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THE

CANADIAN AGRICULTURIST,

AND JOURNAL OF TRANSACTIONS

OF THE

BOARD OF AGRICULTURE, AGRICULTURAL ASSOCIATION, &c.

VOL. VI. TORONTO, SEPTEMBER, 1854. No. 9.

Agriculture, &c.

ROYAL ARICULTURAL SOCIETY OF ENGLAN

JULY EXHIBITION AT LINCOLN.

(Abridged from the Mark Lane Express.)

The Royal Agricultural Society should feel at home in Lincolnshire. The visit is that of a tutor to a pet pupil, or, more appropriately, of a large landed proprietor to his model farm. It is here he finds the example for the rest of his tenantry to imitate. It is here he triumphantly comes to the proof of all he has been preaching. It is here he shows what practice with science *has* accomplished, and how judicious outlay has arrived at profitable returns. The Agricultural Society has had to march into many parts of the kingdom, with its object but little appreciated, as its efforts but comparatively little known.—The welcome has generally been hearty enough; but seldom has it been so thoroughly satisfactory, either "to him who gives or him who takes," as in the good city of Lincoln.

It is not too much to say that the most extraordinary expectations were entertained as to the success of this meeting; and it is not too much to add that they have been amply realized. is an anniversary that must ever stand out amongst the most conspicuous of those recorded in the proceedings of the Society. In almost every way has the result been gratifying. Whether we take the increasing importance attached to these annual displays, as demonstrated by the attendance, the general excellence of the show, or the characteristic features imparted to it by the locality in which it was held—the conclusion to be arrived at is still the same. It bears, too, the most trying of all scrutinies with an equally handsome issue. It is long since any meeting has added so much to the funds of the Society; and this question of funds, it must be remembered, is one which for some time past has engaged the serious attention of those on the direction who devote themselves more particularly to the business of finance. The poor company at Lewes, and the gloomy atmosphere of Gloucester, have been well compensated for, by the still succeeding crowds, and settled sunshine of Lincoln.

A little consideration will show, that even previous to this last week's gathering, the national Society had some thanks due to Lincolnshire. Many a hint that became gradually embodied in its prize-list—many a point that the farmers of the whole kingdom were incited to achieve—might be easily traced back to the practice of this now famous county. The very President for this year, and one of the most prominent members of the Council, though coming himself from a far distant quarter, has long since declared himself as the champion of Lincolnshire farming. The tenant who wished to know how he was to do best, was told to imitate what was done here. The landlord whose laudable ambition it was to see his property made the most of, was ordered to learn his duty and take his share in the good work from his brethren in Lincolnshire. Indeed, it might even yet be written that we came more to learn than to teach—prepared rather to see what the district could show us, than what we could show it.

The weather was delightfully fine and the number of visitors unusually large—entrance fees amounting to upwards of three thousand pounds. The dinner was attended by near a thousand persons, the Earl of Chichester presided, in the absence of the President, Mr. Philip Pusey, from indisposition. A deputation of several gentlemen from France, attended the show for the purpose of collecting information with a view of organizing a similar society in their own country.

CATTLE.

SHORT-HORNS.

This is a somewhat singular designation, and a total stranger to the breed is to be found natu-

ing any peculiarity about the horn. From whence this most fashionable and most valuable breed derived its name we know not; but its great improvement, if not creation, dates from the bull "Hubback," on the one side, and the Tees-water, Holderness, Lincoln, and other like coarse breeds on the other. Hubback was calved in 1777, and was bought by Messrs. Collings, out of a bye-lane; from him descended Favourite (the sire of "The Durham Ox"), Comet, and other bulls, &c. It was from this stock that the breed of cattle known as "The Improved Shorthorns" was established. We believe that it now carries the palm." No breed has attained like celebrity, and this is proved by some of the late sales; none so early reach a ripe state of maturity, and but few exhibit better milking qualities. The nobility of their appearance is superior to that of any other breed, and the prices realized by some of the most popular herds and best bloods exceed belief—the celebrated Duchess tribe, for instance; nine animals from this tribe were sold at Tortworth [Earl Ducie's] sale for 4,160 gs. or 462 gs. each. The county of Lincoln has been long celebrated for its breed of shorthorns; we were therefore prepared to witness a splendid collection of animals, and the result has fully answered our anticipations. The show was a first-rate one as a whole, but to take individual specimens of this breed we have occasionally seen them surpassed. The classes of cows and heifers we think were never better filled up, and many first-class animals are amongst them. We make honorable mention of these classes first, because we think they have the first claim. The classes of bulls, good as they are, do not equal the cow and heifer classes. We do most heartily commend them as a whole, but what we looked for was one or two specimens of still greater merit than are to be found; some "Duke of Northumberland," or one equally surpassing his fellows.

CLASS I.—BULLS calved previously to the 1st of July, 1852, and not exceeding 4 years.

William Sanday, of Holme Pierrepont, Nottingham, and Henry Smith, of The Grove, Cropwell Butler, near Bingham, "Vatican," roan, 3 years 2 months 2 weeks and 5 days, bred by the late Earl Ducie, of Tortworth Court; sire Usurer, dam Virginia, sire of dam Petrarch. (First prize of £40.) This is a finely formed animal, of great merit; beautiful chine and chest, with level back and good hips, his head full, good and handsome, except a little prominence above the eye, nice neck, ribs not sufficiently springing, leaving the form less cylindrical than we like, beautiful level sides, good loin, hips wide, thighs long and full, twist full, flank and ripping parts not quite full enough in proportion, nor is he quite so noble in appearance as some of our first-class bulls of former years.

Richard Booth, of Warlaby, near Northallerton, "Windsor," white, with red at end of the ears, 2 years and 9 months, bred by exhibiter; sire Crown Prince, dam Plum Blossom, sire of dam Buckingham. (Second prize of £20.) This is a beautiful animal, very cylindrical in form, plenty of good lean flesh, fine appearance, head and muzzle small, good horns and well set, neck thin and short, chest very deep, with full, well thrown out shoulders, beautiful level wide chine and back, ribs well springing, forming a fine cylindrical shape throughout, hips rather too close, but good rump, thighs and flank very superior, twist good, tail fine and well set, legs rather short and fine; a very good animal.

CLASS II.—BULLS calved since the 1st of July, 1852, and more than 1 year old.

William Odling, of Baslingthorpe, near Market Rasen, "Comet," roan, 1 year and 6 months, bred by exhibiter; sire Sir No Name, dam Rosemary, sire of dam Prince. (First Prize of £25.) This is well formed, and of good substance, but stands rather too low; head rather ordinary, horns fine and pointing forward, neck too thin and not quite right adjoining shoulder, back and chine very even, hips good and standing out well, ribs fairly springing, with good chest, and flank rather thin, but good thighs, tail rather high, and tuts bare; beautiful color.

Charles Towneley, of Towneley Park, near Burnley, "Hogarth," red, 1 year and 8 months, bred by exhibiter; sire Harbinger (10,297), dam Rosa, sire of dam Baron of Ravesworth. (Second prize of £15.) This is a beautifully formed good animal, very pleasant head and horns, full neck, full good chine and back, but not quite level, hips rather short and too narrow, twist too light, thighs long, but rather thin, flanks and lower parts all good, tail rather high, tuts broad and short, ribs nicely springing, and deeply, but not quite cylindrically formed; a deep good red color.

CLASS III.—BULL CALVES above 6 and under 12 months old.

Charles Towneley, of Towneley Park, near Burnley, "Master Butterfly," rich roan, 11 months, bred by exhibiter; sire Frederick (11452), dam Butterfly, sire of dam Jeweller (10354). (Prize of £10.) This has a good and proportionate frame; fine horn, fine neck, chine rather narrow, even back, hips fair, tuts good, twist good and full, and color good.

CLASS IV.—COWS IN-MILK OR IN-CALF.

John Booth, of Killerby, near Catterick, "Venus Victrix," roan, 3 years and ten months, in milk, bred by exhibiter; sire Vanguard, dam Bloom, sire of dam Buckingham. (Second prize of £10).—A good, well-formed animal; muzzle too dark, heavy and wide breast, thighs good; her whole frame exceedingly good.

Charles Towneley, of Towneley Park, near Burnley, "Beauty," roan, 6 years and 9 months, in milk and in calf, bred by exhibiter; sire Victor (8739), dam Mantle, sire of dam Marcus (2262). (First prize of £20.) A very fine animal, with hips astonishingly large and fat; the cow herself very fat, and almost a perfect cylinder in form, except her wonderful tuts and hips; neck rather light, but breast exceedingly good; her great fat causes her arms, legs, and flank to look thin; color very good.

This is a very superior class, and fully keeps up the reputation of the Shorthornen cow.

CLASS V.—HEIFERS IN MILK OR IN CALF, not exceeding 3 years old

Charles Towneley, of Towneley Park, near Burnley, "Vestris," light roan, 2 years and 9 months, in calf, bred by exhibiter; sire Hudibras (10339), dam Venetia, sire of dam Tom of Lincoln (8714); and 86, "Butterfly 2nd" red and white, 2 years and 5 months, in calf, bred by exhibiter; sire Garrick (11507), dam Butterfly, sire of dam Jeweller (10354).—Two well proportioned fine animals, and large. No. 85 takes the second prize of £10, and is a beautiful animal, having a nearly perfect from and symmetry; broad and full in evary part, with fine beautiful head and horns.

James Douglas, of Athelstaneford Farm, near Drem, East Lothian, Haddington, "Rose of Summer," red, 2 years and 2 months, in calf, bred by exhibiter; sire Velvet Jacket (10998), dam Rose of Autumn, sir of dam Sir Henry (10824). (First prize of £15.)—Very good and well made, but rather small; of exceeding fine quality, short and thick; neck she has none, her ears and shoulder nearly meeting; frame very deep, chine surprisingly good, hips not wide, tuts narrow; but her general form is wonderfully compact and full.

CLASS VI.—YEARLING HEIFERS.

Charles Towneley, of Towneley Park, near Burnley, "Blanche 6th," red and white, 1 year and 10 months, bred by exhibiter: sire Frederick (11489). dam Blanche 5th, sire of dam Duke of Northumberland (1940); and "Roan Duchess 2nd," roan, 1 year and 9 months, bred by exhibiter; sire Fiederick (11489), dam roan Duchess, sir of dam Whittington (12299)—two beautifully-formed heifers, particularly No. 94, which takes the 1st prize of 10*l*. She has a beautiful head, and fine horns, a prominent good shoulder, fine chine, wide hips, and ribs well out, flank and under parts all right, tuts great and good; very fine in offal. She is of fine symmetry and quality. No. 95 is a beautiful heifer.

George Sainsbury, of The Priory, Corsham, near Chippenham, "Countess 4th of Gloucester," red and white, 1 year and 7½ months, bred by exhibiter; sire the Duke of Gloucester, dam Countess 1st, sire of dam Antonio—takes the 2nd prize of 5*l*. She is rather too narrow in chine, back, and hips, but, as a whole, a good heifer, long in frame, and high standing.

HEREFORDS.

We now come to the classes of Herefords. The Hereford cattle are now universally known by their peculiar colour and form. The colour is usually red, either light or dark, with white face, and a white streak along the back; generally some marks of white about the neck and along under the body: there is a grey or roan variety with similar white marks. Their form is singularly compact, full, and symmetrical. The origin of this breed of "white faces" is yet a mystery, but it is affirmed that they were introduced from Flanders near 200 years ago, and fac-similes of them are to be found in old Flemish paintings; be that as it may, it is certain that they have undergone immense improvement within the last fifty years. Many attain a large size, and the breed stands pre-eminent for that rotundity of shape, that fulness of chest, and breadth of chine so essential to a good constitution; their general contour and vivacity of look are admirable. The cow is a good milker, giving large quantities of milk upon moderate provender. This department of the show has been a very circumscribed one, the number of animals altogether shown in the various classes not exceeding nineteen, and few of them of first-rate character.

CLASS I.—BULLS calved previously to the 1st of July, 1852, and not exceeding 4 years old.

Edward Price, of Court House, Leominster "Magnet," red and white, 2 years and 10 months, bred by Thomas Yeld, of Bodenham, near Leominster; sire The Knight, dam Spot, sire of dam Big Ben (first prize of 40*l*).—He is of great substance in little room, stands wide, good form. This is a good and profitable animal, without many marks of great superiority.

John Carwardine, of Stockton Bury, near Leominster, "Malcolm," dark red, 3 years and 6 months, bred by John Turner, of Court of Noah, near Pembridge; sire The Knight, dam Nutty (second prize of 20*l*.)—A fine animal of great substance, head fair, neck large, chine very deep, great length, good hips, rump not good, thighs large.

CLASS II.—BULLS calved since the 1st of July, 1852, and more than 1 year old.

James Rea, of Monaughty, near Knighton, "Guardian," red with white face, 1 year 7 months and 1 week, bred by exhibiter; sire Attraction (892), dam Spot, sire of dam Cholstrey (217), (first prize of 25*l*.).—This bids fair to make a good heavy animal, having plenty of good lean flesh.

William Styles Powell, of Castle Street, Hereford, "Brecon," red brown with white face, 1 year 7 months and 23 days, bred by Walter Maybery, of Brecon; sire Young Dewsall, sire of dam Henry the Second (second prize of 15*l*).—This has a good fore-quarter, and fair cylindrical form; hind-quarter rather defective.

CLASS III.—BULL CALVES, above 6 and under 12 months old.

In this class only one animal was shown, this was the property of Mr. Edward Price, of Court House, near Leominster, "Magnet the Second," red and white, 8 months, bred by exhibiter; sire Magnet, dam Windsor, sire of dam Pembridge (the prize of 10*l*.).—A very useful, well-formed calf; and the prize was properly awarded.

CLASS IV.—COW IN-MILK OR IN-CALF

Philip Turner, of The Leen, Pembridge, near Leominster, "Nell Gwynne," brown with white face, 3 years and 6 months, in milk and in calf, bred by exhibiter; sire The Knight, dam Belle, sire of dam Sir Walter (first prize of 20*l*.)

Lord Berwich, of Cronkhill, near Shrewsbury, "Miss Lewes," red spots on white face, 3 years

6 months and 2 days, in milk and in calf, bred, by his Lordship; sire Wonder, dam Duchess of Norfolk, sire of dam Tom Thumb (second prize of 10*l.*).—She is well filled out in every part; large and heavy, with beautiful countenance.

In this class only two animals competed, which, however, were good representatives of the breed.

CLASS V.—HEIFERS IN-MILK OR IN-CALF, not exceeding 3 years old.

William Perry, of Cholstrey, near Leominster, "Fancy," red and white, 2 years and 8 months, in calf, bred by exhibiter; sire Noble Boy, dam Gloucester, sire of dam Marden (first prize of 15*l*.).—A very fine broad-framed heifer, with excellent points and plenty of lean flesh.

The Earl of Radnor, of Coleshill House, near Highworth, "Stately," red and white, 2 years and 3 months, in calf, bred by his Lordship; sire Venison, dam Young Sovereign (113), sire of dam Jeffries (second prize of 10*l.*).—A large useful heifer.

In this class also the competition was confined to two animals.

CLASS VI.—YEARLING HEIFERS.

John Walker, of Westfield House, Holmer, near Hereford, "Lady," brown with white face, 1 year 8 months and ten days, bred by exhibiter; sire Widemarsh, dam Windsor, sire of dam Governor (first prize of £10).—This heifer denotes fair substance, length, and good frame.

Philip Turner, of The Leen, Pembridge, near Leominster, "Gazelle," brown with white face, 1 year and 7 months, bred by exhibitor; sire Andrew the Second, dam Vesta, sire of dam Sir Walter (second prize of £5).—A very pretty little heifer.

This was a rather better class-competition, though only five entries.

DEVONS.

The variety usually shown in these classes is the North Devon cattle. The South Devon is far inferior to the North Devon. He is generally of slender make, and altogether is considered a mis-shapen animal, and the quality of his flesh coarse and unprofitable. The North Devon, on the contrary, is probably the handsomest and hardiest of the English breeds, as also one of the oldest native herds. The flesh is of excellent quality, and it is produced in larger quantity on the most valuable joints than other breeds.—They fatten rapidly, and their beautiful appearance and symmetrical proportions are nearly perfect. They do not come to so large weights as the Short-horns or Herefords; but their adaptation for ploughing and to thrive on inferior pasturage is so remarkable, the peculiarity of their character is so distinct, and the extent to which they are bred so great, as to fully entitle them to a distinct class in the Society's exhibitions.—The cows are proverbially good milkers, and Devonshire cream and Devonshire butter are of all kinds most popular. The show this year is not equal to some of former years, but decidedly good, comprising thirty-eight animals in the different classes, and those of a character fully calculated to keep up the reputation of the breed, and the celebrity of the breeders. The prizes have been pretty equally distributed between those gentlemen whose names have long appeared before the public as breeders of Devons—Somersetshire once more coming into formidable competition.

CLASS I.—BULLS calved previously to the 1st of July, 1852, and not exceeding 4 years old.

Samuel Farthing, of Stowey Court, near Bridgewater, "Baronet," red, 3 years 2½ months, bred by exhibiter; sire Baronet, dam Dairymaid.—(First prize of £40).—This a very heavily loaded animal, possessing great substance, of good quality, in little compass, his shoulders are rather high, his back not even, good rump, capital ribs and thighs.

George Turner, of Barton, near Exeter, "Abd-el-Kadir," red, 2 years and 4 months, bred by Richard Moggeridge, of Molland; near South Molton; sire Earl of Exeter, dam Prettymaid, sire of dam Baronet. (Second prize of £20).—This is a very prettily formed animal, with deep chest, and great beauty, and exceedingly good quality, but rather small; his offal not much heavier than some of the large pigs.

