

contrast. Now, it this Vine from the Rocky Mountains could be introduced into England, would it not be adding another most vigorous and, I should think, most certainly a hardy climber to our list, with its splendid large crimson blossom? What an excellent effect it would have on building or tree! I once before saw near Ludlow a wild Clematis running up a Spruce Fir that had been shredded up all but the head. The climber was one mass of blossom, broad at the base, but gradually tapering as it ascended the tree; the effect in this case was good, light green surmounted by dark, but nothing like the superb effect the light green had resting on the crimson. Pray excuse this long epistle. Of course the Clematis was in full blossom at Downton at the time mentioned. *R. N., Shrewsbury.* [We have no faith in travellers' tales of Vines with six petals, and wonderfully good wild fruits. It is astonishing to see how small these great things become when they are put to the test.]

Dioscorea Batatas.—From experiments that have been made, and the specimens produced at the Horticultural Society's meeting of this root, it would appear that it is quite hardy, easily cultivated, and that it occupies but little space in the ground. I therefore think on that account, as well as from the circumstance of its being apparently very prolific, that it is likely to become hereafter, if not exactly a substitute for the common Potato, at all events a valuable acquisition in the feeding of cattle and pigs, and consequently its extensive cultivation ought to be encouraged. Last March I received two small roots of it from Messrs. E. G. Henderson & Son, but, from what cause I cannot tell, did not meet with the same success as you mention others to have done. One of these I planted about the middle of March in the open ground, the other in a small pot, and then placed it in a cold frame. The former, which was inserted about 4 inches deep, came up towards the end of April, but it was cut down by frost when an inch or so high, and it did not again vegetate, nor could I in searching for the root some time after discover any vestige of it whatever. The one in the pot, when it had grown to the height of about 3 inches, was transferred without disturbing the soil into a much larger sized one, where it did not make a greater progress than an inch or two more in height, and it now remains in the frame with its leaves all turned yellow. Will you inform me whether I ought to allow it to stand just as it is during the winter, or take it out and dry the root for replanting next March? Also, in the event of my then cultivating an increased number of roots, what is the proper depth to place them in the soil, if they may be treated like the common Potatoes with regard to manuring, earthing up, &c., and what height the stems usually attain? There is one thing I confess somewhat puzzles me to comprehend, namely, that if planted at only 6 inches apart, how the tubers can find room to swell to such an enormous size as has been represented? Do the roots or fibres, then, extend to a great distance on either side of the row, instead of along the line, and form their tubers at the extremity? If so, the rows I should imagine will require to be several yards separate from each other when the crop is cultivated in that form. *J. H., Whitland.* [The tubers do not swell to an enormous size; quite the contrary; they are long and slender. Plant exactly like Potatoes, only on the top of a ridge full 1 foot above the ground level after setting. We should take up the root and replant next March.]

Ferns.—Having been travelling in Switzerland I have brought home a small collection of Ferns, which I have placed for the present in a pan under a glass in a cold room. Many of them having lost their fronds and throwing up young shoots which are weak and watery, as it would do no good to shorten them like another plant, would it be best to let the weak shoots grow or to cut them off close, so as to force the root to throw up fresh shoots? I would also ask whether the rough outside husk of the Coconut could be mixed with advantage with the peat soil under a glass case. *Filix.* [Keep them cold for the winter, and in spring they will sprout of themselves unless they are dead. We have no experience with Coconut husks.]

Iris reticulata.—A correspondent asks in your impression of the 15th ult. whether this can be procured anywhere. I obtained it this autumn from Messrs. Rollisson, but the plant, if true, certainly does not correspond with Loudon's description of it. He says it is only a quarter of a foot high, but the plant I received is a foot at least. I should be glad to know whether you think I have the true plant, which, I understand, is the best of the genus. *A. R.* [I. reticulata is a bulbous species, with rush-like four-cornered leaves, often a foot long. The flowers do not rise half so high. It is a charming plant. There are figures in the Journal of the Horticultural Society, Vol. III., p. 166; and in the Botanical Cabinet.]

