds of milk and got 22 pounds of butter—an average of 17 pounds 9 ounces of milk to make a pound of butter.

Aug. 25 he had 411 pounds of milk and got 23 pounds of butter—an average of 17 pounds 5 ounces of milk to make a pound of butter.

Sept. 14 he thought he would try the sudden cooling and low temperature recommended by Mr. Harlin, of Kentucky. He had 373 pounds of milk and cooled it

to 45 degrees. From it he got 19 pounds of butter—an average of 19 pounds 10 ounces of milk to make a pound of butter.

Sept. 19 he set in the old way. He had 365 pounds of milk and got 21½ pounds of butter—an average of 16 pounds 8 ounces of milk to make a pound of butter.

Oct. 8 he had 341 pounds of milk and got 23 pounds of butter—an average of 14 pounds 13 ounces of milk to make a pound of butter.

Of course, one experiment does not settle this question of sudden cooling and low temperature, any more than one swallow makes a spring; but the loss on the days on which the experiment was tried was remarkable, and sufficient to deter Mr. Day, who is a practical man looking after the best results, from trying it again. I understand that all the conditions, save the cooling and temperature, were the same as on other days.

I may add that Mr. Day finds his yield very much increased by taking off the top of the milk with the cream and churning it, and that his butter herd is of the Devon breed; that is generally selected for butter making in his section, which affords hilly pastures.

T. D. CURTIS.

Syracuse, Dec. 22, 1875.

EXPERIMENTAL DAIRY STATION.

The committee appointed by the New York Dairyman's Association made the following report at the late meeting at Norwich:

Your committee appointed to take into consideration the subject of a proposed experimental station in dairying is gratified to observe that within the past year the subject has more earnestly engaged attention in our own State than at any previous time, and not a few of our most earnest and able thinkers are seeking for more light and inquiring in what way the enterprise may be most surely and successfully inaugurated. The object of these stations is to systematize discovery in the interests of farming. They consist of chemical laboratories connected with the stables, fields, gardens, or greenhouses, where men of high scientific attainments and practical skill are engaged in studying and experimenting in agriculture. And in addition to this, much of the business consists in the analysis of commercial fertilizers for farmers and others.

In the year 1851 a body of Saxon farmers composing the Leipzig Economical Society, realizing that individual experiments were costly, and often unreliable from being conducted by unskilled hands, decided to fit up a few rooms at their farm house, on the small estate owned by

this society in the little village of Broeckern, near Leipzig, for the purpose of scientific investigation. Dr. Emil Wolf, a young scientist of promise, was engaged, and Mr. Baehr was the manager of the farm instructed to superintend the practical detail of experiments. Two or three rooms were fitted up for a chemical laboratory, and with some improved stock and a few farm implements, was established the "first farmer's station for agricultural experiment." So substantial and satisfactory were the results of this first effort, that two years later another Saxon constituency of Chemnitz established the second. In 1852 there was but one; in 1857 there were 11; in 1862, 19; in 1867, 30; in 1872, 62; in 1875, 70,—and one in the State of Connecticut. In each of these 71 stations are employed from one to five investigators, trained in the great modern schools of chemistry and physiology.

As a practical result of the far-reaching benefits of these stations, may be quoted the affirmation of the Prussian Minister of Agriculture, wherein he says "that the results of experiments upon the feeding of animals, obtained at a single station, have been of more direct advantage to that country than the entire cost of all the stations up to that time." And as an illustration we present the work of the Halle station for the year 1870, which may be summarized as follows:

Fattening experiments with twelve sheep as to the comparative feeding value of lupines and colesseed cake.

Study of the changes which beets and beet leaves undergo in souring.

Continuous culture of sugar beets on the same field.

Testing the quality of the so-called Bestchoru's richest sugar beet.

Influence of annually renewed use of saline manures on the quantity of saline matters taken up by beets.

Continuation of experiments on the nutritive processes in the milk-giving animal, fourth series—effect of feed on the quantity of milk and its ingredients.

Observations on the temperature of the soil at different depths.

Construction of respiration apparatus, and preliminary trials therewith.