CLASS II.—BULLS calved since the 1st of July 1852, and more than 1 year old.

Robert Wright, of Moor Farm, near Taunton "Protector," red, 1 year 11 months and 20 days bred by exhibiter; sire Young Miracle, dam Fancy, sire of dam Fat Ass. (First prize of £25).—This is a bull of very even proportions deep chest, ribs not sufficiently springing, good level back, but not wide, very handsome, and of fine quality.

James Quartley, of Molland House, near South Molton, "Napoleon," red, 1 year and 6 months, bred by exhibiter; sire Duke of Devonshire, dam Rosebud, sire of dam Baronet. (Second prize of £15).—This is a finely proportioned and compact animal, of great merit; head not very pleasing looking.

CLASS III.—BULL CALVES above 6 and under 12 months old.

In this class the competition was limited to two animals.

George Turner, of Barton, near Exeter, "The Czar," red, 7 months and one week, bred by exhibiter; sire Earl of Exeter, dam Sontag, sire of dam Baronet. [Prize of £10).

CLASS IV.—COWS IN-MILK OR IN-CALF.

There was a good competition in this class the animals equal to former years.

Samuel Farthing, of Stowey Court, near Bridgewater, "Lovely," red, 4 years 2½ months, in milk and in-calf, bred by exhibiter; sire Wonder, dam Lofty. (First prize of £20).—This is a cow of very great beauty, even, deep, and full throughout, pleasant looks, capital shoulders, a perfect cylindrical frame, of excellent quality. The Earl of Leicester, of Holkham, near Wells-next-the-Sea, Norfolk, "Beauty," red, about 8 years, in-calf, bred by R. Merson, of Brinsworthy, near North Molton. (2nd prize of £10).—A cow answering in every respect to her given name, Beauty

CLASS V.—HEIFERS IN-MILK OR IN-CALF, not exceeding 3 years old.

Only three competitors in this class, the animals very creditable.

George Turner, of Barton, near Exeter, "Dahlia," red, 2 years and 5 months, in-calf, bred by exhibiter; sire Earl of Exeter, dam Julyflower. (First prize of £15).—This is a fine specimen of the breed as a young heifer, delicate in make, of superior quality, very proportionate frame, of great beauty.

James Quartley, of Molland House, near South Molton, "Graceful," red, 2 years and 6 months, in-calf, bred by exhibiter; sire Duke of Devonshire, dam Curly (93), sire of dam Quartley's Prince of Wales. (Second prize of £10). This really accords with her name, "Graceful," capital tuts and twist, very pretty.

CLASS VI.—YEARLING HEIFERS.

This was an interesting class, and several good animals were exhibited.

George Turner, of Barton, near Exeter, "Garcia," red, 1 year and seven months, bred by John Halse, of Molland, near South Molton; sire Earl of Exeter. (First prize of £10).—This is a very pretty specimen of the breed, and well worthy the distinction, exceedingly well made, being a full and beautiful cylinder.

Thomas Webber, of Halberton Court, near Tiverton, "Jenny Lind," red, 1 year 7 months and 2 weeks, bred by exhibiter; sire Sir Robert, dam Rosebud. (Second prize of £5).—Is a beautiful little heifer, nicely proportioned, with flanks somewhat slight.

The classes 4 and 6 were generally commended.

OTHER BREEDS.

This is a class combining all breeds, except these just named. We have before expressed our doubts respecting this class. We doubt the feasibility of bringing all "other breeds" into one general competition: in order to improve the whole, every variety of Irish, Scotch, Welsh and English, not included in the three favored classes, are here sought to be shown in rivalship; the result is, that very few ever come at all.—These classes might embrace, or be composed of upwards of 100 varieties—breeds and subvarieties of breeds. Every district of the three kingdoms lays claim to peculiar distinctions in breed, and each has as strong advocates in its favor. This cannot be right: Judges cannot adjudicate properly amidst so many kinds, and designed for so many purposes. We should prefer offering prizes for the best animals suited to certain districts or particular purposes.—We might thus have put before us for decision the best breed for mountain pastures, hilly districts, moorlands and other inferior herbage; or, again, the best milkers or most prolific breeders, &c., &c. We might thus from time to time gain knowledge; but to have such a mingled class, in order that the judges may tell us which is the best animal amongst them, can answer no very useful end; the show of this year fully bears out our views, for while we have some splendid specimens of Longhorns, we have standing beside them, as if intended to excite the ridicule of a public not always considerate enough to look to the design for which they are bred.—We want a designation analogous to the above, in order to promote the most good. We do not complain of individuals sending inferior-*looking* animals for competition in this class: we highly approve it: many are very valuable for certain purposes which are not surpassingly good in our eyes as animals; and if such were not shown, the public would remain uninformed respecting them. All we ask for is, a more extended and better classification, which we trust the liberality of the public will enable the Council to adopt. The show in this class was a great improvement upon some past years. Although in Class I. for Bulls calved previously to the 1st of July, 1852, and not exceeding four years old, there was no entry, and consequently no competition, the cow class was very good.

CLASS II.—BULLS calved since the 1st of July, 1852, and more than 1 year old.

This was but a moderate class.

Samuel Burbery, of Wroxhall, near Warwick, long-horned breed, "Brind," 1 year and 4 months, bred by exhibiter; sire Chasleton, dam Primrose, sire of dam Blucher. (Prize of £10.) A fair useful bull.

CLASS III.—COWS IN-MILK OR IN-CALF.

This was a good class, and the long-horned cows very good.

Captain Inge, of Thorpe Constantine, near Tamworth, pure long-horned breed, "Favourite J 2," red and white, 9 years and 3 months and 22 days, in-milk and in-calf, bred by exhibiter; sire White Thighs No. 25, dam Fillpail J 1.—(Prize of £10.—A very fine specimen of the long-horned breed: very good, and cylindrical proportioned.

Samuel Burbery, of Wroxhall, near Warwick, long-horned breed, "Violet," brind and white, 6 years and 4 months, in-calf, bred by exhibiter; sire Blucher, dam Daisy—(Second prize £25.)—This is a very good animal; more compact than the former, with exceedingly good frame and fine condition.

CLASS IV.—No competition.

CLASS V.—YEARLING HEIFERS.

Captain Inge, of Thorpe Constantine, near Tamworth, pure long-horned breed, "Buffalo E 6," red and white, 1 year 5 months and 2 days, bred by exhibiter; sire Rollright X 50, dam Bashful E 2, sire of dam White Thighs, No. 25, (Prize of £5.)

This class was confined to two animals.

HORSES.

We now come to the class of horses, which is a great improvement upon some former years. All kinds are now included in one general term, "for agricultural purposes, in which even the roadster stallion very fairly takes his place. The large "agricultural" horse is the London dray-horse; he is good for both purposes, so that the Society have no improper limit; he may, however, be rather too heavy for ordinary farm uses.

We again demur as to the expediency of including all breeds of horses indiscriminately in this class—farm-horses of every breed; the Lincoln and Clydesdale dray-horses against the Suffolk punches; and these in competition with the almost innumerable varieties of farm-horses throughout the country. These must necessarily be adjudged in a great degree in accordance with the prevailing taste of each individual judge (and in "horse-flesh" who has not his peculiar taste?) We do not impugn judges: they may act with the strictest impartiality, notwithstanding. Here all are to be judged by one standard—"for agricultural purposes": it must be much a matter of taste. We should prefer some division of breeds, as in the cattle and sheep classes. The Suffolk Punch is probably unequalled as a farm-horse; the Clydesdale and Lincoln dray-horses are more valuable on sale; these might be kept quite distinct in class, and so with any other kind that denote such manifest distinction in breeding; if not, as in pigs, our judges must define them.—The show has fully equalled our expectations, and many fine horses have been exhibited. The agricultural stallion classes are well sustained, though not so numerous as we expected to see them. The Society should have bethought them of the character of the country, and provided for it. A class should certainly have been organized for hunters, and a prize offered Happily, the Mayor of Lincoln and the gentlemen of the local committee supplied this lack from their own means. The result has proved their wisdom, and is very worthy of the occasion. The yearling show surpassed, in some instances, anything we before remember. The mares and foals were well worthy of notice; but without giving further time to a preliminary notice, we will pass forward, and devote a cursory remark to such animals as commend themselves to our judgment.

In Class 1, devoted to stallions for agricultural purposes, foaled previously to the first January, 1852, we find a very noticeable improvement.—Those animals that have received prizes quite deserve them, and those that are commended sufficiently merit commendation; while we fancy that, had the judges possessed more tickets for distinction, they would have put them more frequently than they have done.

Mr. James Stockdale and Messrs. Edward and Matthew Reed bore away the prize in this class. The property of the latter gentleman was a fine old bay farmer's horse, more commendable in many points than Mr. Stockdale's.

In passing to Class 2, wherein are the two-year-old stallions for agricultural purposes, we notice that Rutlandshire and Suffolk take the prizes. Mr. Bran is the owner of the first prize horse, and Mr. Wilson of the other.

The most remarkable animal, in our opinion, in the yard, or at any rate amongst the horses, may be seen in the 3rd class. We need not say that we allude to Mr. Robert Howard's prize yearling. Every one mentions it with a glow of enthusiasm. It stands out alone in the class, and the other competitors suffer by the comparison, although there are some fine colts too. And Lincolnshire bears the belt. Never did we see a yearling so furnished: his points excel those of some four-year-olds. The first prize could not have been more properly awarded.

With roadster stallions we were much pleased. The road horse is more difficult to meet with in perfection than either the hunter or courser. He must be a horse of all work; and so rarely is he to be met with, and so much is the demand increased for him, that we welcome any stallion likely to supply a want so universally felt and expressed. Mr. Innocent stands foremost in this class with his "Calton," a six-years-old, dark bay stallion. The judges have judged wisely, we think. "Sir Charles," the property of Mr. Taylor, is an exceedingly fine animal. His formation denotes strong constitution and good running properties. He seems peculiarly adapted for his work.

Amongst the fillies, Suffolk bears off the palm. The first prize is awarded to Mr. Barthropp, and the second to Mr. Bayles, for a Lincolnshire bred filly.

And now we pass to a class of especial importance, held as the present meeting is, in the midst of one great hunting county, and upon the borders of another. Mr. Tweed, the Mayor of Lincoln, and the members of the local committee, have come forward with prizes of their own, and their call has been promptly responded to. It was very desirable to have a display of hunters, and most praiseworthy was it on the part of these gentlemen to have foreseen this necessity, and arranged for it. The contest seems to us to be a very hard-run one between Mr. Denison's "Lotherbourg" and Mr. Watson's "Drayton."—The former is certainly a splendid type of a horse, but seems to us somewhat more adapted to get carriage-horses than hunters. From age and work he is shaky on his forelegs. He bears away the prize of £40.

SHEEP.

The show in all classes is very large, particularly of Leicesters and long wools; while the number of improved Lincolns far exceeds that of any previous instance, when a local class has been provided by the society.

Leicesters.

Class I.—Shearling Rams: In spite of close competition, one exhibitor was here able to carry off both prizes. The prize shearlings were bred by Mr. T. E. Pawlett, of Beeston, Beds, and are remarkable for their long and level backs, broad springing chines, good rumps and thighs, and deep plates. The rams of Mr. J. Barton, of Barton-le-street, Yorkshire, are deservedly famed; but in the present instance, we think, that although possessing good fore-quarters, and being well fleshed, they have not quite sufficient depth (two of these are commended.

Class II.—Rams of any other age: Mr. J. Borton takes the first prize, for a very handsome sheep, with good chest; and Mr. Abraham, of Barnetby-le-Wold, Lincolnshire, takes the 2nd, for a sheep with wide and straight back, heavy neck, broad chine, and good wool.

CLASS III.—PENS OF FIVE SHEARLING EWES: The first prize is awarded to Mr. G. Walmesley, of Rudstone, Yorkshire, for a lot with uncommonly good flesh, compact forms, and very fine bone. The second prize to Mr Abraham, for a good pen of well-made ewes, though scarcely deep enough through the chest.

SHORT WOOLS.

In this class there is very considerable merit, notwithstanding the absence of Mr. Jonas Webb's splendid animals from the show; but we must condemn the practice of some exhibiters, in trimming their sheep to such an extent, as often to hide very serious defects in form, particularly high loins.

CLASS I.—SHEARLING RAMS: The prize Ram of Mr. H. Lugar, of Hengrave, Suffolk, is a finely formed animal, neck good, back level, wool fine. The second prize Ram, of the Duke of Richmond's, is also of great merit, having a level broad back, and full shoulders and chine.

CLASS. II.—RAMS OF ANY OTHER AGE.

Mr. Sainsbury takes the first prize, for a 29 months' old ram, of great length and yet well formed, and with good back. The second goes to Mr. Rigden, for a 28 months' old ram, with level back, good rump, good chine, heavy thighs, but perhaps a little failing in the chest. Mr. Lugar's highly commended ram has a level back, great girth, but rather narrow twist. Mr. Rigden receives another commendation in this class.

CLASS III.—PENS OF FIVE SHEARLING EWES.

Mr. Overman's prize ewes are remarkable fine and well-made; and the Duke of Richmond's second prize ewes are certainly beautiful animals, though somewhat small, and with less wool.

LONG WOOLS.

As we might expect, in Lincolnshire, the show of long wools is unprecedented as regards the number of specimens; and we find from the catalogue that onefifth of the exhibitors in this class are men of this county, notwithstanding that a special class has been prepared for them.

CLASS I.—SHEARLING RAMS.

Mr. G. Fletcher, of Shipton, near Andoversford, takes the first prize. His ram is of amazing length and size, finely-proportioned and grand-looking, though with a head somewhat too short for some tastes. Mr. G. Hewer, of Laygore, near Northleach, shows his very superior breed of animals, celebrated not only for their great size and spacious form, but equally so for their very fine mutton and pleasing countenances. Number 62 has the second prize.

CLASS II.—RAMS OF ANY OTHER AGE.

The first prize ram of Mr. W. Lane, 28 months old, is an animal possessing many good points, combined with unusual size; and the second prize ram, 40 months old, belonging to the same breeder, is quite as extraordinary.

CLASS III.—PENS OF FIVE SHEARLING EWES.

Mr. W. Garne's beautiful ewes take the first prize; Mr. Lane's take the second; and we must say that these are really surprising animals, their size being that of some rams, and their breadth of chine and loin, and fore-quarter and rumps, is as great as their heads and bone are fine.

IMPROVED LINCOLNS.

This class has been appointed, according to the custom of the Society, to test or develope the breeding capabilities of the district in which the meeting is held; and we may say, that on no former occasion has the local class of sheep been so numerously filled with good animals, or so well characterized by good mutton and fine qualities. The Improved Lincoln occupies a very extensive district of the country, and, from the fact of producing a longer and heavier fleece than any other sheep, forms a very important breed. We cannot say that all the sheep exhibited in this class were of peculiar merit; indeed, from what we know of the various Lincoln flocks, we anticipated a still better show: but we can safely affirm that many of the animals possess great beauty, extraordinary substance and symmetry, good looks, fine quality of flesh, and a long thick-set staple of very good wool. Without the amazing proportions of the Cotswold or New Oxfordshire breeds, they have hitherto failed to succeed in competition with them in the same class; but as animals profitable to both breeder and grazier in meat and wool, they are abundantly able to enter the field against the broader framed but lighter skinned Cotswolds.

CLASS I.—SHEARLING RAMS.

The first prize is awarded to Mr. John Clarke, of Long Sutton, Lincolnshire, for a good well-made sheep, with good mutton and plenty of wool. The second prize to Mr. Thomas Greetham, of Wragly, Lincolnshire, for a useful farmers' sheep, fairly proportioned, and of considerable merit.

CLASS II.—RAMS OF ANY OTHER AGE.

Both first and second prizes are taken by Mr. John Clarke. Both animals of great size, breadth, and depth; good rumps, loins, and legs; firm, beautiful meat, and very heavy wool. The first prize sheep is exceeded in girth, we believe, by only one sheep in the yard—viz., one of Mr. Lane's Cotswolds, and he clipped in three years no less than 51¾ lbs. of wool.

CLASS III.—PENS OF FIVE SHEARLING EWES.

Mr. John Kirkham obtains the prize for a lot of very good ewes, having plenty of wool.

THE EXHIBITION OF PIGS.

The only classification adopted by the society is that of "Large Breed" and "Small Breed"; and considerable difficulty always arises in distinguishing between the two, so as to pronounce with certainty in which class some of the animals ought to be shown. For it is less the actual dimensions than the peculiarities of form that mark these groups of "large" and "small" breeds, the latter being found, in some instances, to exceed some of the former in size and weight. And although the judges are always directed to withhold prizes from any animal, however meri-

torious. if entered (according to their judgment) in a wrong class, it frequently happens that a "small breed" pig possesses such amazing frame and flesh as to exclude the really small from fair comparison. Perhaps a better way of ensuring equality of competition would be to follow an entirely different principle of classification: for instance, take the purposes for which the animals are bred and fed, and give two or more sets of prizes for the individual specimens best qualified for these purposes respectively.—Swine are employed for producing two varieties of valuable meat, pork and bacon: one set of prizes might be offered, therefore, for boars and sows best adapted for breeding fine porkers, and another set for larger bacon hogs; apportioned, of course, between boars, sows, and sow pigs, as at present.

And now, with respect to the show at Lincoln: we have certainly seen better—taken as a whole—but many of the animals were of a very superior order, particularly in the small breed class.