Miscellaneous about Trees.—It may have been observed that some of the newly introduced Conifers are liable to split their bark a short distance above the ground, and thereby to cause a wound which takes a long time in healing, though the health of the tree does not seem to be materially affected by it. Such is the case in some instances with *Taxodium sempervirens* and *Cryptomeria japonica*. In one young tree of the former species a considerable lump of waxy or gummy resin has exuded from the upper margin of the slit, where the bark has been lifted up by it, and the secretion seems to be increasing. As it is probably a natural healing process it is perhaps not safe to remove

it. What is the botanical name of the black or Chinese hardy Bamboo? Is it *Arundinaria* or *Ludolfia glaucescens*? [It is *Bambusa nana* we believe.] Is the Pear called in France *Martin Sec* to be had in England, and what is its quality? [It is a crisp winter sort of no value here.] The *Olea japonica* of the Horticultural Society's Garden is what comes as *Olea excelsa* from Madeira. Is not *Maclura* now to be had by the hundred for making hedges, and where is it sold? [By all nurserymen of note.] Has the beautiful blue of the fruit of *Monnina* ever been turned to use? is it of poisonous nature? would alkalies have an effect in fixing it so as to prevent its fading? [Don't know.] A letter from Baron Jacquin, of 1839, now before me, mentions a Ginko female bearing—but not ripening—13 fruits in the Vienna garden. Has it ever done so here? [No.] He also mentions a *Gypsophila paniculata* from the Levant as a substitute for soap used for washing wool, shawls, and lace; is that generally known? [Yes.] *Aster Carolinianus*, a very remarkable departure from the common run of Asters, is about to flower with me; it seems according to Loudon and Sweet that there exists no figure of it. N.B. It has been here about 16 years without showing a bud until this season. The Turkey Oaks have borne a vast quantity of acorns this autumn. I have been led to compare the varieties, which seem endless, including *Lucombe Oaks*, &c. I think I can distinguish the following:—1. Normal Turkey Oak: leaf jagged, stem straight, branches horizontal, leaf early deciduous. 2. Ditto; but semi-evergreen. 3. Leaf regularly and largely indented, handsome foliage; *qy. austriaca*? 4. Very irregularly sinuato-lobate; luxuriant foliage. 5. Almbst evergreen, stem straight, branches thick or ascending, making a fine head; handsome tree. 6. Leaves as No. 1, branches spreading close; habit like *Q. pedunculata*. All these have mossy cupped acorns. No. 3 may possibly be called a *Lucombe Oak* of the old original batch. The common *Lucombe* of 40 to 50 years ago is very different, and seems to bear acorns sparingly. The so-called evergreen *Lucombe* of 15 to 20 years ago is no *Cerris* at all (save in leaf), and bears smooth cups like an *Ilex*. *S.*

Cross Breeding.—I have been lately collecting all the evidence which I can get from the observation of others and my own, on the natural crossing of varieties of plants. The evidence in regard to Leguminous plants is curiously conflicting, but preponderates against their ever crossing without artificial aid. I should esteem it a singular favour if any of your correspondents would give in your paper or send me any evidence showing either that Leguminous crops, when grown close together, do sometimes cross; or, on the other hand, that they may invariably be grown close together without any chance of deterioration. *Charles Darwin, Down, Bromley, Kent.*

Petunia imperialis.—I quite agree with your South Wales correspondent as to the unsuitableness of this *Petunia* for bedding purposes. It is all that was said of it as a pot plant; it is certainly double, fragrant, and also a free grower. It will strike (to use a common phrase) like weeds, and I have found no difficulty in growing really handsome plants in pots indoors, but bedded out, or in pots and vases, and in a variety of soils, I have never seen it produce one perfect blossom; they will not expand, and if they do partly burst, in every case that I have seen they have not been white but a dirty green. I have seen it bedded this season in very many places, and I have myself tried it in the common garden soil, and also made up different composts for it. In one case I planted in a large vase four plants in the same compost I used for my pot plants, and although carefully watched I never saw a perfect bloom on them, while the dark *Petunia triumphans* (a decidedly bad grower) flourished and flowered freely. As a pot plant the *imperialis* is really valuable. It may be had in bloom nearly the whole year. The flowers also stand well when cut, and the plant itself differs from most *Petunias*, being a compact grower, and not at all liable to mildew. *H. Davies, Edgeware.*

Societies.