Execution of 776 analyses of fertilizers.

The work of these stations is approximately divided as follows: Thirteen are principally devoted to cattle feeding, as at Wende, Poskau and Milan; twenty-five to experiments on the conditions of vegetable growth and the action of manures, as at Dahme and Ida-Marienhutte; several to tobacco and grape culture, as at Carlsrhub, several to grape culture and wine making, as at Wiesbaden and Padu. The station at Vodine is devoted to studies in silk production; those at Stock-

Holm and Lodi to milk industry. Thirty stations are largely occupied with analyses of commercial manures. Eighteen stations test the purity and vitality of seeds. The more usual practice, however, is to combine several of these objects in one. It may not be unprofitable to continue the illustration of our subject by presenting in our own currency, from a table furnished by Professor Johnson, the revenues and working force of ten Prussian agricultural experimental stations for the year 1870:—

Name of Station.	Revenue in Dollars—Gold—				Total.
	Government.	Agricultural Societies.	Analyses of Fertilizers.	Private Contributions.	
Halle	864		3,254.40		4,118.40
Engenwalde	1,152	417.60	108		1,677.60
Bonn	576	606.24	288		1,470.25
Kuschen	750	235.10	109.80		1,092.96
Insterburg	648	252	44.04		944.04
Ida-Marienhutte	792	216	1,301		2,309
Dahme	2,178	324	216	108	2,826
Wende	1,008	1,340	41.76		2,389.76
Alt-Morschen	936	83.56	108	184.76	1,317.32
Weisbaden	1,296		179.28		1,475.28

Each of the ten stations enumerated in the above table has one director. In addition to the director, Halle has three assistant chemists: Engenwalde, Ida-Marienhutte, Dahme, Wende and Weisbaden two; Kuschen, Insterburg and Alt-Morschen, one and Bonn the director alone. Dahme has also an assistant in vegetable physiology, and Wende an assistant in agriculture.

The State of New York is the Empire State. Its area is 47,000 square miles. A liberal estimate classes one-half the number of counties, thirty in number, as first-class dairying counties, and including those of central New York; and the remaining thirty may be classed as non-dairying. These thirty dairying counties have a cultivated area of 9,364,139 acres, a territory within itself capable of being divided into nearly six States as large as the State of Connecticut, the cultivated area of each being considered. Within this district are kept 1,028,348 cows, leaving only 322,313 in the remaining thirty counties of the State. From the census of 1870 we find that the annual production within this district was 76,834,241 pounds of butter and 21,020,283 pounds of cheese, and 126,497,280 gallons of milk sold, as the dairy product of this portion of our State. If we presume that this butter was worth, upon an average, 30 cents, and the cheese 12 cents, and the milk eight cents per gallon, the vast proportions of this production are strikingly manifest—\$35,692,489. It must not be overlooked that in the production of this product a vast capital is invested in lands, stock, in tools, fixtures and implements; in short that it is the most costly of any of our general farm products, so that the great proportion of this sum is absorbed in the actual

cost of production. The entire wheat production of the State in 1870 amounted to a trifle over 12,000,000 bushels, which at the high estimate of \$2 per bushel would yield a revenue of \$11,000,000 less than the dairy product of one-half the State.

Thus the dairy is the most important agricultural interest within the domain, and we have no hesitation in urging that for studies in milk industry, the experimental statistics should be first established; and it is more important to our people at a time like this, of financial embarrassment, when success turns on the ability of the producer to increase his production without enhancing its cost. Connected with our first station there should be a department for the annihilation of commercial fertilizers for farmers, at a nominal cost. We are now passing that transition period through which our English and German friends struggled so long before they reached a point of safety. In the light of their experience let us hope that we may pass it more speedily. In 1855, said Dr. Voelcker, "that if ever there was a time when the agriculturist had need to exercise special caution in the purchase of artificial manures, that time is the present, for the practice of adulterating standard fertilizers, such as guanos, superphosphates, etc., has reached an alarming extent." In Germany, under the system of the experimental stations, the business is as stable and secure as is our trade in sugar and coffee. A German farmer, in purchasing a fertilizer, demands of the seller an analysis of the article. He takes a sample to one of these stations, where it is analyzed, and, if found deficient, he demands a deduction from the original price in proportion as it is short; and he gets it, too, in accordance with the law. If we would protect ourselves, we must organize a similar system. At the last session of the Legislature of the State of Connecticut, an appropriation of \$2,800 was made for this object, and the station is organized and located at Middletown under the directorship of Prof. Atwater. Is it not possible for New York to follow where Connecticut has led the way?