Class I.—Boars of a Large Breed.—First prize to Henry Blandford, of Sandbridge, near Chippenham, Wilts, for "Jack," 2 years 3 months and 2 weeks old, a pure Berkshire, black, with white face and feet; dam Star, sire of dam Peacock. This is a very large hog, but with rough hair, and a rather coarse quality of flesh. The second prize to Matthew Harvey and Joseph Branston, of Langford, near Newark, for a white boar, 2 years 11 months and 2 weeks old, of a very great size, good quality, and little offal; somewhat of small breed character.

Class II.—Boars of a Small Breed.—First prize to Mr. William Northey, of Lake Litton, near Launceston, for a 1 year and 3 months old black boar of the improved Leicester breed, having a very thick form and substance, and beautiful quality, though rather too short at the tail. The second prize to Mr. Solomon Ashton, of Peter Street, Manchester, for "Yorks," 1 year and 2 months old, of pure small breed, white with blue spot; a remarkably well bred and valuable hog.

Class III.—Breeding Sows of a Large Breed.—We have seldom seen so large a sow as the first prize one, shown by Edward Robinson, of Green Bank, near Lymm, Cheshire. "Amazon" is 2 years and 2 months old, white, with a few blue spots, immensely long, and having very deep sides. The Rev. Edward Elmhurst, of Shawell Rectory, near Lutterworth, Leicestershire, showed a remarkably fine sow (highly commended).

Class IV.—Breeding Sows of a Small Breed.—In this Class, which the Judges have honored with a "general commendation," Mr. Mangles takes the prize for the "Queen of Diamonds," 2 years and 4 months old, Yorkshire breed, white; sire "Guy Fawkes," dam "Lucy," of beautifully fine quality. Mr. Northey showed some capital sows in this class; so did Mr. Thomas Horsfall, of Burley Hall, near Otley, Yorkshire.

Class V.—Three Breeding Sow Pigs, of a Large Breed.—Mr. Saddler takes the prize for a pen of three sow pigs, 7 months and 1 day old, pure Berkshire breed, dark spotted; sire "Wellington," dam "Duchess of Gloucester," sire of dam "Barrington." Mr. John Harrison, jun., of Heaton Norris, near Stockport, showed a pen of almost equally meritorious animals; very useful, and uncommonly good in character.

Class VI.—Three Breeding Sow Pigs, of a Small Breed.—The prize was carried off by the Earl of Radnor, for three 5 months and 2 weeks old white pigs of his Lordship's celebrated Coleshill breed; sire "Farringdon," dam "Old Bess."

POULTRY.

We are sorry to notice this year so comparatively poor a show. Lincolnshire seems not to have surmounted the old prejudice that is showed when it underrated Mr Handley's exertions. Lincolnshire is yet decidedly behind in attention to poultry: a department of farming in the respect from which, it properly conducted, a good profit may be derived. We should be glad to see a county so celebrated in other respects, take the lead in this also; and we advise that the old motto, "What is worth doing at all, is worth doing well," be constantly kept in mind.

The exhibition in question is, *in our opinion*, not nearly so meritorious as it might have been. True, the time of year is not very suitable to the show of birds in full feather; after having performed the duties of the spring, they are necessarily out of condition. We venture to ask, then, whether it would not be well to give prizes for chickens—encouraging the production of early maturity? *Prizes for adult birds might be left* for Birmingham to award at Christmas.

The benefits of this annual poultry show are two-fold: it affords to amateurs an arena where to enter into friendly competition; and to the landowner or occupier it affords an opportunity to judge of the comparative excellence of breeds. The eye will not alone decide which is the sort adapted especially to any *locality*; we must consult experience to come at the knowledge. We do not intend to diverge into any remarks in this direction however; and we only say, by way of introduction to some notice of the fowls exhibited, that there may be three classes of profit—breeding for fancy, breeding for eggs, and breeding for the table. The first changes with fashion; the second is certain profit; while the third is, although the most neglected, the most remunerative of the three. Of the first we shall say nothing. The Spanish, Hamburg, and Polish fowls are respectively good layers, bad sitters, and consequently fitted for those who require large supplies of eggs. The Cochin China, Malay, Dorking, and Game fowls are good layers, good sitters, and good nurses. *But while* the Dorking and its kindred varieties are excellent for the table, the Malays and Cochin Chinas are seldom be served up except as *roasted*, because of bad colour. Mr. Soyer says that, as a rule to be observed in the kitchen, white-legged fowls should be boiled, and black-legged poultry are fit only for the spit

IMPLEMENTS.

This department of the show was, as on former occasions, very extensive. Most of the articles were most substantially made, and evinced very great skill both in design and workmanship.—Howard & Ransome carried off the principal prizes for ploughs. Bentall was the most successful among the cultivators and grubbers.—Scragg's machine for making draining tiles and pipes, were decided the best. A trial of Reaping Machines took place on rye; several machines were put into competition. The question of merit lay ultimately between Crosskill's Bell with Mc Cormick's Cutter, and Dray's Hussey, and the prize was awarded to the latter. "It is singular (remarks the *Agricultural Gazette*), how the English and Scotch judges vary in their decisions on this subject. In its own country, Bell has uniformly won the palm,—and as the trials there have generally been during a fitter state of the grain for its operation, we should be inclined to give greater weight to the Scotch decisions.—Dray has this year added a tilting board, which greatly facilitates the delivery of the corn."

COMPARATIVE ESTIMATE OF JETHRO TULL'S PRACTICE IN GROWING WHEAT.

...ave been favored by J. B. Marks, Esq., of Kingston, with a copy of the Eleventh Edition of the Rev. Mr. Smith's pamphlet, entitled *Wad in Season; or How to Grow Wheat with Profit*: addressed to the British Farmer. Mr. Smith's operations are carried on upon a limited scale at Lois Weedon, Northamptonshire, and here attracted general attention both among scientific and practical farmers. We propose extracting such portions of his work as will prove suggestive and interesting to Canadian readers:

Attention has been roused at last to the merits of that extraordinary man, the undoubted pioneer of the onward march of modern agriculture. I believe, however, that little is still known by farmers generally of the actual details of the process by which he carried his theory out. A few introductory words, therefore, on this point, and a comparative estimate of his practice, may not come amiss at a time when a great degree of interest on the subject has been awakened among thinking men.

The principle of Tull, in his tillage for wheat, was to pulverize the soil effectually to the bottom of the staple, in order that every particle of the mould might be impregnated with the fertilizing substances of the atmosphere, whatever they were; and that the roots of the plant, at the same time, might be enabled with ease to permeate the loosened earth and so take up the food thus placed within their reach.

To attain his object he divided his field by broad and deep furrows,—as deep, that is, as the staple would permit, and no deeper—into lands about six feet wide. In the centre of each land he drilled his seed in two rows about ten inches apart, thus leaving an interval of about five feet between each double row. Then, when the plant was up, came a very nice and difficult operation. After closing up the furrow, he ploughed the whole interval, with the exception of six or eight inches, for a winter fallow, taking the last slice within three or four inches of the wheat, and leaving that standing on a ridge about eighteen inches wide, with a deep furrow on each side. Thus it remained during winter. At spring another equally nice and difficult operation succeeded. He cast back the soil, thus fertilized by exposure, against the tender wheat, and restored the broad furrow in the centre of the interval. Then, during summer, as often as the nature and state of the soil required it, he horse-hoed, or rather ploughed it away from the wheat and then back to it again, retiring farther and farther from the spreading roots as the season advanced, and operating for the last time after the wheat had just gone out of flower.

The process succeeded to admiration. The well-stirred soil had become impregnated with the elements of fertility. The roots had been enabled to take up their nourishment. The straw, exposed to the sun and air, hardened and stood well up, except in very peculiar seasons. The ears became unusually bulky, the grain large. And Tull calculated that thus, without manure, on the same acre of land, he gained year after year, for several years, a profit much larger than that of farmers in the common mode of farming.

But, if it indeed was so,—if the profits of the system were so surpassing, it has been very naturally asked, how came it to pass that it dropped, and, with few and scattered exceptions, died away?

The question, as I think, admits of easy solution. The principles of Tull were sound and original, and, as applied to root-crops, have gained their author imperishable fame as a farmer. But with reference to corn, his theory, as carried out by himself, could not stand.

For, it is quite clear, in the first place, that if any farming scheme proposed for adoption be so beset with difficulties in the execution as to be beyond the capacity or the power of common husbandmen, it must come to nothing. It can make no progress as a national concern; and, however promising it may be, it will be looked at only at a distance as a pleasing delusion.

Now, that the full effect of Tull's mode of tillage might be felt by the roots of the growing plant,—in order that they might receive, without any obstruction, the benefits of the impregnated and pulverized mould thrown back to them for their nourishment at spring, it was necessary, at the first ploughing before winter, to guide the plough with such unerring nicety, that a slice should be cut from the sides of the

wheat three or four inches from the tender plant. That was the bond. Cut more or less, in the estimation of a single inch,—cut closer or further off, and the forfeiture and penalty is this: in the one case the object is defeated; in the other, the plant is roooted up, and dies.

Again, it was required at an early spring, when the plant was yet weak, that this slice should be thrown back against the rows: plough with a heavy hand, clumsily, and the wheat is buried. If Tull's ploughman succeeded in avoiding the evil and attaining the good, I question whether, out of the thousands and ten thousands of hard-handed laborers within the realm, there could be found five hundred as good as he.

Here, then, was a difficulty sufficient in itself to be fatal to the scheme.

But, there was a more palpable cause of its failure still. I have spoken of Tull's success in comparison with that of his cotemporaries. And, looking at the state of agriculture in his time, seeing that the farmers' outgoings were so much greater than his, with their bare fallows, their heavy manures, their extravagant seeding, and their frequent and necessary ploughings, doubtless he had greatly the advantage; and had it not been for the difficulties of his plan, it might have made considerable progress at the time and for many years afterwards. The crowning result, however,—his actual produce per acre,—this, after all, has been the real stumbling-block in later times in the way of even a trial.

It is unfortunate that we have no *bona fide* balance sheet of Tull's average yield of wheat, from his own account book. For, calculations from ounces of grain and yards of land are of no account. We look for the measured crop stated and authenticated by his own hand, and we look in vain. Still, from a few scattered intimations here and there, and from the early editions of his work published in and about his time, we may gather that his general produce per acre was about *two quarters*. If any doubt existed on that point it would be removed by the statements of *M. de Chateauvieux*. He was an excellent farmer and one of the best and most energetic followers of the great master. His experiments extended over a large estate and even with his improved implements, his more enlarged experience, with all appliances and means to boot, he can shew but an average of less than sixteen bushels. If, indeed, we consider the extent of *ground occupied by the fallow interval*—a space which Tull found necessary for the perfect development of his scheme—the amount of produce in reality was so great that, as an average, it could scarcely be more, fully bearing out the truth and goodness of his principles. For, the two quarters were taken from only a fifth part of the land, being at the rate of ten quarters per acre.

Still, in an island, with a limited surface and a population like ours, a yield of wheat like sixteen bushels over the whole acreage of the country would never be borne, nor, I suppose, would the worst farmer in England look at it for a moment.

Was the scheme, then, to come to nothing? I thought it ought not. Well worked out, with a change of practice, I felt assured it might become a mine worth the wealthiest diggings in the world.

Were there no means, then, of making the process easier and safer?—

Such, again, was the vigorous and healthy conditon to which it brought the wheat plant, that, besides the closer growth of the stems in tillering, each ear on an average contained double the amount of grain, as compared with ears on the common plan; and the half portion of each acre in wheat would therefore yield double the amount of half an acre on the common plan. In other words—half an acre in this way would become equal in productive power to a whole acre in that. *Were there no means of effecting this?*

These two questions I boldly answer in the affirmative. And if in taking upon myself the responsibility of doing so, the answer be found to contain a great deal about me, I can only suppose it must be—as the gentle Esther supposed in her case—"because I have really something to do with it, and can't be left out."

There *are* means, then; I have tried them; have succeeded; and seen others succeed. Since the details of the scheme I practise and recommend have been matured, I have had years of trial upon wheat, and have given the result. I have succeeded, and seen others under my own immediate observation succeed, in gaining an average produce from half an acre, equal to a high average produce from a whole acre.

It would be a very useless and unworthy thing to make a statement such as this, if I did not believe that, with few exceptions, farmers generally could do the same. But, I most fully believe they might, to any extent. One little demand I must make, however. I must, with permission, presuppose an ordinary knowledge, on their part, of the duties and the details of ordinary good farming. For, the scheme is no *wild offset from the brain of the theorist*. It is a graft on the stock of acknowledged truths. It is essentially practical—a matter of the plainest common sense. I submit to certain rules, and so gain certain ends. It is owing wholly to my obedience to the one, that I accomplish the other. It cannot be otherwise. No one can evade the conditions with impunity. I have known the *scheme tried upon wheat*; and, *in one case*, it was thick sown in September; in another sown thin in November. I have known the great principle, pulverization, wholly disregarded, and the seed plaistered in raw unmitigated clay; or committed to the untried mercy of the fresh-uplifted, unneutralized subsoil. I have heard of fat-fed thistles in the intervals overtopping the wheat at harvest. Yet more wonderful—I have seen a season of blight, and premature ripening, and almost universal mildew, amounting to a visitation; and, while wailings were heard on every side, that field of miraculous triple rows and yard-wide intervals was expected to be Goshen.

In all these, and such like cases, there is a self-evident need of the exercise of the common gift of reason. That will teach a man to look for no miracle in any scheme ; to expect no success without a previous fulfilment of the means ; and farther to believe, that if success has been attained in even one case, it need not find a limit in ten thousand.

The process by which I carry out my plan is a very simple one ; and is given in detail and at length in the following pages. Briefly, it is this: I divide my field into lands 5 feet wide. In the centre of each land I drop or drill my seed in triple rows one foot apart, thus leaving a fallow interval of 3 feet between each triple row. When the plant is up I trench the intervals with the fork, easily taking my spits about 3 inches from the wheat, and at spring and during summer I clean them with the blades of the sharp cutting horse-hoe, and keep them open with the tines of the scuffler. Every year, in short, I trench and cultivate 2½ feet out of the 5 for the succeeding crop, and leave the other 2½ for that which is growing.

One moiety of each acre is thus in wheat, and the other moiety fallow ; and the average yield of that half acre is 34 bushels, grown without difficulty or danger in the execution, and surpassing the average yield of a whole acre on the common plan.

It will here be seen at a glance how I differ from Tull in practice ;—how the fork takes the place of the plough, and does better work in a narrower compass,—how the fallow is reduced from four-fifths of the land to only one-half ;—and how, in consequence, the produce is more than doubled at once.

But, the difference is far from ending here. I differ from Tull in this: I do not refuse manure. The essence of the scheme I propose, is, not that it dispenses with manure, but that, with manure, where required, it enables the farmer to draw from half an acre of land a produce beyond his now average produce from a whole acre. The wheat-land I am cultivating is unmanured : for one portion of it is clay ; the other a gravelly loom. The former is fed sufficiently, and is safe. The latter, in parts, is hungry ; and, as I dig deeper, shews symptoms of sharp gravel, and these I shall dress with clay.

WHEAT-CULTURE IN THE UNITED STATES AND CANADA.

France, and the United Kingdom of England, Wales, Scotland and Ireland, contain a population of about sixty-five millions, who are fast acquiring that higher standard of comfort which enables the masses to consume good wheat bread in place of much cheaper vegetable food. For indefinite ages the great body of the people in Europe have consumed, comparatively, little wheat ; being compelled to subsist mainly on various kinds of pulse, potatoes, and other tuberous roots, and rye, oat, barley and corn meal. By the discoveries and inventions in arts, and the advancement of sciences, their labor is far more productive now than it has ever before been, their wages are higher, and, consequently, they are able to live better, and are glad of an opportunity of so doing. Official returns made to Parliament show that the people of the United Kingdom have doubled their annual consumption of sugar in ten years—a remarkable fact, considering the comparatively small increase of population. In 1847, the British nation, before the discovery of gold in Australia and California, and when labor was not so well paid as it now is, imported for consumption 32,000,000 bushels of Indian corn and 4,464,757 quarters of wheat. In 1853, it imported 6,235,864 quarters of wheat, and only 14,168,856 bushels of corn. These figures show a decrease of the consumption of our Indian corn of more than half, and an increase in the consumption of wheat of about fifty per cent., in seven years. In Northern and Central Europe, in Italy, France and the United States, brown bread and corn bread are giving place to wheat bread whenever the former have long been eaten. "Rye and Indian" in New England, "hoe-cake" "pones" and "corn dodgers" at the South and South-west, are becoming historical. Place good wheat bread and that made of meal on the tables of the million, and the old habit of eating meal bread, or meal dumplings and porridge will in a few years cease to exist. The poor in Rochester pay eleven dollars a barrel for flour rather than consume meal at less that half the cost, because their wages are generally good, and they have always been in the practice of eating flour in this fine wheat growing district.

In the British West Indies, Cuba, Brazil and Central America, the consumption of our wheat flour is on the increase. We have before us the official Reports of all our exports and imports, of our commercial and other transactions with all nations, for several years, including the last. Attention is invited to the fact that the whole world took only $1,374,077 worth of corn, and $709,074 worth of meal, of this great corn-growing nation during the last fiscal year, ending June 30th, 1853 ; while it exported wheat and flour to the amount of $20,000,000, within a small fraction.

Nothwithstanding our pretty high duty on foreign wheat, Canada wheat-growers sold in the United States 1,297,131 bushels in the last fiscal year, and received for the same, according to custom house returns, only $821,696. The returns for the present fiscal year, ending on the first of July, 1854, will doubtless show a much larger sale, and at a far better price.