LINNEAN, Nov. 18.—Prof. Bell, President, in the chair. A. B. Cooke, Esq., R. Garner, Esq., J. T. Law, Esq., and P. L. Sclater, Esq., were elected Fellows. The following papers were read: 1. "Description of a new species of *Draparnaldia*," by J. B. Hicks, M.D. This plant, which Dr. Hicks first found two years since, and again in the present year, he names *D. cruciata*, from the cruciate arrangement of its parts. The frond is 3 to 4 inches long, light green; its branches proceed from the main filaments at right angles mostly in whorls of four, placed crosswise; and the ultimate tufts of branchlets also grow in a cruciate manner from the branches, and bear cilise of extreme tenuity and length. The filaments are invested with a mucous layer. The plant is met with in the streamlets issuing from some of the bogs of the New Forest, and grows attached to sticks and stones. The paper was accompanied by drawings. 2. "Note on the Palm tree of Timbuctu," by Dr. Seemann. After remarking that the species of Palm which grows at Timbuctu had till now remained a botanical enigma, the statement of its being the Coconut Palm being obviously open to grave doubts, Dr. Seemann states, that from information afforded him by Sir H. Barth, together with the descriptions contained in the letters of Dr. Vogel, he had reason to believe he had correctly determined it to be the *Borassus*? *sethiopicus* of Martius. This Palm, it appears, is diffused over the whole of Central Africa, and forms extensive forests, especially on the banks of the numerous lagoons. At a distance from such waters it is only found isolated; and sometimes is met with in company with the Date and the Doum Palm. The trunk is about 2 feet in diameter, and according to Vogel 40, Thonning 60-70, and Barth 60-80 feet high, undivided and unarmed, surmounted by a mag-

nificent crown of fan-shaped leaves 5 to 12 feet in diameter. These leaves, like those of other Palms, are used for thatch and for making baskets, mats, hats, and other articles. It produces large bunches of fruits which are nearly round, about as large as an ordinary Melon, each 4 or 5 lbs. in weight. These fruits have three seeds surrounded by a fibrous husk containing pulp, to obtain which the natives suck it. The seeds are then planted, and in about a fortnight young plants have sprung up, and these are eaten either boiled or raw like Celery. Barth believes that a kind of flour called "fidigma" is also derived from their roots. The albumen of the seed, when soft, is eaten. "It is curious," observes Dr. Seemann, "to find this Palm applied to the same uses in Africa as its congener the *Palmyra* (*B. flabelliformis*) is in Asia, especially as to the sucking of the husk of the fruit, the eating of the young seedlings, and the preparation of a kind of flour." Though there is nothing peculiar in the mode of eating the fruit, there is in the fact of eating the seedlings, and it is a curious speculation whether this idea is of native growth or has been derived from the East Indies. Though not inclined to give the negroes much credit for inventive genius, Dr. Seemann thinks that in this instance it must be assigned to them; for, he adds, "if the applications of this Palm had been adopted from the *Palmyra*, it is not likely that the most useful one of them, the extracting of toddy for making wine, vinegar, yeast, and sugar, would have been overlooked. But neither of the *B. sethiopicus*, nor of any other African Palm do we find it recorded that they serve for that purpose; all we hear is, that the Date tree in Northern Africa, after the heart of its leaves has been cut out, accumulates a thick sweetish and refreshing juice of a slightly purgative tendency; and that the ancient inhabitants of the Canary Islands, the Guanches, knew how to prepare from it a beverage which replaced the Grape wine, and also vinegar, honey, and sugar." The extraction of toddy seems to be peculiarly Asiatic. In America it is entirely unknown, the so-called Palm wine not being obtained by means of the spathe from a living tree, as in the case with genuine toddy, but by a hole cut under the crown of a tree previously felled. "Both Africans and Americans kill the tree, the sap of which they procure, the former by destroying its terminal bud, the latter by felling its trunk; only the Asiatics preserve it, merely cutting its spathes, and allowing the juice to ooze out through the wounded parts." It is the wanton destruction of the trees in the one case instead of carefully husbanding them as in the other, which furnishes the reason why Africa and America never have produced, and as long as the present process is continued never will produce any Palm-sugar, "of which Asia sends to Europe alone more than a hundred thousand tons annually." 3. "On the previously unobserved Occurrence of certain Fungi in and near London," by the Rev. J. M. Rodwell. The author states that he has found the rare *Agaricus ulmarius* finely developed on the trees in St. James's Park, in the Green Park, and also in Gray's Inn Gardens; several fine specimens of *Polyporus giganteus* in St. James's Park and Kensington Gardens; and of *Fistulina hepatica* at Highbury; and he suggests that it may be due to the greatly increased purity of London air in consequence of the reduction of the smoke nuisance that these fungi have made their appearance in the places mentioned. In St. James's Park he also states that the usual *Aregmas* and *Aecidia* are to be found, but these also he has never seen previously to the present year. 4. "On the Nature of the Coronas Scales in *Saponaria*," by M. T. Masters, Esq. The author considers that the scale on the petals of the *Caryophyllæ* is a double organ consisting of two abortive stamens united. In some young flower-buds of a semi-double variety of *Saponaria officinalis* recently examined, the scales were in some instances found completely divided into two strap-shaped bodies, standing quite distinct in front of the petal. In one case, the scale single below was bifurcated above, each subdivision bearing an anther, and several similar scales were found adherent to the claws of the petals. There were also numerous cases showing an intermediate condition between the ordinary scale and that of two distinct stamens. From these observations Mr. Masters concludes that it is fair to infer that the scales on the petals of *Caryophyllæ* are composed of two abortive stamens united; and in consequence that these bodies do not constitute any real exception to the laws of alternation. The flowers of this *Saponaria* also afforded instances of both marginal and free central placentation.

