

Bull, 1 year old—

- Hon. J. H. Angas, Angaston, S.A.—Lord Waterloo 5th
 Second do : Hon. W. M'Culloch, Colac—Charming Duke 5th
 Third do : Hon. J. H. Angas, Angaston, S.A.—Rugias
 Prince 6th
 Highly commended : John C. Cochrane, Aitkenside, Ceres
 —Master Oxford

Bull Calf (calved on or after 1st December, 1889)

- First prize : James Tweddle and Son, Gisborne—Earl of
 Hopetoun
 Second do : J. G. Brisbane, Colac—Alvie's Duke
 Third do : John F. Reid, Oamaru, N.Z.—Duke of Elderslie
 13th

Cow, 4 years old or over (giving milk or in calf)—

- First prize : Lawrence Dugdale, Myrniong—Oxford's Countess
 2nd
 Second do : Hon. J. H. Angas, Angaston, S.A.—Rose of
 Connaught 3rd
 Third do : Hon. Sir W. J. Clarke, Bart., Lancefield Junction
 —Bolinda Duchess of Derrimut 8th

Heifer, 3 years old (giving milk or in calf)—

- First prize : Hon. W. M'Culloch, Colac—Lady Nonsuch 7th
 Second do : Hon. Sir W. J. Clarke, Lancefield Junction—
 Bolinda Duchess of Derrimut 30th
 Third do : Hon. Sir W. J. Clarke, Lancefield Junction—
 Bolinda Duchess of Derrimut 29th

Heifer, 2 years old—

- First prize : Hon. W. M'Culloch, Mertoun Park, Colac—Lady
 Oxford Blanche 2nd
 Second do : Hon. J. H. Angas, Angaston, S.A. — Lily
 Waterloo 3rd
 Third do : Hon. J. H. Angas, Angaston, S.A.—Blanche Rose
 12th

Heifer, 1 year old—

- First prize : Hon. W. M'Culloch, Colac—Cowslip 51st
 Second do : James Rennick, Kyneton—3rd Countess of Oxford
 Third do : Hon. J. H. Angas, Angaston, S.A.—Charming
 Oxford 9th
 Highly commended : Hon. W. M'Culloch, Colac—Fuchsias
 Duchess 8th

Heifer Calf (calved on or after 1st December, 1889)

- First prize : J. G. Brisbane, Colac—Lady Brunswick
 Second do : Samuel Gardiner, Bundoora—Duchess of Bruns-
 wick 9th

Tribe of Shorthorn (Special Prize), best five Shorthorn Females of one tribe on the dam's side, bred by exhibitor—

Hon. Sir W. J. Clarke—Summertown Tribe

Group of Shorthorns (Special Prize), best Group of Shorthorns, consisting of one male and four females, bred by exhibitor—

Hon. William M'Culloch

GRAND CHAMPION PRIZES OF AUSTRALIA.

Shorthorn Bull, over 12 months old—

Hon. W. M'Culloch, Colac—Earl of Shaftesbury

Cow or Heifer, over 12 months old—

Hon. W. M'Culloch, Colac—Lady Nonsuch 7th

SECTION X.—HEREFORDS.

Bull, 4 years old or over—

First prize : Henry Beattie, Mount Aitken, Diggers' Rest—
Sir Henry Loch

Second do : Hon. J. H. Angas, Angaston, S.A.—Roger

Third do : Hon. J. H. Angas, Angaston, S.A.—General
Gordon

Bull, 3 years old—

First prize : Hon. J. H. Angas, Angaston, S.A.—Bravo

Second do : Henry Beattie, Diggers' Rest—Figaro (imp.)

Third do : Henry Beattie, Diggers' Rest—Alfonso (imp.)

Bull, 2 years old—

First prize : Hon. J. H. Angas, Angaston, S.A.—Count
Comely

Second do : Thomas Powles, Fairview, Corop—Khedive

Bull, 1 year old—

First prize : Henry Beattie, Diggers' Rest—The Earl of
Hopetoun

Second do : Henry Beattie, Diggers' Rest—Admiral 2nd

Third do : Hon. J. H. Angas, Angaston, S.A.—Jeannette's
Lad

Bull Calf (calved on or after 1st December, 1889)—

First prize : Thomas Powles, Corop—Confidence

Second do : Bright and Howe, Corop—Captain

Third do : Thomas Powles, Corop—Faithful

Cow, 4 years old or over (giving milk or in calf)—

First prize : Henry Beattie, Diggers' Rest—Rose of Summer

Second do : Henry Beattie, Diggers' Rest—Red Rose 3rd

Third do : Hon. J. H. Angas, Angaston, S.A.—Venus

Heifer, 3 years old (giving milk or in calf)—

First prize : Henry Beattie, Diggers' Rest—Beatrice 9th
(imp.)

Second do : Henry Beattie, Diggers' Rest—Princess Alice
5th (imp.)

Third do : Henry Beattie, Diggers' Rest—Staunton Cherry
(imp.)

Heifer, 2 years old—

First prize : Henry Beattie, Diggers' Rest—Dorothy

Heifer, 1 year old—

First prize : Hon. J. H. Angas, Angaston, S.A.—Collin
grove Comely 2nd

Second do : Hon. J. H. Angas, Angaston, S.A.—Tulip 2nd

Third do : Henry Beattie, Diggers' Rest—Brunette

Heifer Calf (calved on or after 1st December, 1889)—

Third prize :—Henry Beattie, Diggers' Rest—Queenie

GRAND CHAMPION PRIZES OF AUSTRALIA.