To be a skillful and successful wheat-grower, one needs considerable professional knowledge. The most difficult points in the operation are to make the soil precisely what it ought to be, and to prevent its gradual deterioration by years of successive cropping. Where nature has made the land just right for the growth of wheat, its cultivation is as simple as any tillage possibly can be.

Many a soil abounds in both iron and alum salts (sulphates and phosphates of iron and

alumina), that lack only lime to decompose these often injurious salts, and form in their stead both plaster of Paris and the earth of bones. Where sufficient lime exists naturally in the soil, tillage effects the important chemical changes which we have just named. A calcareous soil yields far more clover and other herbage to be turned in with the plow, and feed growing wheat plants, than will grow on land that has only a minimum quantity of lime. To persuade a field to bear a generous burden of clover, or grass of any kind, we must see that the soil abounds in the things which nature consumes in the growth of such plants. If it has the constituent elements of crops, it needs no manure; but if these are lacking, then look out for ashes, bones, gypsum, marl, night-soil, subsoil plowing, swamp-muck and lime, stable manure, and all other known fertilizers. Little attention is paid to collecting the elements of grain and applying them to the soil. The amount of good wheat land in North America is much less than is generally supposed; while the number to consume wheat increases very rapidly.—*Genesee Farmer.*

THE HEMP TRADE.

Under the head of "Hemp from Canada," will be found an extract from a valuable article on "Canada," which appears in the last edition of the Messrs. Black's *Encyclopœdia Britannica.* At this time, when we are shut out from supplies of hemp from Russia, and when the prospect of the renewal of our trade with that country is remote enough, it is of the greatest importance to know that our dominions in North America may be able to furnish us with all the hemp which we may require, and that the quality grown may be made to rival the hemp of Russia. A double benefit will certainly be conferred on this country, if we are able to supply our own manufacturers with the article, and, at the same time, to give an impulse to an important branch of agricultural improvement in a country, whose interests are identical with our own.—*Belfast Whig.*

HEMP FROM CANADA.

The growth of hemp in Canada assumes a position of great national importance at the present time when British supplies have been so seriously checked by our war with Russia. The important towns upon the Eastern coast of Scotland, which are the chief seats of the trade, have suffered severely by the check received by the trade on account of our being so dependent on Russia for this great staple of a growing branch of our national manufactures. Were our own dominions in North America to supply hemp for our manufactures in future, instead of our being, as hitherto, so wholly dependent upon Russia for such supply, the change would be attended with signal advantage in more than one point of view. We would be giving employment to our own colonists, and thus fostering the growth of a country upon the verge of becoming a great nation, speaking our own language, and giving proof to the world of the advantages of those enlightened principles of free government by which our own enviable national greatness and prosperity have been obtained. It may, perhaps, not be generally known that hemp grows spontaneously in Canada, particularly in all the lower or Eastern districts of the country. And it is stated, upon respectable authority that, under good cultivation, the quality is equal to Russian hemp. The soil and climate of Canada is believed to be eminently adapted to the growth both of hemp and flax. Very many years ago, the culture of hemp in Canada was commenced with all the earnestness and vigor which a well grounded confidence in the capabilities of the country for such production warranted; but, owing solely, it is believed, to the want of efficient modes of converting the raw produce into a prepared state, and thus securing an immediately profitable market, the culture of hemp in Canada, upon any extensive scale, was then abandoned. As memorials of the comparative success of the cultivation of hemp in Canada at that period, there at least were, not many years ago, and there may be still, farmers in Lower Canada holding medals from the British Society of Arts and Science for samples of hemp produced upon their farms. The elaborate work of the late Colonel Bouchette on British America affords a good deal of information in regard to the capabilities of Canada for the growth of hemp, and explains the causes of the comparative failure of these efforts, made many years ago, to introduce the cultivation of this important staple upon an extensive scale into Canada. Colonel Bouchette was Surveyor-General of Lower Canada, and a corresponding member of the Society of Arts in London, and he was therefore enabled, both from his official position and general acquirements, to furnish facts and opinions of unquestionable value bearing upon the subject in question. According to calculations of Colonel Bouchette, the cost of one ton of merchantable hemp landed in England would be not quite £21 sterling. The mean price of Russian hemp in the English market at that time was £40 15s. sterling. It is at least highly probable, from what has been stated, that an important national staple of our manufactures may be procured to any extent, of equal value, and quite as cheaply, if not more so, in one of our own colonies, as the same article for which we are now dependent for our supply upon an inimical foreign power, which may to the utmost of its resources, as has been now proved, place our interests in jeopardy to an inconvenient extent for some time, commercially as well as politically. The American navy use at present large quantities of native-grown hemp. Mr. W. B. Shubrich, chief of the bureau of construction, navy department, United States, in a report to the secretary of the navy, recommends greater attention to the detail of cultivation, curing and packing native-grown hemp, "which, in the opinion of the Bureau, would be found to be very beneficial in effect, and, in the course of time, make it altogether independent of a foreign market for a material so important for naval purpose." Mr. Gardiner, Superintendent of the

Ropework of the United States Navy-yard at Memphis, in a report of his department, further substantiates these views, concluding that, with proper care, "American hemp may (as experiment has proved) be made to equal, if not to excel, any foreign importation. The quantity of hemp and flax produced in Canada, taken together as officially returned, amounted, in 1852, to 1,917,666 lbs., being above 800 tons. The value placed upon this, by the Government Board of Registration and Statistics in Canada, is 3d. currency on £28 currency per ton, which, reduced to sterling, is £23 3s. The total value of the hemp and flax grown in Canada in 1852 was, therefore, according to his official valuation, £23,971 provincial currency, and very nearly the whole was the growth of Lower Canada.—*From the article "Canada" in the Encyclopædia Britannica.*

FARMING.

Among the most vigorous class of people the farmer may be found. There are many ways by which men of this present age procure the necessaries of life, but no occupation is more conducive to health and happiness than farming. There are several ways by which this may be exemplified.

First.—In order to make the muscles of the human body rigid and strong, they should all receive their due proportion of exercise. Those trades and kinds of exercise that tend to give every muscle its proper share of action, both of the upper and lower extremities, are most salutary, as it tends to develope and strengthen them equally.

Second.—The purer the air we breathe, the longer the muscles can be employed in labor.—What department can be more thoroughly ventilated than the open fields?

Third.—Light has as great an influence upon man as it has upon the plant, particularly that of the sun. You have doubtless noticed a plant that grows in the shade is weak and pale. The same is true of man; both, in order to make them strong, require the stimulus of this great agent.

There might be numerous other reasons brought forward to show that farming is most conducive to health; but it is useless to multiply them. In regard to happiness, I would ask but one question to be resolved in your minds. What is health but happiness? Knowing that farming promotes the greatest blessing, let each and every one of us be engaged in this business; for shop work, (particularly shoe making) does not bring the lower limbs into any action while the upper limbs are constantly employed. The air indoors, where laborers are employed, is not so healthy as it is in the great department or shop, owned by Uncle Sam, which was not planned by man, and needs no ventilation. In-door work is not exposed to solar light; hence let us devote ourselves to that which affords us the purest air, and which exercises the muscles in the right mode; and that, as we have already proved, is farming.—*Farmer and Mechanic.*

AGRICULTURAL IMPROVEMENTS.

Since the days of Sir John Sinclair—the esteemed friend and correspondent of Washington, and one of the great men of the earth—no science has received more general attention than that of agriculture. This, at least, is particularly true with respect to the past twenty years' agricultural experience of our own country. When we look back over that space of years, and contemplate the many improvements in farming which have been made, we have great reason to congratulate our farmers for the spirit, intelligence, and good sense which they have exhibited.

OBSERVATIONS

ON THE MAKING, CURING AND CASKING OF BUTTER.

We have been favored by the Hon. Adam Fergusson with a printed copy of the following directions for making and preserving Butter, as the result of numerous enquiries into the practices adopted in Ireland, and of the experience of several extensive curers in the county of Aberdeen, Scotland. Although printed several years ago, the observations will be found not devoid of interest at the present time, and in many respects applicable to this, or as it should be, very important department of Canadian farming.—Such as possess good soils for pasturage, will find it greatly to their advantage to pay stricter attention to the breeding and rearing of cattle and the improvement of dairy products.

1st. The milk-house or dairy should have no internal communication with any other building. It must be kept free from smoke, well aired, and clean; and no potatoes, fish, onions, cheese, or any thing likely to impart a strong or bad smell, should be kept therein. In short, nothing but the dairy utensils, which must also be kept sweet and clean.

2d. The milk, when brought in from the cows, should be strained through a fine hair scarce or strainer, and, when cool, put into sweet well-seasoned oaken cogs, keelers, or milk-pans—the latter to be preferred. A tin skimmer, with holes in it, is the best for taking off the cream, which should always be churned while the cream is fresh.

3d. The churns, whether plunge or barrel, should be made of the best well-seasoned white oak; and, as cleanliness is of the first importance, great attention should be paid to the washing, drying, and airing of the churns, immediately after use, otherwise they are sure to contract a sour and unwholesome smell, which must injure the quality of the Butter.

4th. The Butter, immediately after being churned, should be thrown into fresh spring water, where it should remain for one hour at least, that it may grow firm; and, at the end of

the third or fourth washing, some fine salt should be put into the water, which will raise the color of the Butter, and purge away any milk that may remain among it. Before salting, it is very essential that no milk or water be left, otherwise a strong smell and unpleasant taste will be the certain consequence.

5th. The Butter thus prepared should be immediately salted. The proportions of salt may be from one and one-fourth to one and one-half ounce of Scotch salt for the pound of Butter; or, of the best stoved rock or bay salt, one ounce for the pound. But when Butter is not intended to be kept through the winter and spring, or for any long period, the quantities of salt above recommended may be somewhat reduced, the Curer exercising his own judgment in doing so.

N. B.— In Ireland, the use of salt and saltpetre, is recommended, in proportions of one ounce of stoved rock or bay salt, and one-fifth of an ounce of saltpetre to the Aberdeen pound.*

6th. It is a very injurious practice to keep a making of Butter uncured to the next churning, for the purpose of mixing the two together. This mode invariably injures the flavor of the whole, and renders it of too soft a quality ever afterwards to get firm. This applies to Curers who are the producers of the Butter; but as the greatest quantity of the Butter in this county is collected and cured by merchants, they are particularly cautioned against the too common practice of throwing the fresh Butter together, and retaining it in that state for days, until they have collected what they consider a sufficient quantity to commence curing: the Butter treated in that manner is invariably found inferior to what is salted shortly after churning. Should, however, there not be a sufficient quantity collected in one day to fill a package when cured, the quality of the Butter may in a great measure be preserved, by giving it a partial salting, and covering it over with a clean linen cloth, dipped in pickle, and placing it in a cool situation. Country dealers who are in the habit of sending carts through the districts where they reside, to collect the Butter, should endeavor to arrange it so between themselves and the makers of the Butter, that it is churned upon the day it is called for.

7th. When the Butter is cured, it should be tramped firm into the firkin with a round wooden tramp-stick, of sufficient weight and thickness. The firkin should be filled up to the crose, and then covered over with a little of the purest salt, —sufficient room being merely left for the head of the cask, which must be well secured, to exclude air, and to prevent the pickle from getting out.

8th. The Liverpool stoved salt, or Portugal St. Ube's, or Bay salt, is, from strength and quality, always to be preferred. All salt must be kept quite dry, and at a distance from the fire, to prevent its imbibing the smell of the smoke. If kept in a cask, a little unslacked lime placed under it will prevent it from drawing moisture from the ground.

* All these calculations are made for the Aberdeen Butter pound of 28 ounces Averdupois, and the salt of 16 ounces to the pound, of same weight.

9th. The mixing of the salt with the Butter should be done in wooden dishes, after the water and milk are completely expelled, and no time should then be lost in tramping it into the firkin, which will make it draw even and firm.

10th. The milk of new calved cows should never be set for Butter until at least four days after calving, as a small quantity of beast-milk Butter will injure a whole firkin. The practice of scalding cream in cold weather should also be avoided, as cream thus treated will never make good Butter.

11th. Great care should be taken not to steep the firkins in boggy or unwholesome water.— Nothing but the purest spring or clear running water should be used for that purpose; and the firkins should be rendered perfectly dry inside after being steeped, either by long dripping, or by being rubbed with a smooth towel. Old Butter should never be mixed with new; and the lining of the casks with inferior sorts, or grease Butter, is a practice which cannot be too much reprobated.

12th. The casks ought to be made of the best oak or ash, (the former be to preferred) and the largest size should not exceed 84 lb. gross, or 3 stones Aberdeen Butter weight, that being the size used in Ireland, and most convenient and saleable in the London market. The casks should be tight and well hooped. Beech, plane, arn, &c., should never be used, as that quality of wood is more apt to absorb the pickle, and independent of the injury thereby occasioned to the Butter, it will often lead to disputes about the tare.

To render these observations more complete, it might be thought necessary to point out the injurious, and even nefarious practices, which more or less prevail in the making of Butter throughout the county; but as a perseverance in such practices must ultimately have the effect of entirely destroying this profitable branch of agricultural industry, it is hoped the makers of Butter will see it to be their own interest to produce nothing but Butter of the best quality, and that these mal-practices, which are perfectly known, will be discontinued. The dealers in the country have it in their power to put a check to them; and it is expected they will do so, by refusing to purchase from those who adopt any artificial means to hasten the making of the Butter, or to increase the quantity, while the quality is thereby deteriorated.

A FEW WORDS ON BUTTER MAKING.

The production of butter involves so many intricate questions of organic chemistry--so many nice physiological considerations--is influenced so much by climate, by soil, by food and the breed, age and condition of the cows, that an essay might easily be written on the subject, while it is exceedingly difficult to say any thing interesting in a single short article.

Milk contains curd, sugar of milk, and butter. The latter exists in the form of small oily globules, encased by films of curd. These globules

are specifically lighter than water, so that when the milk is allowed to stand, they gradually rise to the surface and constitute cream. When the cream is kept at a moderate temperature, the sugar, under the influence of the curd and air, is transformed into lactic acid, according to well-known chemical principles.

The object of churning is to separate the butter from the curd by which it is surrounded. This is accomplished simply by agitating the cream and *breaking the films of curd*, setting the oil free which runs together and forms lumps of butter. Cream, from the formation of lactic acid, is generally sour before churning, and if not, always becomes so during the operation.—The lactic acid acts on the films of curd, and renders them more easily broken. During the process, the cream increases in temperature from 5° to 10°. The best temperature at which to churn the cream is a disputed point. It appears, however, to be well established by numerous experiments, that 55° when the cream is put in the churn, and about 65° when the butter comes, affords the best result. If higher than this, the butter is white and soft; if lower, the whole of the butter is not separated, and the labor of churning is much increased. The butter should come in from 20 to 40 minutes. If obtained quicker, it is generally at the expense of color, flavor and hardness. After the cream is "broke," it should be churned slowly till the butter is gathered.

Some good butter-makers do not wash the butter at all, merely working out the buttermilk by pressure. Where good, cool, spring water can be obtained, we should always prefer to thoroughly wash the butter, taking great pains to remove all the buttermilk. Butter generally contains about 15 per cent. of water, curd, &c.—It is important for the preservation of butter, that as much of this as possible should be removed. The quantity of salt required, depends upon the quantity of water in the butter. The water should be *saturated* with salt; hence, the less water the butter contains, the less salt will be required for its preservation,

We need hardly say that the most scrupulous cleanliness is required in all the operations of butter-making. Cream is more easily tainted by noxious gasses than almost any other substance. Hence, not only must the dairy or cellar be itself clean, but all fumes from the barn-yards, or out-buildings, carefully excluded. *Rural New Yorker.*

TO CHOOSE A GOOD MILCH COW.

Breed.—We find good milkers in all breeds, but they are rare in some, and very common in others. It could not be otherwise. Milking properties, depending on the conditions which determine the formation of the breeds, are due partly to the climate, the soil, the air, and the plants of the countries where the breeds have originated; and must, therefore, vary in our different breeds of horned cattle with the hygienic conditions peculiar to each locality.

Milkers, and more especially animals intended for breeding, must always be selected among breeds celebrated for abundance of milk. Not that we can hope to import into our departments, with a dry and warm climate, all the qualities of the excellent milking breeds possessed by countries in which the soil is fertile, the air moist, and the sky cloudy; but, as the influence of climate, though very marked, take effect only in the long-run, the properties of the animals imported are maintained—though subject, doubtless, to gradual deterioration—during a period which varies with the precautions taken to preserve them: and for several generations the descendants of the individuals of a good imported breed give more milk than individuals belonging to a breed formed on the spot, when hygienic circumstances are not favorable to milking properties.

It is not to be forgotten, moreover, that under the influence of particular circumstances, which it is sometimes impossible to call into existence, animals manifest properties which we cannot produce daily. This explains why it is often more advantageous to import qualities possessed by foreign stock, than to try to develope them in native stock.

Here we deem it sufficient to observe, that good milking breeds are distinguished by a soft and supple skin, and by tissues rather relaxed than rigid; are not hardy or fit to bear fatigue (sweating easily, and falling off rapidly when put to work); are difficult to keep, seldom fat, and have often little flesh on the buttocks.

Descent.—As milking qualities are, in a great measure, depending on structure and temperament, which are more or less hereditary, descent exercises a great influence.

In each breed, therefore, we should choose individuals belonging to the best stocks, and the offspring of parents remarkable for their milking qualities; for it is certain that good milk cows produce others which resemble them.