ENTOMOLOGICAL, November 3.—W. W. Saunders, Esq., F.R.S., &c., President, in the chair. Mr. Samuel Stevens exhibited a specimen of the Chinese Wax insect upon the twig, recently received from Mr. Fortune, and Mr. Bowring stated that the *Pela Wax* was used by the natives for coating their ordinary candles so as to give them a hard surface. Mr. Stevens also exhibited the larvæ of *Noctua Ashworthii* and those of a moth still infesting a bottle of Liquorice powder produced at a former meeting of the Society. Mr. Augustus Shepherd exhibited specimens of various rare moths taken near Brighton, including *Acronycta alni* and *Phibalapteryx gemmaria*. Mr. Stainton also exhibited some rare moths taken by Mr. H. Cook, including *Phlogophora empyrea*, *Leucania Vitellina* and *musculosa*, *Laphygma exigua*, and *Cucullia Verbasci*; also the extremely rare beetle *Uleiota planata*, taken under the loose bark of Lime trees, and also a remarkable open network cocoon attached by a long footstalk

plant delights will be disturbed. By the two former hoeings the weeds will in a great measure be eradicated, still there are always plenty of weeds in spring; but this last hoeing is chiefly to break the crust and open the channels of the soil, allowing the air and dews to penetrate. Now these three hoeings come rather expensive if done in the usual manner, but the expense is not in proportion to the benefit derived by the crop, but I know of no hand-hoe, excepting the one I am about to speak of, which will do the work as I should wish to see it done. A man, generally speaking, is obliged to work too fast to do the work well, and as he often treads on the weeds after they have been cut off, they take root again; at any rate he presses down the soil with his feet, which instead of being left open and mellow to admit air and dews, is again closed up. My idea of a hoe is, that a man should have it entirely under his control, so that if he wishes to hoe exactly half an inch he should be able to do so, or 1 inch or 2 inches; and also, excepting by great carelessness, he should be unable to hoe up a single plant, and that he should not tread on a weed after it has been cut off; also that the soil should be left open and mellow, and above all that he should be able to hoe one acre a day. Such a hoe I trust I have invented, and if any one wishes to see it he can do so at 223 Stand, Smithfield Show, where he will see other original inventions. *Sigma*.

Large and Small Potatoes as Sets.—With respect to planting large Potatoes close in the drills, and giving the greater distances between the rows, I willingly give way to Mr. Knight's opinion as stated by "J. T." in the *Gazette* of November 29. It suits with my general rule of tillage better than planting them at equal distances each way. But it is not as only regards the advantage of exposure to the direct rays of the sun, which I believe they would obtain either way, but as allowing, in the greater distances between the rows, a freer passage of air; this I consider most essential as affording a more continuous supply of fresh aerial food to the leaves of plants. In rows at narrow distances, and more so in broadcast tillage, more or less stagnation of air must occur, and the plants be thus compelled to re-imbibe the excrementitious matters they have thrown off in perspiration. As the diffused light of the sun appears as effectual to the decomposition of carbonic acid as the direct one, I do not know that it may not be advisable to give the lines of plants the direction of the most prevailing winds instead of that of north and south. I have never planted whole large tubers so near to each other in the rows as Mr. Knight recommends, but I doubt not, in allowing them the greater distance from row to row, from the small leaf and manner of growth of the plant, that it is a plan deserving of all attention, and as productive over wider dropping as he, in his practice, found. If I do not change my mind I will adopt it to some small extent, say half an acre, in the coming summer. I shall take 4-foot rows, with Scotch Dons or Downs, and as Cabbages are found to answer well in our beds, perhaps try some between the rows; in their young growth they will not check the passage of air. *J. M. Goodiff*.