J. V. H. SCOVILL,
JOSIAH SHULL,
E. F. JONES,
Committee.

Will you allow a lady subscriber to tell the story of her cow-keeping, which has proved a decided success. In purchasing "our cow," we were advised that pedigree is not of primary importance in a dairy, and we were therefore satisfied with the most promising cow we could obtain—a Shorthorn reared on a neighbouring estate of 8 acres of copyhold land belonging to a poor widow. The

old lady had recently died, and the lord of the manor had claimed and carried off our subsequent cow, which a dealer brought to us without a name. We dubbed her Heriot. Her calf had been born late in February, the dealer said, and we might expect another calf early in December. In the interim there would be uninterrupted milk, we were informed, except during five or six weeks at the end of the term, when we were to feed Heriot on sweet hay, and allow her to "go dry"—that is, we were to purchase our milk instead of availing ourselves of what she might still give, if we persisted in requiring it, which we were told we had better avoid. We noted down all these details, and began to feel quite farmer-like, though at present our practical experience was simply nil.

Now about food. As there was no grass at that early time of year, we were recommended to buy mangel wurzel, hay, and plain linseed cake; and with these provisions at hand, Heriot was established in the rear of our premises, and in a few days the excitement of rather suddenly acquiring a cow, subsided, and we patiently began waiting for grass. At present we were feeling our way along cautiously, yielding to public opinion as expressed by its representative, the dealer, in regard to various matters of detail, but in respect to certain principles we intended to carry out certain theories. A cow is a cow everywhere. She may be pampered in a fine stall, or tied by the neck and hind leg to be milked by a machine; she may become the victim of a horrid covered homestead and a paid police, or she may be half starved in some poor man's byre; but there must be a way between these extremes. My husband and I had seen cows in other countries standing quietly without a halter, and milked into bottles by children, and we were determined our cow should be treated kindly, and should get sufficient air and exercise without being "coddled." Our excellent old man, Ravender, is a person who prefers his own way as a rule. He is not to be driven, and he can find stiles, when he likes, in unnecessary places; but we established a give-and-take system with Tom Ravender, which worked extremely well. He had his way when he could get it, and we had ours on much the same principle. His plans were often destined to fall through, but always accidentally; and I took care he should always have that something in his path to knock about which every man requires.

It is a good point in Tom that his temper is good. He and Heriot never quarrel, and if a fitch of bacon were awarded for kindness to a cow, he might

claim and obtain it. He was fortunate in being connected with a creature that had been the cow and cruse of an inoffensive widow, and had never known what a stick upon the back might be, till the day when driven to market, and plunged for the first time into trouble. I think I can see her, as I have seen other cows in a cattle market, standing on the bare stones, with the tears running down her cheeks, a shouting crew of rough men around, her destination uncertain, her only friend dead, the home of her birth broken up, and herself seized as a heriot. There is no doubt her confidence was shaken. She must have passed through purgatory into our possession, and she entered the future bliss of our back premises timid, excited, marked by stripes on her brindled coat, her fetlock torn, and her tail so twisted by brutal drovers that it did not hang straight for several days after her arrival. Poor Heriot! Previous to the arrival of the mangel I gave her a loaf of bread; we sacrificed some young cabbages with Bavender's consent, and if we had possessed an early cucumber or a bed of forced asparagus, we should have chopped them into a salad for her, feeling responsible in a measure, as marketing creatures, for the cruel conduct of the dealers and their drovers. When she lifted her leg up as I passed behind her—poor persecuted thing! I freely forgave and re-assured. Once only she kicked out and was patted in return, and in a few days she became as gentle as if I had been another widow—all through the magic of a little kindness. In the matter of milk Heriot was hardly equal to our expectations. In fact she gave but little, and it was poor, owing partly, as we concluded, to the immense amount of water in mangel wurzel, and partly to the fright she had sustained. In all else she was everything we could wish—her grievances were forgotten, and her newborn confidence complete. If she saw us bringing hay she would poke her nose anywhere to obtain it. She allowed the cat to sit on her back, and permitted Bounce to wag his tail under her very nose as she stood quiet and untied while being milked. She became tame and familiar to a degree, and on one occasion gave my head-dress a tug and pulled off all one wears, including an artificial wreath of buds and leaves. I took the hint, and we drove some miles round the country to try and find some early tares, or young rye. We were still disappointed in the quantity of milk. The summer came and we turned Heriot into the little pasture behind the house; but as to milk, instead of the quantity increasing with a grass diet, as we had anticipated, it settled down to about 3 quarts a day, which was certainly a small result, and a mystery that puz-