It should be our object, then, as far as possible, to obtain cows engendered by youngish bulls, whatever be the race to which they belong.

But it is, especially, when selecting stock for the purpose of breeding milk cows, that particular care should be taken to select individuals belonging to good families. A cow not of a good milking family, or even breed, may occasionally be an excellent milker, and more than this is not wanted when it is not meant to breed from her. The same cannot be said when breeding is intended, because there would be little chance of her transmitting the accidental, or exceptional qualities possessed by her; whereas the qualities forming the fixed and constant characters of the stock would, almost to a certainty, be transmitted to descendants.

These remarks with regard to breed and parentage, apply to the selection of the bull, which, as experience demonstrates, acts, like a cow, in transmitting the milking qualities which distinguish the breed and stock.

Shape.—Active mammary glands are seldom found united with the graceful, rounded forms which constitute what is vulgarly called *beauty*

in quadrupeds. Most frequently good milkers have sharp points, and appear more or less loose and flabby. In regard to bony structure, they may be as well formed as cows remarkable for their readiness to fatten, or ability to work; but, being seldom in plump condition, they seem lean and raw-boned.

Constitution.—It is desirable that the special marks which indicate a great activity of the milky glands, and, consequently, a good milker, should be united with those which imply a good constitution. These are large lungs, a broad and prominent chest, a somewhat low respiration, an abdomen of moderate dimensions, a good appetite, and a great inclination to drink—an inclination stimulated by the abundant secretion of milk. Such cows eat much, digest easily, and breathe well; they make *good* blood. This fluid gives activity to the nervous system, makes all the organs lively, and furnishes the glands with the materials of a copious secretion. Cows possessing these properties last long, give much milk, and, when they become dry, soon fatten.

General Appearance.—In all breeds, the preference should be given to cows which in form are the farthest removed from that of bulls; to cows with small bones, fine and slender limbs, and a tail which is fine at its base; a small but longish head, narrowing towards the horns; the horns themselves of a bright color, tapering finely, and glistening; a supple and soft unctuous skin, covered, even to the forehead, with erect, glossy, soft hair, and provided, near the natural passages, with a short, fine, and silky down; a small neck, and shoulders (*encolure*) apparently long, because slender, especially near the head; small eyelids, well divided, but not much wrinkled; prominent eyes, and gentle feminine look.

Temperament.—With these marks of a feminine description, cows should unite a sanguine lymphatic temperament, and especially a mild disposition. Good milkers allow themselves to be easily milked; often, while ruminating, they look with a pleased eye, easily recognized, at the person who milks them; they like to be caressed, and caress in return.—*London Veterinarian.*

A Twig which every Farmer should Know.—If you wish to drive a cut nail into seasoned timber, and not to have it break or bend, just have a small quantity of oil near by, and dip the nail before driving, and it will never fail to go. In mending carts and ploughs, this is of great advantage, for they are generally made mostly of oak wood.

In straightening old nails before using, let it be done on wood with easy blows; if done on iron, they will be sure to break.

Test for Sound Eggs.—The larger end of a newly-laid egg feels cold when placed against the tongue. A newly-laid egg, also, appears semi-transparent when placed between the eye and a strong light, and has a small and perceptible division of the skin from the shell, which division is filled with air or gas. If an egg shakes, it is sure that it is stale.

Communication.

ON THE MODERN SYSTEM OF DRAINAGE, AND ITS APPLICATION TO CANADA.

No. IV.

To "first catch your hare" is as essential a preliminary in drainage operations as in those of the cuisine; for unless materials of a suitable description can be obtained within an available distance and at reasonable prices, it is in vain to expect any considerable progress to be made in works which must necessarily be confined within certain limits as to cost. Having then already shown that the cylindrical Tile is the most perfect for all ordinary purposes, we shall proceed in the first place to give a few plain directions for its manufacture, and conclude our present series with some remarks on the depth and distance of drains, and the effects to be produced.

Now, as affording to the agriculturists the best guarantee for their early introduction throughout the Province, and at the same time to the manufacturer a profitable addition to his business, we would suggest to the established Brickmakers of the country the advantages of manufacturing Drainage and Sewerage Pipes, as well as bricks. We could enumerate hundreds of instances where this has been done in England with great advantage to the district, and a corresponding remuneration to the maker. And as evidence of the certainty of success, and of the demand for the articles growing and increasing with their production, we have ourselves established Tileries in localities where previously the use of a draining tile was hardly known, which in a few years afterwards were second to none in the kingdom for extent of business; and so it will no doubt be in this country when once the benefits of realization are felt. Already in one instance at least has an example been set at Toronto by one of the oldest Brickmakers there, which is deserving of notice, and where the orders for Pipes will form a very considerable item in the products and profits of the establishment during the present year. And further, we are desirous in our professional capacity as a Drainage Engineer of contracting for a supply of 300,000 and upwards of different sized Pipes to be delivered for the drainage of property in the Cobourg District.

In an established brickyard the only things at first required for the manufacture of pipes are a wooden shed of moderate extent (which can be enlarged as the business increases); a claymill, and a machine for moulding the pipes. Until the demand justifies the outlay, it is not necessary to incur the expense of erecting covered kilns, because by taking care to set the pipes away from the fire poles and in the middle they can be readily burnt in the ordinary brick clamps. As the demand increases, however, it will be found desirable to build one or more arched kilns for the exclusive burning of pipes and the better description of bricks, flooring Tiles &c., moulded from the machine. In building the shed there is no need to put up any great length of shelving, as in the case of hand-made tiles; all that is necessary being two or three lines of shelves

raised a little from the ground and parallel to each other, with an alley of sufficient width for the machine to work in, upon which to place the pipes as they come from the machine in successive rows, one upon the other, as the lower course becomes dried and capable of supporting the fresh-made pipes. As regards the machine, our readers may be aware that a patent has been granted to us for the Province for a machine for moulding all descriptions of tiles and pipes for drainage and sewerage purposes, as well as bricks, flooring tiles, &c., for building, from clay or other plastic substances, and we are now fully prepared to deliver machines to order in any part of the Province, or to grant licenses for their manufacture to respectable and responsible parties for specified districts. These machines, worked by a man and three boys, will mould, according to sizes, from 5,000 to 10,000 feet of pipes per day; and that parties may not be disappointed, we shall be ready to give personal attention to the starting of each machine, if desired, as well as all the information in our power for the general management of this branch of business. For ordinary drainage purposes a machine capable of moulding a pipe of six inches internal diameter as the maximum size, is ample; but where pipes of larger dimensions for sewerage of towns are likely to be required, a machine of corresponding strength and capacity must be used. The price of the machine for general drainage pipes, bricks, &c., is £50, (half in cash and the remainder in six months) inclusive of five dies for moulding pipes; the dies for brick, flooring tiles, &c., &c., being charged separately in addition. We guarantee the effective working of the machine, which is accompanied by printed instructions for its management. It is hardly necessary to say that the clay must be properly ground and prepared, and used much stiffer than for common brick moulding, so that the pipes, &c, may retain their form. No sand or water is needed in the moulding; the process by the machine being almost as neat and clean as that of turning off the printed sheets from a steam press. It may be well to add, that in setting the pipes in the clamp or kiln they must be placed upright on their ends; and whenever the sizes will permit the smaller may be put inside the larger.—This arrangement, however, can only be of limited application, because the proportion of the smaller pipes for drainage will always greatly exceed that of the larger sizes.

As we have already intimated, the depth, distance and direction of drains must be governed by circumstances, general rules being for the most part insufficient unless the work be set out and directed by an experienced drainer. In order to be out of all harm's way, however, from frost or other causes, drains should never be less than three feet deep; the interval in clay lands will vary from 18 to 30 feet, and in the more open soils from 30 to 100 feet; and the direction of drains should, whenever practicable, be parallel to each other and directly up the face of the fall —not obliquely, as was too often the practice in former years when the operation was less perfectly understood. Under certain conditions of situation, surrounding formation, and substratum, we have seen drains, laid with four such pipes, at a depth of from five to eight, and from 100 to 200 yards apart, act most effectually in draining extensive areas of land, at a comparatively insignificant cost; and we are inclined to think that there are many situations in this country where such a system would be very effective and economical. In commencing the drainage of an area of land, the outfall and main drain must be first attended to, and cut, and be land with pipes of a suitable size, care being taken to provide for the entrance and junction of all the tributary drains as the work progresses. These junctions with the main drain must be very carefully made, or stoppage is apt to ensue—so much so indeed that all the best practitioners of the present day use junction pipes in the main with a bell-shaped projecting mouth-piece which admits the end of the small drain pipe, and retains it safely and firmly in its place. Collars over the pipes will in some subsoils be necessary, but we do not by any means advise their invariable use; unless absolutely indispensable they only add to the cost of the work without any adequate benefit. The skilled workman in cutting a drain, always keeps the section in a perfect V form, with a uniform slope on each side to the bottom, which is scooped out as he proceeds to the prescribed grade and to the precise external dimension of the pipes to be laid. The width at the top is regulated by the depth to be cut and so as just to leave room for the workman to stand, thus circumscribing the amount of earth to be removed within the strictest limit of economy in labor. The cost of cutting the drains forms under favorable circumstances a considerable proportion of the entire outlay, and must therefore, with the high price of labor here, be to some an obstacle; but as "there is never a hill without a dale," so the readiness with which mechanical appliances are adopted in this country, coupled with advantages which it possesses meteorologically for economising the operation, will, in all probability speedily adjust the general average expense to a true equilibrium. In England the inducement to the inventor to apply his talent and energy to perfecting an efficient machine for cutting drains, is very small, for he is quite certain to expend a considerable sum in the attempt, and very uncertain of its being adopted even if perfectly successful. It is otherwise, however, in this Province, and we venture to predict that ere very long drain cutting machines will be as common and as successful operation as reapers. A very little encouragement would make us try our hand at it; and as we have some already half-digested notions on the subject, those who would be first at the patent office must not be idle.

As regards the effects of good drainage, there can be no more convincing proof than its general application, and the fact that although millions after millions are expended upon it, the anxiety to have estates and farms drained on the modern system increases with every fresh example; and on lands too, which, at one time, would have been thought sufficiently dry. It is not now, as formerly, when drainage was advocated, that

men admitted its advantages on land they knew nothing about, but always questioned its efficiency "on our land." To adduce testimony of the benefits of drainage at this day would be to enumerate almost every Parish and Landowner in Great Britain: and indeed so world-wide patent is the "great fact," that it would be just as reasonable to doubt the full reality of the Californian and Australian gold fields as that of the equally certain and hardly less direct productiveness of the English diggings.

In the whole of our experience, both as an Assistant Commissioner under the Drainage Acts, and as a private practitioner, we have never known an instance in which the immediate money return from drainage was less than 10 per cent,—but in the great majority of cases it is at least double this; and we have seen instances out of number, where the additional yield of the first crops of the drainage has more than paid the entire cost of the work. An extra produce of 20 bushels per acre is very common on strong land, which at 5s. per bushel repays the outlay the first year, to say nothing of succeeding ones. But this is not all, for the character of the soil is so ameliorated that the cost of cultivating the land in its drained state is reduced by at least 10 per cent; and furthermore, that old enemy of the farmer, *the season*, is brought to capitulation, and soon becomes his acknowledged and appreciated ally.

Although, as we have said, to quote English testimony would be to give the unanimous assent of every landowner and occupier, it may be serviceable to refer to special instances on this side the Atlantic where something like the present improved system of drainage has been tested and the results found to be as satisfactory and profitable as in England; indeed in many respects the benefits to be derived in this climate will be more marked and tangible than in the mother country. The following are extracts from the reports of drainage experiments in the State of New York, addressed last year to the Committee of the New York State Agricultural Association, for the prizes offered by that body for drainage; the first is from Mr. John Johnson, of Geneva, who says:—

"In order to show the benefits derived by me, the following remarks will be necessary; to me, the results are very satisfactory and conclusive: My farm is on the east side of the Seneca Lake, opposite to Geneva, and immediately adjoining the farm of your honorable president, John Delafield, Esq. About six years ago I began to drain a field on the boundary line between Mr. Delafield and myself. The field contains about twenty acres; of which, six were then subject to drainage. The six acres had seldom given a remunerating crop, even of grass. After draining the six acres, the whole field was plowed and prepared for corn; two acres being reserved for potatoes. The usual care was given to the cultivation of the whole crop, which, during its growth, showed a marked difference between the drained and undrained portions of the field; the yield of this field proved to be the largest ever raised, as I believe, in the county; the product being eighty-three bushels, and over, per acre. When the corn was husked and housed, it was weighed and measured in the ear; and allowing *seventy-five pounds* to the bushel, as has been customary in this region, for corn and cob, the product was as above stated. This field attracted much attention from my neighbors and other gentlemen from more distant places. It was examined at the time of draining; and after plowing, both the first and second season, permitting the parties to walk on the drained parts, without any undue moisture, while all the other undrained land in the neighborhood was muddy; and, as before stated, the corn was found to be far more vigorous in the plant and abundant in the grain. In the following season after the corn, I cropped it with barley, and found the drained land produced altogether the finest plant, and the best yield of grain. When the barley was harvested, I prepared the field and cropped it with wheat. The difference again was so striking and distinct in favor of the drained land, that I felt the propriety of thoroughly draining the whole field, which was completed without loss of time, at a cost of twenty-two dollars per acre for the whole field. I then plowed and sowed with barley and seeded with clover; of the latter, I cut a very large crop last summer, and not one square foot of the clover froze out; and now I can rely on a good crop of anything I may sow or plant. I had previously drained several other fields; or, at least, those parts that needed drains. Encouraged by a considerable increase of products, derived from my farm from draining, I determined to extend the system as rapidly as convenience and circumstances would permit. Upon examination, it appeared necessary to possess a piece of ground belonging to a neighbor, that I might secure a good and sure outlet for the water from some of my upland fields that required draining in places. With this view, I purchased ten and three-fifth acres of low land, saturated with water. A part of this land, say about four acres, from twelve to eighteen inches of the surface of the surface, was a black vegetable mould, lying on a stratum of clay of the same depth, under which I found a hard bottom for my tiles, not over three feet in depth. I felt persuaded that those ten acres were wet from my own upland, as well as from my neighbor's wet land adjoining. The first ditch I dug was directly on the line betwixt the land I got of my neighbor and that he still owns. This I found cut off all the water on that side.—I then commenced draining that ten and three-fifth acres; also about thirty acres of upland.—*A large proportion of the upland* did not require draining. In the two pieces, which, made into one field, containing about forty acres, I laid one thousand, seventy-two and a-half rods of drain, which have drained the whole extent in a thorough manner. The flow of water is so large at times, I was compelled to use a large number of the largest sized tiles; and for main drains, as I had to have three, I had to lay double rows of four-inch tiles; and in one locality I had to use a double row of six-inch tiles for over fifty rods; this received a great flow of water from a public

road, which was let into the tiles by digging a basin at the upper end of the drain, and then filling with small stones over the tiles. These extra-sized tiles increased the expense of these drains, making one thousand seventy-two and a-half rods to cost about forty cents per rod.—The first year after completing the drains on this field, the whole, or nearly the whole, upland and all, was planted with corn. The season was not favorable for that crop in this neighborhood; yet the crop was fair—say forty bushels shelled corn to the acre. The low ground was excellent, where nothing but coarse grass grew for twenty years before. This year, 1851, I harvested from this field a crop of wheat; and a heavier crop I never saw to stand up. Heretofore many acres of wheat were lost on the upland by freezing out, and none could grow on the low lands. Now there is no loss from that cause, only two small patches, in all less than one quarter of an acre, was lodged. In fact, the whole field was so even that it was difficult to pronounce any five acres worse than the rest. The wheat fly or weevil injured a little, but I think not a great deal. I have not threshed enough to know the yield of wheat per acre. The wet ground got from my neighbor was the source of much curiosity to all around, as none would believe wheat could be ripened on land so long saturated with water.—It was watched, therefore, from the time it came above ground, in the fall, until the last of it was harvested. The result was a crop of wheat from that ground, abundant in quantity and excellent in quality.

Such, gentlemen, is the result of my labor in draining. I have forty acres of wheat now growing on land thoroughly drained. The improvements in my fields and crops have been great and satisfactory, giving me fine crops of wheat, where it formerly froze out. So well satisfied am I of the advantages derived from the system, that I have drained six acres this fall; and shall continue to drain while I have a wet spot on my farm. In regard to cost, I find that drains constructed with two-inch tiles can be finished complete for thirty cents per rod; yet something must depend on the digging, whether the earth be hard or soft, and the distance to draw the tiles; mine have all been drawn five miles, and I find that two-inch tile are large enough, except for main and sub-main drains. In my own case I was compelled to feel my own way and discover the best system and best adaptation to my lands, consequently the drains have cost me more than they would if I were to construct them with my past experience."

A second from Mr. T. G. Yeomans, of Walworth, speaks thus:—

"Some of the advantages derived from draining are, that the ground becomes about as dry in two or three days after the frost comes out in the spring, or after a heavy rain, as it would do in as many weeks before draining; enabling the farmer to work his land at almost any time he may desire to do so; it also dries it uniformly alike all over the field, so that in plowing, he does not find spots of wet and dry, but is all in good condition at once; it causes the lowest places, which were generally too wet at seed time, and consequently produced but little if any crop, to produce the best of any part of the field, being generally the richest soil, from having had the wash of the surface of the land about it for many years.

Some of the land I first drained had been planted with young orchard trees, and in the wettest places some trees died the first winter, and a greater number the second; and some young nursery trees on the same ground were nearly thrown out of the ground by the frost.