Thick or Thin Seeding.—Seeing in your Paper that a discussion on this subject is proceeding, I beg to give you an account of a field I sowed last autumn. The kind I sowed was what is locally called Kissingland, a red Wheat with white chaff. The field was sown about the middle of December broadcast, and three bushels and one peck of seed to the statute acre. It was then top-dressed with dissolved bones at the rate of three cwt. to the acre, and harrowed in along with seed. The crop did well and proved not at all too thick. The specimen I send will show you that it does not appear stunted or ill fed. I do not mean to advocate thick sowing, but the quantity of seed sown is so different from Farmer Newlight's, that the circumstance appears very uncommon, and my crop was not in the slightest way too thick. It obtained the prize at the Hale show held here in the neighbourhood on the 11th of September last, so I will leave you to form your own conclusions. No doubt there is much difference to be observed in locality, time of sowing, nature of soil and kind of seed. It was sown on a poor field, but the ground was fine and well harrowed. *Henry Ganthorp, Harnworth, Warrington*. [What was the produce per acre?]

Cross Breeding.—I have been lately connecting all the evidence which I can get from the information of others and my own, on the natural crossing of varieties of plants. The evidence in regard to Leguminous plants is curiously conflicting, but preponderates against their ever crossing without artificial aid. I should esteem it a singular favour if any of your correspondents would give in your Paper or send me any evidence showing either that Leguminous crops, when grown close together, do sometimes cross; or, on the other hand, that they may invariably be grown close together without any chance of deterioration. *Charles Darwin, Down, Bromley, Kent*.

Societies.

ROYAL AGRICULTURAL OF ENGLAND.

MONTHLY COUNCIL: Dec. 3.—Mr. EVELYN DENISON, President, in the Chair.

FINANCES AND HOUSE.—Mr. Raymond Barker, Chairman of the Finance Committee, presented the monthly report of the accounts of the Society; from which it appeared that the current cash-balance in the hands of

the bankers on the last day of the month just ended was 650*l*. Mr. Barker, as Chairman, also read the report of the House Committee. These reports were adopted.

PRIZES FOR ESSAYS.—Mr. Thompson, Chairman, of the Journal Committee, reported the following awards:—

- I. To PETER LOVE, of Naseby Manor Farm, Northamptonshire: the Prize of 20*l*., for the best Essay on the different mechanical modes of deepening the staple soil, in order to give it the full benefit of atmospheric influence.
- II. To T. W. P. ISAAC, of Terrace Walks, Bath (Land-Surveyor): the Prize of 20*l*., for the best Essay and Plans for the construction of Labourers' Cottages, with special reference to domestic convenience.

VETERINARY LECTURES.—Mr. Raymond Barker and Mr. Thompson, as the Chairmen respectively of the Finance and Journal Committees, brought up a joint-report, which was referred to the monthly council in February.

SALISBURY MEETING.—Mr. Cavendish, Vice-Chairman of the General Salisbury Committee, reported the recommendation that the Country Meeting of next year should be held in the week commencing Monday, the 20th of July. This recommendation was adopted by the council.

PRIZES FOR IMPLEMENTS AND STOCK.—On the motion of Mr. Fisher Hobbs, the preliminary arrangement of the Country Meeting Prize Sheets for next year was referred to the Implement Committee, and a Special Live-Stock Committee then named, with a request that they would report their recommendations to the Special Council of Thursday, the 11th of December.

STEAM-PLOUGHING.—The Council received from the Stewards the Judges' report of the trial of Mr. Fowler's plan of ploughing by steam-power. The President directed a Special Council to be summoned for the ensuing week, when their report on the trial of machinery competing for the Society's prize of 500*l*. "for the steam-cultivator that shall in the most efficient manner turn over the soil, and be an economical substitute for the plough or the spade," may be taken into deliberate consideration.

DECEASE.—Notice was given that the vacancy in the Council, occasioned by the lamented decease of Mr. Woodward, would be filled up by election at the monthly meeting in February.