zled us. But time revealed the truth as usual, and restored our cow's character as a good milker.

One evening, in July, Bavender came to me and announced his opinion about Heriot, with startling abruptness.

"It looks to me," he said, "as if she might have a calf afore long."

I was quite taken aback, and, remembering the dates given us by the dealer, I replied, "No, not yet; not till early in December."

"Oh!" was Bavender's reply; that's some time to come, ain't it! Do you think, she'd better be milked any longer, Mum, or how?"

"August, September, October, November," said I; "Yes, go on at present."

The next morning a calf was announced. Bavender reserved the information till he saw us in the garden, and then came forward, and observed without preface, "Beg your pardon, Mum, she's calved. Got as fine a cow calf as ever you see; and it runs in my head they are going to do well, too; anyhow they are all right so far."

The dealer had deceived us, of course, in selling us a cow just as she was "going out of profit," and representing her to be coming in. But it was no fault of Heriot's, and she made the most ample amends. We had the calf weaned immediately by a very simple process, of which the leading features were linseed tea and warm skimmed milk; and we were then at liberty to try experiments in dairying, and to sell our butter for 18d. per lb. The milk pans, which we had provided in vain in the spring, were now filled daily with 23 or 24 quarts of milk, which would have given us, as we ascertained, about 13 lb. of butter a week, if we had abstained from pilfering the cream. It was quite late in the following spring before the lacteal fountain ebbed so low as 6 quarts a day, when we allowed it to cease by degrees. Then came a pause, which was thought better on the whole for Heriot, and then came a calf, at the end of May. There was the same rotation every year. I think it unnecessary to go into particulars on the subject of rearing calves and managing cows. I can only say that nothing can be easier, and that I hope this simple narrative may induce others to follow our example in starting a dairy. Milk would be much cheaper and more abundant if the business of the dairy were not left to large farmers, who, in fact, will not be troubled with it. I speak with authority. Some persons suppose that a principle of political economy settles all these things, and that in this country of equal laws people would keep a cow if it paid. Fiddlestick! Let people believe that who don't care for cream and butter.

Things are not what they seem, or say, always. It does pay, and cows would be kept, in many cases, if the land could only be obtained to keep them on. It requires about 4 acres. To justify these assertions, I will mention what we did a few weeks after the arrival of Heriot. We bought Tom Bavender's house and a plot of 4 acres, which we sowed with grass seeds, and now Tom keeps a beautiful cow on his own account, and is making a little fortune, as we tell him, by butter and porkers. The small sum he owes us on account of the cow will most likely be paid soon; meanwhile we are satisfied with the security, and think it would readily be accepted in other cases where a petty loan might aid perhaps a faithful servant. But it is an investment which does not occur to people who do not know how very easy it is to sow a little grass and keep a cow.

All that is required in a cow shed is a warm roof of straw, heath, furze, or chips, to keep the cow dry. Bavender built his shed in a few days and, as we happened to have some fir poles, it cost us nothing.