After draining it, I replaced the orchard trees, and all have grown well; and the first crop of nursery trees, which I was compelled to remove, to save them, before draining, have been replaced by others since draining, and they have succeeded perfectly, so that I may now well say that, if we desire to deprive Jack Frost of his power to do us harm, we should keep everything as dry as possible which is within his reach and liable to injury; and I am from my own experience fully convinced that for whatever crop, and especially any crop liable to be injured by frost in winter, such as wheat, clover, &c., whether the season be wet or dry, if the soil retains its moisture too long at any season of the year (and most soils do), it will be materially benefitted by draining; and in fact I am well convinced that most of the winter-killed young fruit trees, especially the peach, in many places, as well as the winter-killing of many valuable shrubs, vines and evergreens, which survive the winter in some places in this latitude, and are destroyed in others, is more to be attributed to excessive moisture in the soil during cold weather than to all other causes combined. I will only estimate the increased value of the land, by saying that I have, the past year, made over 1,200 rods on 20 acres, at a cost of about $25 per acre; and that I should not permit such land to remain without such draining, even were the expense doubled.—Most of the lands, so drained, have been purchased by me immediately preceding the construction of the drains, and their very recent construction precludes the possibility of giving the specific and comparative productive capacity before and after draining; though on much of it very light crops have been grown for many years past, and no good crop of wheat has been raised on it for a long time; but the reason has not heretofore, to my knowledge, been ascribed to an excess of water, which I believe to have been the principal cause of the non-productiveness of the land. From the experience of two seasons on the small quantity first drained, I am of the opinion that the increased value of the land is much greater than the cost of constructing the drains; but more time is needed to fully test with accuracy the benefits to result therefrom.

Thus I have in three years constructed over nine miles of drain, of the three kinds herein named, on lands which most farmers thought unnecessary to drain, and which they felt assured *could not be drained with profit.* But notwithstanding, I doubt not the result will be not only a source of profit to myself, but a great inducement to many to commence the work."

And a third is from Mr. J. McDonald McIntyre, to the same effect:—

"My success in this trial has decided me to go on. I have this season laid within a fraction of three miles of tile—draining by it about 30 acres thoroughly and five more partially so. The cost this year has averaged about 40 cents per rod; a large proportion of my work this season has been with main drains, using the four and one-half inch tile, and several rods laid with that tile double. As the work progressed, I have taken up about three-fourths of a mile of open ditch which I found upon the farm, reclaiming in this way nearly an acre of ground heretofore useless for cultivation, and a nursery for weeds. This, according to the value of land here, may be fixed at $100, and forms an item not to be overlooked.

A portion of my work this season has been given to some side-hills, which, from the general level of the farm, make a steep descent to an alluvial bottom, lying about 100 feet in width on both sides of a small stream. These hills are full of springs, which break out about midway or higher up the face, filling with water the land below them. I tiled about five acres in one field, by sending the lateral drains directly up the hill at 56 feet apart; this was done in April last.—When the drains on this piece were closed up, and no rain having fallen during the work, the mouth of the main tile, 3½ inch, discharged itself nearly half full, and continued to do so for some days in succession, and, without one day's intermission, has discharged more or less through the whole of our dry summer.

I know of no improvement or management that could, on my land, have taken its place, or given me the great benefit that it has done, so far as I have extended it. I have, however, given the labor to those fields that stood most in need of it—some of them worthless without it.—I have, therefore, seen greater benefits arising from it than much of my future work may yield me. This, however, cannot make what I have done the less valuable. So satisfied am I of its great aid to me, that I shall extend the work as rapidly as I can conveniently do so."

Space will not admit on the present occasion of entering at much length into the climatic, or the detailed influences of effective drainage. To produce any very noticeable difference in climate the work must be pretty generally extended; nevertheless it is but a matter of time; but the effects on each farm or portion of land drained are at once perceptible, and therefore we will briefly refer to a few of the most palpable results. On properly drained land the rain does not run off carrying with it to the nearest gutter and creek the best particles of the soil, but it sinks where it falls into the land, taking with it to the roots of the plants all those fertilising properties which rain is known to contain. At the same time the drainage water brings with it in its exit from the drain, many of those hurtful qualities which soils invariably contain, that have been for ages subjected to the saturation of stagnant water. Good drainage produces and keeps up with each successive shower an aeration of the soil and subsoil, which not only tends very materially to improve its mechanical condition and texture, but at the same time to promote vegetation. We have on many occasions, in drained land, seen the roots of the wheat plant descend to a depth of more than two feet; and in the more open subsoils to beyond three feet, ensuring great strength and vigor in the plant. Drainage also warms and equalises the temperature of the land, thereby ensuring a greater uniformity in the growth of the crop. And from preventing that excess of evaporation which, in this climate more particularly, is extremely prejudicial to animal health, it tends materially to prevent those noxious exhalations which are the insidious seeds of epidemic and other diseases both amongst man and beasts. By securing the ready filtration of the heavy and more continuous rains of spring, it admits of farming operations at that important season, being conducted with less interruption and greater certainty; and it produces a more uniform and early maturity in the crops and the quality of the sample. The proportion of small grain or winnowings from corn grown on drained land is always considerably less than from the produce of undrained soils, each head of grain grown on the drained land being fully developed. When land is drained, high ridges and furrows should immediately be dispensed with, and the land be ploughed flat as if naturally dry; the necessity and expense of cutting surface channels to carry off the rain from newly sown ground will also be saved by drainage; and in fine, whilst it adds abundantly to the productiveness of the land, it diminishes in no less a ratio the whole of the expenses incidental to its cultivation.

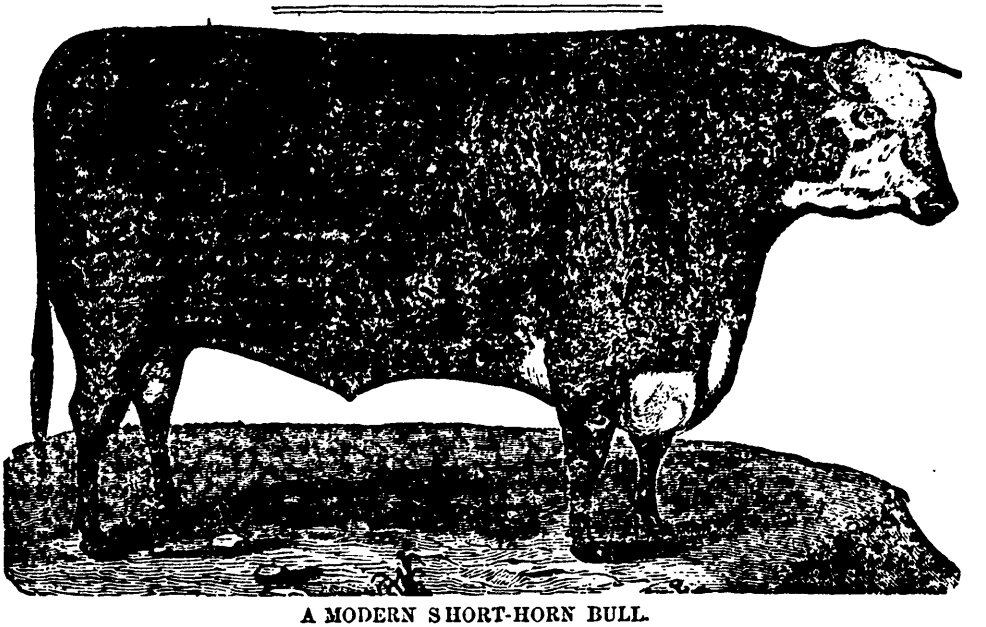
In conclusion, and as bearing with more than common significance on the subject in hand we would direct attention to a passage from the pen of one of the most practical thinkers and statisticians of the day, the present English Registrar General, and whose sources for observation are much beyond those of most other men. In the Quarterly Return, No. 11, 1851, under the head, "Increase of Population," he remarks:—"The present movement of the population is in many respects remarkable. The free admission of grain, meat, and fruit, since the scarcity, is equivalent to an addition to the country of a vast tract of fertile soil which calls for cultivation; and (as the land is abroad) for agricultural emigrants who prefer the cheap, though distant lands of America, to the high-rented farms of Ireland, which no longer possesses a monopoly for its produce in the English market. The fact deserves attention, that while the United Kingdom has been importing food in unprecedented quantities, it has been sending out swarms of emigrants, from the population of which the marriages and births promise to keep up a perpetual and increasing supply." When, then in conjunction with this assurance of perpetual, and increased emigration bringing consumers to these shores without diminishing the necessity for enlarged supplies at home, we reflect on the present condition of Europe, which under any circumstances must greatly disarrange the production of human food; and when we take also into account the fact, that the surplus of pro-

duction over consumption is yearly decreasing in the United States, the agricultural horizon of Canada looms before us like a great reality, with a degree of prosperity which shall justify and encourage all the energies and resources within her reach for advancing her cultivation to the highest point of practical excellence. Let it not be in the power of the historian to record of her that prosperity induced apathy, and that with half the world looking up to her for sustenance she failed to seize the proffered reward; but rather let her be able nationally and individually to exclaim, with Tusser, in an hour of conscious exultation:

"I have no labor wanted
To prune this tree thus planted,
Whose fruit to none is scanted
In house, or yet in field;
Which fruit the more ye taste of,
The more to eat ye haste of.
The less this fruit ye waste of,
Such fruit this tree doth yield."

J. H. CHARNOCK.

Hamilton, August, 1854.



A MODERN SHORT-HORN BULL.

THE OX.—HISTORY, MANAGEMENT, &c.

THE SHORT-HORNS.

This account of the Short-horns is by the Rev. Henry Berry, than whom there were few more zealous breeders of cattle.

It must be admitted that the short-horns present themselves to notice under circumstances of peculiar interest. Possessing in an eminent degree qualities which have generally been considered incompatible, and attractive to the eye by their splendid frames and beautifully varied colors, it is not surprising that they have become objects of public curiosity; that they have realized for their breeders enormous sums; and that, in our own island, and in every foreign country where agriculture is attended to, they are in increasing demand.

It might tend to throw much light on the science of breeding, could these animals be traced, in their improvement, to an earlier period than has been found possible.

From the earliest periods as to which we have any accounts of our breeds of cattle, the counties of Durham and York have been celebrated for their short-horns, but principally, in the first instance, on account of their reputation as extraordinary milkers.* It may be asserted, on the best evidence, that, as a breed, they have never in this particular been equaled. They were generally of large size, thin-skinned, sleek-haired, bad handlers, rather delicate in constitution, coarse in the offal, and strikingly defective in girth in the forequarters. As milkers, they were most excellent; but when put to fatten, were found slow feeders; producing an inferior meat, not marbled or mixed fat and lean, and in some cases the lean was found of a particularly dark hue.

A period of more than one hundred years has now elapsed since the short-horns, on the banks of the river Tees, hence called the Teeswater breed, had assumed a very different character to the foregoing description. In color, they resembled the short-horns of the present day, being occasionally red, red and white, and roan,

*Before this a large and valuable description of cattle had existed on the western coast of the continent of Europe, and extending from Denmark to the confines of France. They were celebrated for the great qualities of milk which they yielded, and some of them exhibited an extraordinary aptitude to fatten. At what particular time they found their way to England, or by whom they were imported, is unknown; but there is a tradition that, towards the close of the seventeenth century, a bull and some cows were introduced into Holderness.—*Youatt.*

though the last not then so prevalent as now. They possessed a fine mellow skin and flesh, good hair, and light offal, particularly wide carcasses, and fore-quarters of extraordinary depth and capacity. When slaughtered, their proof was extraordinary, and many instances are recorded of the wonderful weight of their inside fat.

The remarkable merit which existed in the Teeswater may, with propriety, be ascribed to a spirt of improvement which had some time manifested itself among the breeders on the banks of the Tees, whose laudable efforts were well seconded by the very superior land in the vicinity of that river. No doubt can be entertained that they proceeded on a judicious system of crossing with other breeds, because it was utterly impossible to raise such a stock as the Teeswater from pure short-horn blood. One cross to which they referred was, in all probability, the white wild breed; and if this conjecture be well-founded, it will be apparent whence the short-horns derived a color so prevalent among them.

It is also asserted that, about the period in question, Sir William St. Quintin, of Scampston, imported bulls and cows from Holland, which were crossed with the stock of the country. It would tend to little advantage to conjecture as to what other breeds were resorted to, if any; this much is certain, that great improvement was soon manifested, and a valuable variety established, as the two following instances will prove.

Mr. Milbank, of Barmingham, bred and slaughtered an ox, which, at five years old, weighed four quarters, one hundred and fifty stones, (2111 lbs.) of fourteen pounds to the stone, producing sixteen stones of tallow; and a cow bred from his stock, slaughtered by Mr. Sharter, of Chilton, at twelve years old, weighed upwards of one hundred and ten stones. (1540 lbs.)

From Mr. Milbank's time, the Teeswater cattle continued to sustain their excellence and celebrity in various hands, until Mr. Charles Colling adopted them.

Whatever had been the merits of the Teeswater cattle, it is certain Mr. Colling greatly improved them; and though it has been asserted that his success was the result of chance, arising from the possession of an animal, with the merits of which he was at one period unacquainted, the writer of this article is of opinion that Mr. Colling's success resulted from a deliberate and well-considered plan. He found the Teeswater, like all other extravagantly large cattle, frequently of loose make and disproportion. He was sensible, also, of the difficulty of breeding, with anything like certainty, *large good* animals; and though he has declined on all occassions to throw any light on his views and proceedings, the writer thinks he can detect, in the very outset, and through the progress of his practice, a resolution to reduce the size of this breed, and at the same time, and by that means, to improve its form. This he is supposed to have effected, in the first instance, through the medium of a bull, called *Hubback*, an animal respecting which there has been much controversy, principally touching the purity of his blood, a question now of little importance, because it is admitted on all hands that Mr. Colling adopted another cross, which prevails in a majority of superior short-horns of the present day. It may, notwithstanding, be matter of interest to state a few particulars respecting this bull.

Without entering on an inquiry by what circumstances Hubback's title to be considered of pure blood is supported or weakened, it may suffice to observe that it appears probable he possessed on one side the imported blood. The possessor of his dam was a person in indigent circumstances, and grazed his cow in the highways. When afterwards she was removed to good land, near Darlington, she became so fat that she did not again breed; and her son, having the same feeding propensity in a high degree, was useful as a bull during a very short period. The quality of his flesh, hide, and hair are supposed to have been seldom equalled; and as he was smaller than the Teeswater cattle, he was eminently calculated to forward Mr. Colling's views. There are no superior short-horns which do not claim descent nearly, or remotely, from Hubback.*

After the use of this bull, Mr. Charles Colling proceeded with success to produce superior animals; and the number of bulls he disposed of by letting was highly encouraging. But the circumstance which brought the short-horns into most extensive notice was the production of the Durham Ox, an animal which speaks volumes in favor of this blood. The ox was the produce of a cow which had been put to *Favorite*. At five years old, the Durham ox was sold to Mr. Bulmer, of Harmby, near Bedale, for public exhibition, for £140 in February, 1801. He was at that time computed to weigh 168

*This is true, because Hubback was the sire of the dam of Mr. Charles Colling's bull, Foljambe, who was the grandsire of Favorite; and there has not been for many years any superior short-horn not descended from Favorite. Mr. Charles Colling is said to have considered that the bull, Foljambe, was the one who did his stock the greatest good; and this is not improbable, as Foljambe was the sire both of the sire and dam of Favorite. Hubback, however, must have been a remarkably good animal, and considering the short time which he was used by Colling, proved himself a first-rate stock-getter.

The following account of Hubback we had from Mr. Wastell, of Alnhill, who although his name does not appear conspicuously in the Short-Horned Herd Book, deserves much credit for his discrimination here. He used to admire this bull as he rode by the meadow in which he grazed, and at last attempted to purchase him. The price asked, £8 seemed much, and the bargain was not struck. Still he longed for the beast, and happening to meet Mr. Robert Colling near the place, asked his opinion of the animal. Mr. Colling acknowledged that there were good points about him, but his manner induced Mr. Wastell to suspect that Mr. Colling thought more highly of the bull than his language expressed, and he hastened the next morning, concluded the bargain, and paid the money. He had scarcely done so before Mr. R. Colling arrived for the same purpose, and as the two farmers rode home together, they agreed that it should be a joint speculation.

Some months passed by, and either Mr. Wastell's admiration of the bull cooled, or his partner did not express himself very warmly about the excellences of the animal, and Messrs. Wastell and R. Colling transferred Hubback to Mr. C. Colling, who, with the quick eye of an experienced breeder, saw the value of the beast. Mr. Wastell expressed to us (October, 1832) his regret (natural enough) at having been induced to part with him, and his extreme disappointment that when Hubback was so sold, Mr. Charles Colling confined him to his own stock, and would not let him serve even one of Mr. Wastell's cows.—*Youatt.*

stones, of 14 lb., (2352 lbs.), his live weight being 216 stones, (3024 lbs.) and this extraordinary weight did not arise from his superior size, but from the excessive ripeness of his points. Mr. Bulmer travelled with him five weeks, and then sold him and his carriage, at Rotherham, to Mr. John Day, on the 14th May, 1801, for £250. On the 14th of May, Mr. Day could have sold him for £525. On the 13th of June, £1000. On the 8th of July, for £2000.