COMMUNICATIONS were received from Mr. Pain, Mayor of Salisbury, on the subject of Prizes for Hampshire Down Sheep; from the Board of Agriculture of Lower Canada, on the establishment of an Agricultural Society; from the Smithsonian Institute of America, a present of books; from the Agricultural Society of the Duchy of Nassau, on the entering into communication; from the Baron de Forrester, a valuable collection of his works relating to the capabilities of the soil and climate of Portugal; from Mr. Knowles, a copy of his Pocket Herd-book; and from Mr. Brown, a copy of his Farm-Account Book: along with various other presentation-copies of works connected with agriculture, for which the Council ordered their usual acknowledgments.

The Council adjourned to their weekly meeting at 12 o'clock on Wednesday, the 10th of December, open to all Members of the Society.

BIRMINGHAM CATTLE SHOW.

THE Midland Counties gathering has been this year a week earlier than usual, in order that its interests and those of the Smithfield Club may not clash. It has gained by this in the appearance of many good animals, which will no doubt reappear in Baker Street, and would have been sent there only, had the meetings been together.

A new section for Welsh Cattle has been this year opened, which ought to have some influence on the cattle of the Principality, considering its nearness to the scene of the show. The Herefords were as usual a very excellent class, Mr. Philipps, of Berkshire, Mr. Naylor, of Welshpool, and others, contributing to it first-class animals. The Devons were an unusually good class. The short-horns hardly came up to their usual standard, first-class animals, however, being exhibited by Mr. Stratton and others. The best division of the exhibition was that of pigs, which is more useful than any of the others, seeing that prizes for breeding stock are offered, and a very excellent class of animals, better probably than have ever before been seen in Bingley Hall, were gathered to compete for them. As to the numbers shown, we may say that last year and this have been on the whole nearly equal, viz., cattle, 112 against 109; sheep, 107 against 46; and pens of pigs, 28 against no fewer than 101. A good show of roots was exhibited, and the poultry show, especially in the principal classes, was as usual the finest thing of the kind that is.

The following is the award of premiums:—

FAT CATTLE.

- Class I. Hereford Oxen.—10*l*., Mr. J. Phillips, Ardington, Wantage.
- Class II. Hereford Steers.—10*l*., Lord Hatherton, Teddesley Park.
- Class III. Hereford Cows.—10*l*., Mr. E. Herbert, Powick, Worcestershire.
- Class IV. Hereford Heifers.—10*l*. with Gold Medal, Mr. G. Pitt, Chadnor Court, Leominster.
- Class V. Short-horn Oxen.—10*l*. with Gold Medal, Mr. R. Stratton, Swindon.
- Class VI. Short-horn Steers.—10*l*., Duke of Beaufort, Badmington, Gloucestershire.
- Class VII. Short-horn Cows.—10*l*., Mr. R. Stratton.
- Class VIII. Short-horn Heifers.—10*l*., Mr. J. Armstrong, Patterton, Chesterfield.
- Class IX. Devon Oxen or Steers.—10*l*., H.R.H. Prince Albert.
- Class X. Devon Steers.—10*l*., Earl of Leicester.

Class XI. Devon Cows.—10*l*., Mr. A. Umbers, Weston Hall, Leamington.

Class XII. Devon Heifers.—10*l*., Mr. A. Umbers.

Class XIII. Long-Horn Cows or Heifers.—5*l*., Mr. D. B. Holborow, Knockdown, near Tetbury, Gloucestershire.

Class XIV. Cross-bred Oxen.—10*l*., Mr. J. Naylor, Leighton Hall, Welshpool.

Class XV. Fat Cows.—10*l*., Mr. J. Faulkner, Bretby Farm, near Burton-upon-Trent.

Class XVII. Scotch Oxen or Steers.—10*l*., Duke of Beaufort.

Class XVIII. Welsh Oxen or Steers.—10*l*., Colonel Pennant, Bangor.

SHEEP.

Class XXI. Three fat Leicesters, Wethers under 22 months.—10*l*., Mr. J. Smith, Riseborough, near Kirbymoorside, Yorkshire.

Class XXII. Three fat Leicester Wethers, under 34 months.—10*l*., Marquis of Exeter, K.G.

Class XXIII. Fat Long-wooled Wethers, under 22 months.—10*l*., Mrs. Sarah West, Blethington.

Class XXV. Three fat Southdown Wethers, under 22 months old.—10*l*., Lord Walsingham.