The old man's son has a large family, and as the eldest boy is our "button," and the whole family eminent for good conduct, we obtained a pastured cottage and a cow for them too. They are their own best customers for the milk at present, having eight children at home; and there is no doubt that a milk diet will be most useful for the children in these dear times. It has already plumped out and painted their cheeks, and we have every reason to be satisfied with our outlay, which included a little hutch of a dairy, on the north side the house, as cool and clean as the Queen's at Windfor. We feel sure of being paid so soon as the children have left off consuming and gone into consumption, that is when they are utilized in situations. All the Bavenders are as sure to prosper as prosperity itself; and the two families will thrive much better in every way for keeping a couple of cows. We sincerely hope these hints may induce others to aid and abet cow-keeping among labourers if they can.—*Martha Dash in Agricultural Gazette.*

The following remarks on judging stock are from Mr. Sydney, Manager of the Islington (London) Horse Show. They are in reference to a previous communication in the *Agricultural Gazette* :—

"*Juste Judicatio*," is not more astenished than I am, that he should presume to impute the basest motives to the members of the Council, who consider the responsibility of judging with catalogue in hand, a better security for impartial decisions than the sham secrecy of a book of numbers. I will not insult the gentlemen who advocate judging by catalogue by quoting their names—names, at least, as certain a guarantee for scrupulous integrity as that of "*Juste Judicatio*," whoever he may be.

"Juste Judicatio" assumes that by giving the judges numbers, and not names, secrecy is secured; but that is begging the whole question—I deny his premises, and I have at least ten times the experience of this suspicious exhibitor of cross-bred animals. I may say of him, as Talleyrand said of Lady Holland, "he is furious in his assertions, but when you ask for proofs—that remains his secret."

Judges of live stock are chosen because they are supposed to understand the sort of animals they are called on to judge, and also that they are men of honour, who will award prizes to merit, and not to their friends, because they are their friends.

From a large experience at stock and horse shows, I unhesitatingly assert that if a judge is inclined to give to favour what ought to be awarded to merit, he has ample opportunity of ascertaining which animal belongs to the person for whom he is ready to be dishonest. In the first place, celebrated animals that have won in the show ring more than once, whether bulls, cows, stallions, or hunters, are as well known to the majority of judges as their owners. In the next place, if the animals are not known, the men who lead them out or ride them are. Lastly, judges and exhibitors who mean to act dishonestly can talk before the judge and exchange signs while the judging is going on. In a word, absolute secrecy is impossible. The partial, I will not say the dishonest, judge, knows all his friends' animals; the scrupulous judge knows nothing, or, if it is a nice point, votes against his friend.

As there is no secrecy in any important class of Shorthorns or horses, the better plan is to put the judges on equality by putting a catalogue in their hands and trusting to their honour.

The judge who has not prejudices of any kind is a miracle. The follower of Booth does not think much of Bates, and *vice versa*, and I have never known a light weight who could thoroughly appreciate a 16 stone horse, or a welter weight from a close country who could admire the sort of hunter to be found in the first flight of the pasture counties. But you won't mend the matter by trying for an impossible secrecy as to owners and pedigrees. I speak rather positively, because for 12 years I have been the manager of the Islington Horse Show, and from the first, for the reasons above stated, have always placed the full catalogue in the hands of the noblemen and gentlemen who have honoured us by acting as judges. I do not say that in the 12 years no mistakes in judging have been made, but that the awards have been about right, has been amply proved. Following our 1st prize winners round the country to other shows, they have been as often 1st as 2nd.

I have also had the advantage of hearing for 12 years the confidential conversation of a series of judges, and have observed how often riders who came into the ring confident in their personal acquaintance with one or more of the judges have been disappointed.

The finest theoretical idea of judging was suggested by one of the best judges of horses and hounds in England, although he never acts in public; for it is utterly impracticable. Mr. W. W.—he is generally known by a more familiar abbreviation of his name—says "A horse should be put behind a curtain, which should be slowly raised above his fet-

locks, then above his knees, then above his back, and finally above his head and neck." But this was a joke. I only wish I could set down "Juste Judicatio's" offensive and unfounded imputations on the honour of better men than himself as jokes.

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