Mr. Day travelled with him nearly six years, through England and Scotland, till at Oxford, on the 19th February, 1807, the ox dislocated his hip-bone, and continued in that state till the 15th April, when he was obliged to be slaughtered, and, notwithstanding he must have lost considerably in weight, during these eight weeks of illness, his carcass weighed—Four quarters, 165 stones 12 lbs. (2322 lbs.); tallow, 11 stones 2 lbs. 156 (lbs.); hide, 10 stones 2 lbs. (142 lbs.); total 2620 lbs.

This was his weight at eleven years old, under all the disadvantages of travelling in a jolting carriage, and eight weeks of painful illness. Had he been kept quietly at Ketton, and fed till seven years old, there is little doubt he would have weighed more than he did at ten years old, at which age his live weight was two hundred and seventy stones, (3780 lbs.) from which, if fifty be taken for offal, it leaves the weight of the carcass two hundred and twenty stones, (3080 lbs.)

It is a well-ascertained fact, that, during his career as a breeder, Mr. Colling tried several experiments in crossing, and the breeds to which he resorted on these occasions being very considerably smaller than the short-horns, this circumstance tends to corroborate the writer's opinion that he considered it desirable to reduce their size. The cross with the Kyloe led to no results worthy enumeration, but that with the *polled Galloway* must not be passed over without comment. Before stating the circumstances attending this experiment, it may be proper to observe that no breed of cattle promised so successful a cross with the short-horns as the Galloway. They were calculated, by their deep massive frames and short legs, to bring the short-horns nearer the ground, and to dispose their weight in a more compact manner: their hardy habits would be essentially useful, and the quality of their flesh and hair were such as to render the experiment still more safe, and they could be obtained of a red color; even without the sanction of a successful experiment, they were admirably adapted to cross with the short-horn, standing frequently too high from the ground, not very well ribbed home, and often of loose, disjointed frames.

To this breed Mr. Colling resolved to resort; and though at the time when he did so, the event was regarded with some degree of ridicule by the pure-blood advocates, and comments passed which would have deterred ordinary men from the exercise of their judgment, Mr. Colling persisted.

Mr. Colling's short-horned bull *Bolingbroke* was put to a beautiful red polled Galloway cow, and the produce, a bull-calf, was, in due time, put to *Johanna*, a pure short-horn—she also produced a bull-calf. This grandson of Bolingbroke was the sire of the cow, *Lady*, by another pure short-horn dam, and from Lady has sprung the highly valuable family of improved short-horns, termed, in reproach, the *alloy*. How far the alloy was derogatory, let *facts* testify.*

Mr. Colling was favored by circumstances in his object, which was to take one cross, and then breed back to the short-horn—the only course in which crossing can be successfully adopted. To breed from the produce of a cross *directly among themselves* will lead to results believed conclusive against crossing; but to take one cross, and then return and adhere to one breed, will, in a few generations, stamp a variety with sufficient certainty.

It will probably be admitted that the prejudice against this cross was at the highest at the time of Mr. Charles Colling's sale. The blood had then been little, *if at all*, introduced to other stocks, and it was manifestly the interest, whatever might be the inclination, of the many breeders who had it not, to assume high ground for the pure blood, and to depreciate the alloy. Under these untoward circumstances for the alloy, what said public opinion, unequivocally certified by the stroke of the auctioneer's hammer? *Lady*, at fourteen years old, sold for two hundred and six guineas. *Countess*, her daughter, nine years old, for four hundred guineas. *Laura*, another daughter, four years old, for two hundred and ten guineas. *Major* and *George*, two of her sons, the former three years old, the latter a calf, for two hundred guineas, and one hundred and thirty; besides a number of others, more remotely descended from Lady, which all sold at high prices. Lady and her descendants sold for a larger sum than any other family obtained.

It appears that seventeen cows were sold for £2802 9s.; eleven bulls, £2361 9s.; seven bull-calves, £687 15s; seven heifers, £942 18s; five heifer calves, £231 6s. In all forty-seven were sold, for £7115 17s.

Mr. Charge of Newton, near Darlington, and Mr. Mason of Chilton, in the county of Durham, were only second to Mr. Charles Colling in his interesting and useful pursuit. Mr. Mason started early with animals derived, it is believed, from Mr. Colling, in the very commencement of his career; and Mr. Charge, who had long possessed a most valuable stock of Teeswater cattle, had at an early period crossed them with Mr. Colling's best bulls, and was one of the spirited purchasers of Comet, at a thousand guineas. Mr. Mason's successful sale sufficiently stamps the value of his stock at that period, 1829.

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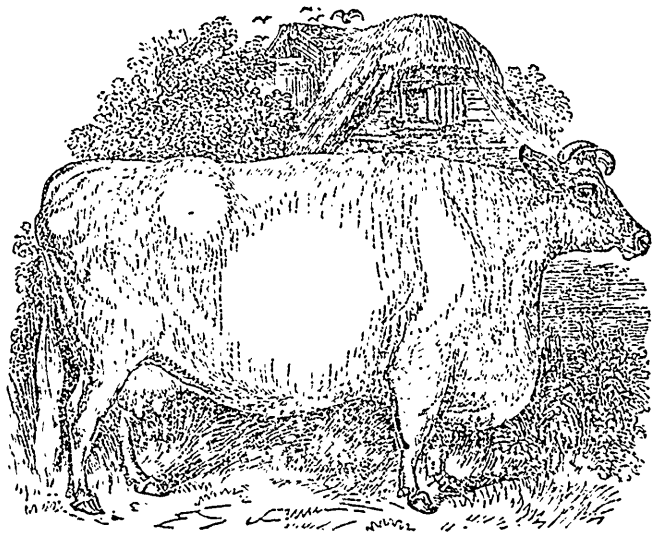
*The dam of Lady was Phœnix, also the dam of the bull Favorite; and as the grandson of Bolingbroke is not known to have been the sire of any other remarkably good animal, it is most probable that the unquestionable merit of Lady and her descendants is to be attributed more to her dam than to her sire.—*Youatt.*



THE REV. H. BERRY'S COW.

It would be unfair to omit mention of a veteran breeder, to whom the advocates for the preservation of pedigree are indebted for the "Short-horn Herd Book"—Mr. George Coates. He is now one of the oldest authorities on the subject, and was once the possessor of a very superior race of short-horns, though somewhat coarse. Portraits have been preserved of some very good animals bred by him; and he had the satisfaction to dispose of his bull *Patriot* for 500 guineas.

Mr. Coates fell into an error, but too common, and generally equally fatal: he fancied his own stock the best, and disdained to cross them with Mr. Colling's; which, as others afterwards proved, would have been a most judicious proceeding. The consequence was, Mr. Colling's sale having settled the public judgment and taste, Mr. Coates's stock fell into disrepute. If an apology be requisite for this statement of an undeniable fact, it will be found in the utility of holding up such an example as a caution to those who may be in danger of falling into a similar error.

It is considered that the specimens already appealed to, and the fine animals whose portraits accompany this account, will render superfluous any attempt more particularly to describe the short-horns. Of course they will be found to vary greatly; but sufficient may be collected from what is presented to the reader, to inform him as to the character of this superior breed of cattle. The next object, then, will be to show their capabilities to make a return for food consumed, and the unparalleled early period at which such return may be made. Indeed, *early maturity* is the grand and elevating characteristic of the short-horns, and their capacity to continue growing, and at the same time attaining an unexampled ripeness of condition at an early age, has excited the wonder, and obtained the approbation, of all not blinded by prejudice. [Our author then gives a long list of cases illustrating early maturity and extraordinary fatness.]

A steer, bred by Col. Cook, of Doncaster, fed on potatoes and straw, was slaughtered when two years and twenty-two days old, his four quarters weighed 72 stones, (1008 lbs.)

Mr. John Rennie (of Phantassie,) fed, in 1823, a steer, from eighteen to twenty months old; the four quarters of which weighed 945 lbs.

The same gentleman fed a steer, aged two years four months, whose four quarters weighed 1231 lbs.; also a steer, aged three years six months, whose four quarters weighed 1369 lbs.; tallow, 241 lbs.

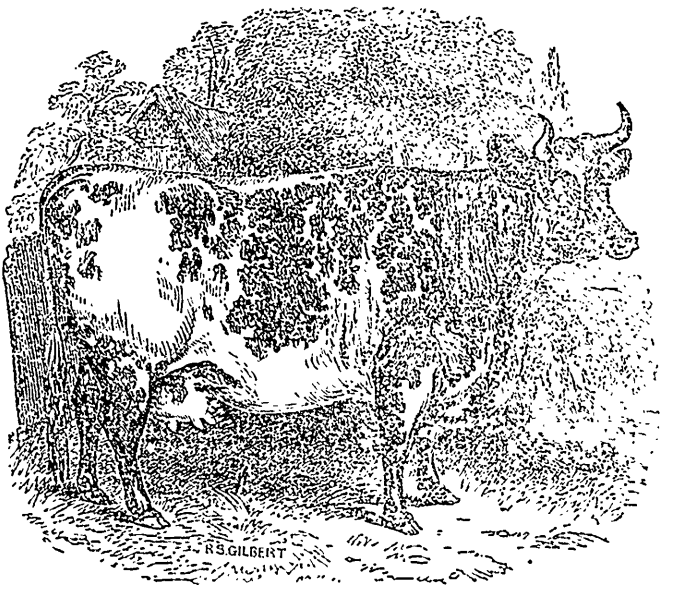
Should the foregoing statement be considered extended, it will, at least, be admitted, that its ample detail establishes the credit of the short-horns as an invaluable breed to the grazier.

In the commencement of this account, however, it was stated that they possess a combination of qualities, considered incompatible in other breeds, viz: the disposition to feed rapidly, in union with dairy qualifications.

There is a very general impression that animals disposed to fatten rapidly seldom give much milk. It is true, that every perfection in cattle—whether it be one of form, of quality of flesh, of disposition to fatten, or to yield milk—can be promoted and retained solely by the breeder's devoted attention to his particular object; and if one object be allowed a paramount importance in the breeder's practice, other objects will suffer, in proportion as they are neglected.

The carcass of the short-horns has ever been so surprising, and so justly valued, that many persons have allowed that completely to occupy their attention, and the dairy has been disregarded. In such a state of things, every advance towards one point has been to recede from another; because what tends to enhance a particular quality, will also enhance a defect, provided such defect was of previous existence.

The objections which exist among breeders, for various and some cogent reasons, against



LORD ALTHORP'S COW.

crossing with the stocks of each other, unavoidably lead to the practice of breeding in and in; which, in cases of any original deficiency of the milking property, must unquestionably go on to render the deficiency greater. Bad milking, in a breed of animals which were ever distinguished as good milkers, is not a necessary consequence of improvement in the animal in other respects, but a consequence of the *manner* in which such improvement is pursued. Short-horns, inferior to none for the grazier, may always be selected and bred with the most valuable dairy properties. There are many instances of the highest bred short-horns giving upwards of four gallons of milk night and morning; and attention only is requisite, on the part of the breeder, to perpetuate this quality to any desirable extent. A moderately good milker will be found to yield as much *butter* in the week as one giving an enormous quantity; the milk being unquestionably of very superior quality; and, indeed, it should be the case, that the animal economy, which leads to an excessive secretion of flesh and fat, should also be productive of other rich secretions.

Wherever the improved short-horns have been crossed with other cattle, their superiority is equally manifest, in respect of dairy qualifications, as in every other.

An opinion generally prevails that the short-horns are unfitted for work; and in some respects it is admitted they are so: but the correct reason has not been assigned, and the question may fairly come briefly under notice. They are willing and able to work, but surely cattle which, as the preceding account proves, will go as profitably to the butcher at two years old as any other breed at three, and as many even at four, ought never to be placed in the yoke. No beast, in the present advanced state of breeding, ought to be put upon a system which arose out of the necessity of obtaining compensation by work for the loss attending a tardy maturity. But where it may be convenient, the short-horns, particularly the bulls, work admirably, as their great docility promises: And as good bulls are apt to become useless, from acquiring too much flesh in a state of confinement, moderate work might, in most cases, prove beneficial.

The specimens which accompany this account will render little comment necessary on their form. With deference, however, it is submitted to the breeders of short-horns, that they should avoid breeding from too close affinities, and, while they steer clear of coarseness, should require a sufficiency of *masculine* character in their males. This is a point in which many short-horns are rather defective, and it is one of infinite importance. The length of the carcass should be medium, as well as that of the legs, and a hardier animal, with equal size and on a more profitable scale, will be produced. The facilities for making this improvement are sufficiently numerous, the short-horns being now more generally diffused. That wider diffusion also multiplies the means of selecting for milk; a quality which should not be lost sight of; for it is the *combination* of perfections which has conferred, and will perpetuate, the superiority of this breed of cattle.

The colors of the short-horns are red or white, or a mixture of the two, combining in endless variety, and producing, very frequently, most brilliant effect. The white, it is very probable, they obtained from an early cross with the wild breed; and whenever this color shows itself, it is accompanied, more or less, with a red tinge on the extremity of the ear; a distinctive character, also, of the wild cattle. No *pure short-horns* are found of any colors but those above named.

Editorial, &c.

G. Buckland, Esq., Editor.
H. Thomson, Esq., Assistant Editor.

HINTS FOR THE MONTH.

The early part of September, as every farmer knows, is the season specially devoted in Upper Canada to the sowing of fall wheat. Experience has proved that wheat sown either during the last days of August, or from the 1st to he 15th of September, stands a better chance, in an average of seasons, of escaping from winter killing, rust, &c., and of producing a better crop, in our climate, than that sown at a later period. In certain seasons wheat has succeeded equally well sown from the 15th to the 25th of September, but after the last mentioned date, the operation becomes a hazardous one, and all observation goes to show that the earlier mentioned date is the safer. All practical farmers are so well acquainted with the usual modes of putting in this grain, that to enter minutely into details would be superfluous. We may, however, give a few practical hints for the guidance of the inexperienced, of whom there is always a greater or less number conducting farming operations in this country.

We will suppose that the fallow has already received the final seed furrow, or that it is prepared, by having been thoroughly ploughed and cultivated to a good depth, during summer, for that operation. In the latter case, on clays or strong loams, and if undrained, as of course, all land with very trifling exceptions still is in Canada, the next required process is to turn up the soil, with a moderately light furrow, in ridges of not more than three or four yards in breadth, tolerably well rounded in the centre, and with the open furrows between the ridges cleanly cut out. The plough should be so held that each furrow will fall somewhat upon its edge, leaving the surface of the ridge well ribbed, so that the wheat may fall into the seams, and come up in drills, somewhat as if sown by a grain drill This is of course in case the latter named implement is not intended to be used, in which case the nicety of the ribbing is not of consequence. On light or sandy soils the ridges may be of a greater breadth than that above named, and on thorough drained land, where such improvement has been effected, the ridging may be dispensed with altogether, and the whole surface ploughed flat.

The next matter of importance, although it should of course have been attended to before the moment at which it is required for actual use, is the selection of the seed. None but the purest and of the best variety and quality should be used. Amongst the varieties in most popular use at present, we may mention the Hutchison, the Blue-stem, Soule's, the Mediterranean, Whiteflint, and a Red Chaff, white wheat, of which we do not recollect the precise designation. The two first named are productive, ripen in good time, yield a plump berry, and weigh well in the half bushel, but are not favorites with some of the millers as to their grinding qualities. Soule's is a favorite variety with those who have tried it, early ripening and productive. The "Mediterranean" is a red wheat, hardy, and may be recommended for the poorer class of lands. The "Whiteflint" is a good variety, and of excellent flouring qualities, but requires to be sown in good time to avoid rust. The "Red Chaff" has taken several of the large prizes for 25 bushels at the Provincial Shows, and generally produces a good sample.

If the seed is perfectly pure and free from smut, it may be sown in its natural condition, without any preparation. If otherwise, the seed should first be thoroughly cleaned and sifted, and then, if smutty, treated with a dilution of sulphuric acid, blue stone, arsenic, urine, common ley or other material of the sort. Such operations should be carefully performed, lest the vitality of the grain be destroyed. A common and efficacious preparation is to soak the seed in strong brine made from common salt for 12 or 24 hours, and then after draining, dry it well in plaster of Paris.

Everything being prepared, the wheat may be sown at the rate of one to one and a half bushels per acre on new or fresh land, and one and a half to two bushels, on older fields. That is, if sown broadcast by hand. If sown by the grain drill, which is every year coming into

more extensive use, and always with improved results, a less quantity will suffice. If the drill be used, the land is first smoothly harrowed, and if the seed does not cover well, it may receive a slight harrowing, lengthwise of the drill, afterwards. If the seed be sown by hand, it should be cast directly upon the ribbed surface, without previous harrowing; that is, if in any tolerable condition. If it should be very rough it may be broken a little with the harrow. After sowing broadcast, the field should be harrowed till the seed is well covered. Then let the open furrows be well cleaned out with the plough, cross drains made with the spade and shovel, wherever necessary, to carry off all the surface water, and then the farmer may turn out all the stray cattle, close up the fences, and wait the result at the next harvest, with the satisfaction of having done his duty towards securing a crop; only let him pay attention during fall and spring to his drains and keep them in proper working order.

With the sowing of fall wheat concluded, the farmer's summer campaign may be said to be over. He has now a little leisure to look about him, and occasionally take a day or two of recreation—go to the Fair, &c. The work usually to be attended to in the latter part of the month, besides an occasional day with the thrashing machine, consists in taking up the potatoes, harvesting Indian corn, &c., and other operations of general improvement. In the coming month, fall ploughing and a variety of other occupations will require attention.

UNITED STATES AND CANADIAN FLOUR.