Class XXVI. Three fat Southdown Wethers, under 34 months.—10*l*., Lord Walsingham.

Class XXVII. Fat Shropshire Wethers, under 22 months.—10*l*., Mr. S. Pilgrim, Burbage, near Hinckley.

Class XXVIII. Fat Shropshire Wethers, under 34 months.—Mr. Henry Smith, jun., Sutton Maddock, Shiffnal.

Class XXIX. Fat cross-bred Wethers under 22 months.—10*l*., Mr. A. C. Keep, Wollaston, Northamptonshire.

Class XXX. Fat cross-bred Wethers under 34 months.—10*l*., Mr. H. Thornley, Marston Hall, near Birmingham.

PIGS.

Class XXXI. Three fat Pigs of one litter, under 10 months.—10*l*., Mr. G. B. Morland, Chilton, Abingdon.

Class XXXII. Three fat Pigs of one litter, under 15 months.—10*l*., Prince Albert.

Class XXXIII. Fat Pig over 15 months old.—10*l*., Mr. R. H. Watson, Bolton Park, Wigton, Cumberland.

PRIZES FOR BREEDING PIGS.

Class XXXIV. Pigs of a Large Breed. Pen of five Pigs of one litter, exceeding three and not exceeding six months old.—10*l*., Mr. J. Smith, Henley-in-Arden, Warwickshire.

Class XXXV.—Pigs of a Small Breed. Pen of five Pigs of one litter, exceeding three and not exceeding six months old.—10*l*., Prince Albert, Windsor Castle.

CHEMICO-AGRICULTURAL OF ULSTER.—At the annual meeting of this society, the annual report was read, and the following remarks were made by Mr. Andrews of Comber:—He thought it was fair and right when they met on any occasion like the present, that they should express their feeling that while other societies, having greater show and parade, received a far greater extent of support from the great body of the community, the silent operation of a society of that kind, whose objects were not of less importance than others but even of greater importance, was comparatively neglected. It was not for the purpose of depreciating the efforts made in other departments that he would ask them to adopt the resolution that he had to propose to them, but merely that they should endeavour to induce those who were so deeply interested fully to appreciate the importance of the Chémico-Agricultural Society, and to place them more nearly on a footing with the efforts made in other departments, and which were individually of very great importance, but certainly not in a relative degree to the support which they received compared with that society. As to the improvement of implements, it was a matter of unquestionable importance, and in the efforts that had been made for the improvement of implements there had been but a moderate expenditure, and no waste of power whatever. He believed it cost the great Agricultural Society very little to reward exhibitors of implements, and it was both an economical and an extremely useful appropriation of the small sum which they applied to that purpose, but they found enormous sums applied to the improvement of stock. Now, there could be no question of the great utility of improved breeds of cattle. They knew that they tended to economise the food. They knew that the same quantity of food applied to the feeding of a good race of animals would produce a greater return than in feeding an inferior race; but it was a matter of not less importance that food should be produced in sufficient abundance, and in the most profitable manner, for the purpose of sustaining the cattle. Hundreds of pounds a year of premiums were applied in rewarding the breeder who had lengthened, by a few inches, the hough of an ox, or produced, in some degree, a little more circular or rotund development of some muscle which was admired, and was, no doubt, useful. But the observation he made was, that while the breeders who produced some of these beauties in utility and fashion were largely rewarded, a very small sum was considered quite enough to give to those who applied themselves to produce the means by which the animals were supported. He did not speak for the purpose of depreciating their efforts, but for the purpose of inducing persons to believe that the efforts of their society were, at least, of equal importance, and that they were entitled to some little support beyond that which had been doled out to them. The resolution which he asked the meeting to adopt was as follows:—

"That, in the present state of agriculture, it is obvious that while the efforts of the national and provincial societies have been conspicuously successful in the improvement of stock and of implements, sufficient attention has not been given to the diffusion of the knowledge of the fundamental principles which govern the nutrition of plants that, for the prosecution of these objects, the funds hitherto supplied by the public have been found inadequate, and the society is again compelled to appeal to the proprietors and all persons interested in agriculture who have hitherto withheld their support to enrol their names in the list of subscribers."

Mr. Andrews went on to say that it was not on the ground of either taste or fashion that he asked support for that society. It was really as a matter of absolute gain. It was quite impossible that the farmer could prosecute his labours with advantage if he had no knowledge of the grounds which grew certain crops best. They had at-