We take the following remarks on the quality of American Flour sent to the European Market, from a late number of the Belfast *Mercantile Journal*. We regret to have to state that we know from the most reliable sources, that the complaints are two well founded, whether as regards United States or Canadian Flour. Complaints have also been made for a length of time in the Lower Provinces of some brands of Upper Canada Flour sent there. It was not only very frequently sour, but disgracefully and systematically short in the weight. And as a proof that the fraud in weight was intentional, the tare of the barrel was sometimes found marked several pounds less than the real weight, so as to make the weight of the flour appear correct, and rendering the detection of the fraud impossible, except by emptying and weighing the barrel. Such dishonesty not only renders those who are guilty of it liable to severe punishment by law, but is of the most discreditable character, and will tend, if persisted in by any of the millers in the Province, seriously to damage the character of the whole country in foreign markets. However, we trust the few millers, who have either by accident or designedly fallen into such a mistake, if any of them are still in the business, will be deterred either by good principle or by fear of exposure and unpleasant consequences from repeating it. The question of the souring of the flour is one calling for the serious attention of the Farmer, as well as that of the Miller. A much greater proportion of exported Canadian Flour has soured within the last few years than used formerly to be the case. The circumstance has been on some occasions attributed, and no doubt correctly, to the fact of spring wheat being used, and flour from such wheat is now generally admitted to be unfit for exportation. But flour has also soured largely when spring wheat was not used, and hence it has been surmised by some manufacturers, that particular varieties of winter wheat,—one of which has been considered to be the Hutchinson Wheat—bore a resemblance in this respect, viz: liability to sour, to Spring Wheat. If this should prove to be the case, it will behove the farmers to select their seed wheat with a view not only to productiveness and early ripening, but also to manufacturing qualities. The extract is as follows:

"We are sorry to be obliged to caution our American friends against continuing to send over flour to these kingdoms of inferior quality to that indicated by the brand. We know not where the fault lies, but certain we are, that more than half that is imported to these kingdoms under the brand of No. I, superfine, is mere rubbish, and discreditable to the character of American millers. Previous to the introduction of "free trade," we recollect that Ohio and Western Canal flour bore a very high character, and justly so, but we have perceived since then a gradual deterioration in the quality, to such an extent latterly as to call

loudly for interference. An immense proportion of the flour lying almost unsaleable in Liverpool is of this description, and the continued loss to our merchants has been so great in consequence that the result will ultimately be a transference of the flour to some of our continental neighbours. French flour decidedly carries off the palm as to quality, and a good harvest or two would place that nation in such a position as to supply us more readily, and on better terms, with a superior article of flour. We would earnestly urge upon such of our readers as may be interested in this matter, and particularly would we address ourselves to our American readers, the vital necessity for their adopting immediate steps to have either an efficient and faithful class of "inspectors" appointed, or to do away with the branding of the flour altogether, and let the purchaser judge for himself. Let the miller's name and a particular initial, to be adopted by each miller, be branded on the barrels, as a matter of course, and indeed we cannot see how trade can be conducted properly or creditably on any other system."

LARGE DAIRIES IN DEREHAM, OXFORD COUNTY.

We take the following notice of Mr. Ranney's large cheese dairy, in the township of Dereham, *Oxford, from a late number of the Toronto Leader.* Mr. Ranney having entered into the business of cheese making, so far as we are aware, more extensively than any other person in Canada, and having several times been a successful exhibiter at our Provincial Shows, where many of our readers have seen the gigantic specimens of his manufacture exhibited, we insert this notice of his enterprise with pleasure:—

"On a recent visit to the County of Oxford, the writer was surprised at the extent and completeness of the dairies in this Township. The largest is that of Mr. Ranney, a settler of about 20 years. His farm is 550 acres, and he keeps 102 cows at the present time. They are all of the common breeds; Mr. Ranney looking not to breeds, but to the quality and quantity of the milk, which makes all the difference between success and failure.—Mr. Raney last year made 17½ tons of cheese from 95 cows. There is one cheese on the premises, intended for exhibition in London, that weighs no less than 1200 lbs. The establishment has been twelve years in growing to its present size; and this year it will turn out upwards of 20 tons of cheese, a quantity that will yield, at the ruling prices, £1,250. Nearly all the farm of 550 acres is required for the purposes of the dairy. The machinery required is not expensive; but the cost of keeping up the establishment is considerable. Mr. Ranney has what is called a grinder for preparing the curd for the press; which is the last operation in cheese making, except salting. Previous to the invention of the grinder a chopper was used, and by this clumsy instrument, it took an hour to perform what is now done in five minutes. Mrs. Ranney superintends with great care and success the entire establishment. She is a woman of great intelligence, and a school teacher was the first in the township who drew any money granted by the Government for education. Mr. Harris has also a large dairy establishment; but not having an opportunity of seeing it, the writer cannot describe it.

PROGRAMME

OF THE ANNUAL EXHIBITION OF THE AGRICULTURAL ASSOCIATION OF UPPER CANADA, TO BE HELD AT LONDON, SEPTEMBER 26TH TO 29TH, 1854.

Monday and Tuesday, 25th and 26th September, will be devoted to the making of Entries, and of receiving and arranging articles for Exhibition.

Entries will be taken up to Tuesday evening. Articles entered on Wednesday morning will be subjected to a charge of 5s. each;—the books will be finally closed at 9 o'clock, A.M.

The Judges will meet at the Secretary's office on the ground, on Wednesday morning, at 9 o'clock, to arrange for entering upon their duties. *Members only* will be admitted to the Show grounds on Wednesday afternoon, at 2 o'clock.

The public will be admitted on Thursday and Friday, after 8 o'clock, upon payment of 7½ each admission.

Public meetings will be held on Wednesday and Thursday evenings, for hearing addresses and discourses on Agricultural subjects.

The President's Address will be delivered on Friday, at noon:—afterwards the Premiums will be officially declared, and paid.

The managers of County Agricultural Societies are earnestly requested to forward the names of such persons as they may appoint as *Directors and Judges*, to the Secretary of the Board of Agriculture, without delay. According to the Statute, the members of the Board of Agriculture and the Presidents and Vice-Presidents of County Societies, or any two members who may be appointed in their stead, constitute the Directors of the Agricultural Association;—who will meet in the Committee Room on the Show Ground on Friday, at 10 A.M., for the transaction of business.

The prospect of a large and successful Exhibition is most cheering, and the Local Committee at London are doing every thing in their pow-

to complete and carry out the arrangements in the most satisfactory manner; and the London Exhibition may reasonably be expected to be a fair exposition of the productions and resources of the great and fertile West.

The prizes offered on this occasion amount in the aggregate to upwards of EIGHT THOUSAND DOLLARS;—a proof of the progressive advancement of the Society. Printed Prize Lists, containing regulations, &c., may be obtained gratis, by applying to the Secretary of the Board of Agriculture, Toronto; J. B. Strathy, Esq., Secretary of the Local Committee, London; or the Secretaries of County Agricultural Societies.

THE ANNUAL EXHIBITION OF THE AGRICULTURAL ASSOCIATION OF LOWER CANADA,

Will take place at Quebec, on the 12th, 13th, 14th and 15th of September. As the event draws near we are glad to hear that the exhibition promises to be a good one, and trust that many persons from this section of the Province will pay Quebec a visit; and as the shows of both sections of the Province are open to general competition, it is much to be desired that Lower Canada should be represented at our approaching Show at London, and Upper Canada at Quebec. We regret that we did not receive the information that the period for receiving entries for the Lower Canada Show had been extended to the 1st of September, in time for notice in our last issue.

THE RESULTS OF HARVEST, AND PROSPECT FOR PRICES.

At the date of our last issue, when the grain harvest was at its height, the general impression appeared to be that the wheat crop in Upper Canada would be this year unusually productive, and the probable surplus for exportation was estimated by some at as great an amount as 12,000,000 bushels. Now, however, that harvest has concluded, and a nearer estimate may be made of the amount of the crop, there appear strong grounds for doubting whether it will be as great as was anticipated. Extensive complaints are made of the effects of winter killing and rust, while spring crops appear to have suffered from drought. In the United States, the wheat crop is probably an average one, but the damage to the spring crops from the long continued drought (which has been the greatest experienced for many years) has been very great. Indian corn especially, on which so much depends, both as an auxiliary to the supply of breadstuffs, and for pork and cattle feeding, will be in some districts nearly a total failure, and the crop on the whole, it is feared, will be far below an average. In Great Britain, where harvest at the last reports had fully commenced, there is every reason to believe that the crop will be an abundant one, fully an average, if not above, and the weather being fine, there seemed a good prospect of its being well secured. The general accounts from the Continent of Europe are also favorable. Meanwhile all the depots or shipping ports on this side of the Atlantic are exhausted of Stocks to an unprecedented degree. The wheat and flour received are scarcely sufficient to supply the consumptive demand. The knowledge of this fact in England, notwithstanding the favorable accounts from the seat of war, and the prospect of an abundant harvest, tends to keep prices advancing—as, should the harvest unfortunately prove wet, there would be an extensive importation of wheat required before British wheat could come into consumption. At the time we write, August 26th, the latest quotations from England were: for Canada white wheat 9s. 6d. a 10s., sterling, per 70 lbs.; red do. 8s. 9d. a 9s. 3d. No. 1 superfine flour was 32s. a 32s. 6d. per brl.; extra do. 33s. 6d. a 34s. 6d. In New York on the 25th, Canadian flour was sold at $9 25 in bond, New York State being $9 50 a $9 75, and Genesee $10 37½ a $11 50; while wheat was bringing $2 a $2 25. In our market at this date flour is worth 37s. 6d. a 38s. free on board, and wheat 7s. a 8d. Whether any material advance be made on these prices during the next two or three months will depend upon further advices from Europe. At any rate prices are not likely to be much lower than at present for some time to come, owing to the shortness of stocks at the shipping ports. With the abundant crops of Europe, if the harvest turns out favorable, prices may perhaps recede in England in winter, though no accurate opinion can be formed at present. It seems at present not improbable that prices may decline somewhat on this side of the Atlantic, when an accumulation of stocks takes place. The reciprocity treaty coming into operation will of course tend to help them up, but the farmer cannot fail of securing high rates by thrashing and delivering in early autumn. If he chooses to speculate upon high prices in winter and spring, he can of course do so, but he must take the risk of a possible reduction.

AGENCY FOR IMPORTING SEEDS, IMPLEMENTS, &c.

We have much pleasure in calling the attention of our readers to Mr. Brown's advertisement in the present number. From the known respectibility and qualifications of the firm of Messrs. Cockburn & Brown, we have no doubt that whatever agency they undertake for purchasing and shipping seeds, implements, &c., from Europe to this country, will be done with care and judgment, so as to give all reasonable satisfaction.

Literary and Miscellaneous.

EDUCATION ANALYSED.

BY MRS. M. F. H. THOMAS.

CHAPTER II.

This habit of abstraction, or inattention, is sometimes carried so far, that we see men, of naturally sound and even superior minds so engrossed by their business, by a mere mode of money making, as to be awake only to what concerns that and the "Almighty dollar." Truly, "having eyes, they see not; and having ears, they hear not." In the emphatic language of Scripture—"The God of *this* world, (is not wealth a god? Aye a very Moloch, reeking with the sacrifice of both souls and bodies;) has blinded their eyes." There are other kinds of dreamers—daytime somnambulists, but I instance this class, because they are among us every where; so much so, that they may even be ourselves, gentle reader. But never mind. No one will think of putting on the coat; but will be sure to award it to somebody else; we have all such a happy method of seeing the application of unpalatable truths to others; never dreaming, that while we are thinking the coat a "snug fit" for our neighbor, *he* may be thinking the same of us.

But to proceed. A thorough knowledge of our business, and interest therein; be it whatever it may, is requisite to success. But let us be careful that we do not confound the *means*, with the *end* of existence. Our subsistence here, should not be the *object* of our life, by any means That were folly in the extreme. Riches are but the *means* of prolonging existence, and affording opportunities for developing our mental nature—for perfecting virtue; and furthering on our life mission. *We* do not live, like the ant, to hoard and die. This state is merely the threshold of existence, and if we waste all our energies in providing for its wants, we shall be, truly, like the "foolish virgins" of the Holy Scriptures, our journey but commenced, with our oil wasted, and our lamps gone out. Besides, if we fit ourselves only for our present occupation, and position, we can never hope to rise above it. Should the influence of the wealth we acquire; or other circumstances, obtain for us admission into a higher and broader field of labor—and in this free blessed country there are none but may indulge such a hope—we shall be unfitted for its duties and requirements, making but a sorry figure, at best; and unhappy and out of place, render ourselves objects of contempt and ridicule, rather than of admiration and reverence. And last, but not least, by any means, be deprived of the inestimable privelege of *doing good*—of blessing mankind, and finding stars in our crown of rejoicing. Every young man and women, in this favored land, should set a high stake for their future, however humble their present occupation; and fit themselves to *shine*, in any position, in which they may hereafter be placed. *Elihu Burrett was a blacksmith—Benjamin Franklin* a poor printer's apprentice; but while pursuing their humble callings, they found time to fit themselves for a broader usefulness—a higher destiny, and be it remembered, that whoever prepares himself for a higher sphere, than he at present occupies, will seldom fail of reaching it. I know that some think, that these self-made men, are peculiarly gifted by nature; but I have ever thought, that *industry and perseverance, are the better part of genius.* At any rate, if we cannot reach the height of the inspired poet or artist; we may at least, make the statesman or reformer—the guide and purifyer of the tendencies of our times. Had Burritt and Franklin never aspired beyond a perfect mastership of thier respective trades, there memories would be lost, with the vast masses of their contemporaries; leaving no visible trace upon subsequent life. Rising men and women are around us, in our daily paths. Men and women, whose motto is "Excelsior," and who, by preparing for a higher usefulness, rise gradually, step after step, on the ladder of fame, the blessing of our present, and promise of our future. The path they are treading is open to all. In the language of the noble, but eccentric Emerson—"*If you would be seen—shine.*" Do not imagine that there is for you, but a single *leaf in the great book of knowledge—a narrow* corner in the universe of God. You are His child; and coheir with your brethern, of all knowledge, human and divine. You have a mind, however humble, capable of infinite expansion, and you know not, till you have spent a lifetime in its development, to what heights you may attain. Do not think, then, that any branch of knowledge concerns you not. You may yet find means of turning it to your benefit in future life; and if not, its acquirement will, at least, help to expand your minds.

Our next chapter will be devoted to a consideration of the different divisions of knowledge, and their respective benefits.

Brooklin, August 20th, 1854.

How to Make Good Tea.—If men can be induced to build rain-water cisterns by recommending rain-water for tea, then some good may arise from tea-drinking. I have no doubt that rain water is far more healthy, and when properly filtrated, is as pure as the running spring. Then why is it not more used? In numerous places, a supply of water could be had from the roofs of farm-buildings, at one half the expense that it is obtained at from deep wells. I hope every tea-drinker in the country will become perfectly convinced that good tea can only be made from rain-water, and then cisterns will become fashionable.

POETRY.

THE HAPPY FARMER.

BY MRS. L. H. SIGOURNEY.

Saw ye the farmer at his plough,
As you were riding by?
Or, wearied 'neath his noonday toil,
When summer suns were high?
And thought ye that his lot was hard?
And did you thank your God,
That you and yours were not condemned
Thus like a slave to plod?

Come, see him at his harvest home,
When garden field and tree
Conspire, with flowing stores to fill
His barn and granary.
His healthy children gaily sport
Amid the new mown hay,
Or proudly aid with vigorous arm,
His task as best they may.

The dog partakes his master's joy,
And guards the loaded wain,
The feathery people clap their wings
And lead their youngling train.
Perchance the hoary grandsire's eye
The glowing scene surveys,
And breathes a blessing on his race,
Or guides his evening praise.

The Harvest Giver is their friend—
The Maker of the soil—
And earth, the Mother, gives them bread,
And cheers their patient toil.
Come join them round their wintry hearth,
Their heartfelt pleasure see,
And you can better judge how blest
The farmer's life may be.

RECIPES, &c.

CERTAIN REMEDY FOR A FELON.—Take Polkroot and roast it in the fire until done, then wash up all the soft part and make it into a poultice and apply to the place afflicted 3 or 4 times a day, as hot as can be borne, and it will perform a cure in forty-eight hours.

CHOLERA.—When cramps and sickness of the stomach occur, also diarrhœa, take 6 or 7 drops of oil of peppermint (not essence) and 15 drops of laudanum, in half a glass of cold water; and if not relieved in two hours repeat the dose.

REMEDY FOR A COUGH.—Syrup of Squills, Syrup of White Poppies, Syrup of Horehound and Clarified Honey.—Equal parts of each.

A tea spoon full of the mixture should be taken at night in a wine-glass full of warm water, and in the morning also, if the cough is very troublesome; but in ordinary cases it will probably be sufficient to take it at night.

TO CLEAN HEAD AND CLOTHES BRUSHES. — Put a table-spoonful of pearlash into a pint of boiling water. Having fastened a bit of sponge to the end of a stick, dip it into the solution, and wash the brush with it, carefully going in among the bristles. Next pour over it some clean hot water, and let it lie a little while. Then drain it, wipe it with a cloth, and dry it before the fire.

TO PROTECT HORSES FROM FLIES. — Take two or three handfuls of walnut leaves, upon which pour two or three quarts of cold water. Let it soak one night, and pour the whole next morning into a kettle, and boil for a quarter of an hour; when cold it is fit for use. Moisten a sponge with it, and before the horse gets out of the stable, let those parts which are most irritable, be smeared over with the liquor. Every "merciful man," who uses a horse during the hot weather, should promote his comfort by this simple measure.

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