Hereford Bull (over 12 months old)—

Hon. J. H. Angas—Bravo

Hereford Cow or Heifer (over 12 months old)—

Henry Beattie—Rose of Summer

SECTION XI.—POLLED ANGUS.

Bull, 4 years old or over—

First prize : David Syme, Killara, Lilydale—Baron Waimea
(4493)

Second do : David Syme, Lilydale—Ilex (imp.) (6099)

Third do : David Syme, Lilydale—Sir Launcelot of Killara
(7199)

Bull, 3 years old—

First prize : David Syme, Lilydale—Eric 3rd of Killara

Bull, 2 years old—

First prize : David Syme, Lilydale—Baron 1st of Killara

Second do : David Syme, Lilydale—St. Michael of Killara

Third do : T. H. Parker, Holmes' Road, Moonee Ponds—
Paragon

Bull 1 year old

First prize David Syme, Lilydale—Black Chief of Killara
 Second do : David Syme, Lilydale—St. George of Killara
 Third do : David Syme, Lilydale—King Billy of Killara
 Highly Commended. Staughton Bros, Eynesbury, Melton
 —Jehoshophat

Bull Calf (calved on or after 1st December, 1889)—

First prize : Staughton Bros., Melton—Belshazzar
 Second do : A. S. Chirnside, Koort Koortnong, Camperdown
 —Pride of Battle

Cow, 4 years old or over (giving milk or in calf)—

First prize : Staughton Bros., Melton—Queen of Sheeba
 Second do : Staughton Bros., Melton—Champion La Mascotte
 (75 T.H.B.)
 Third do : David Syme, Lilydale—Milkmaid of Waimea
 (10300)
 Commended : A. S. Chirnside, Camperdown—Gazelle of
 Aberlour (imp.) (12881.)

Heifer, 2 years old—

First prize : Staughton Bros., Melton—Deborah
 Second do : David Syme, Lilydale—Bellona

Heifer, 1 year old—

First prize : Staughton Bros., Melton—Adat

Heifer Calf (Calved on or after 1st December, 1889—

First prize : A. S. Chirnside, Camperdown—Pride of
 Peace

GRAND CHAMPION PRIZES OF AUSTRALIA.

Polled Angus Bull (over 12 months old)—

David Syme—Baron Waimea (4493)

Polled Angus Cow or Heifer (over 12 months old)—

Staughton Bros.—Queen of Sheeba

Beef-producing Group (special prize) best Group of five Beef-producing Cattle, the property of one owner. Not more than two animals of the group to be calved in the same breeding year—

Hon. W. M'Culloch

SECTION XIII.—AYRSHIRES.

Bull, 3 years old or over—

First prize: Alexander Cameron, Mayfield, Cranbourne—Sir Robert Stout

Second do: Alexander Cameron, Cranbourne—Major

Third do: John Grant and W. M'Nab and Bros., Tullamarine—Bruce

Highly commended: Alexander Cameron Cranbourne—Victoria's White Prince

Bull, 2 years old —

First prize: John Bond, Fairfield, Grenvale—Ada's Adonis

Second do: A. and J. M'Farlane, Ayrshire Park, Taieri, N.Z.—Master John

Third do: William M'Nab and Bros., Oakband, Tullamarine—Heather Lad

Bull, 1 year old—

First prize: William M'Nab and Bros., Tullamarine—Falkirk

Second do: William Cumming and Sons, Mount Fyans, Darlington—Dalkeith

Third do: William M'Nab and Bros., Tullamarine—Flemington

Highly commended: William Cumming and Sons, Darlington—Wallace

Cow, 4 years old or over (in milk)—

First prize: William Cumming and Sons, Darlington—Drumlanrig's Ada 4th (3465 A.H.B.)

Second do: A. and J. M'Farlane, Taieri, N.Z.—Fanny

Third do: Thomas A. Grant, Glen Elgin, Toolern—Advie

Cow, 4 years old or over (in calf)—

First prize: William Cumming & Sons, Darlington—Russell (5454 A.H.B.)

Second do: William McNab & Bros., Tullamarine—Blue Bell of Oakland

Third do: A. & J. McFarlane, Taieri, N.Z.—Norma

Highly commended: A. & J. McFarlane, Taieri N.Z.—Heriot 2nd.

Heifer, 3 years old (giving milk or in calf)—

First prize: William Cumming & Sons, Darlington—Favourite of Munnoch (imp.)

Second do: William Cumming & Sons, Darlington—Drumlanrig's Heiress (5465 A.H.B.)

Third do: John Grant, Seafield, Tullamarine—Pansy 4th.

Highly commended: John Grant, Tullamarine—Duchess of Seafield

Heifer, 2 years old—

- First prize : John Bond Fairfield, Greenvale—Dainty Polly
 Second do : William McNab & Bros., Tullamarine—Bow Belle
 Third do : William Cumming and Sons, Darlington—Drumlanrig's Heiress 2nd.

Heifer, 1 year old—

- First prize : William Cumming & Sons, Darlington—Drumlanrig's Heiress 4th.
 Second do : William McNab & Bros., Tullamarine—Bellebone of Oakbank
 Third do : Thomas A. Grant, Toolern—Annie Laurie of Glen Elgin

GRAND CHAMPION PRIZES OF AUSTRALIA.

Ayrshire Bull (over 12 months old)—

Alexander Cameron—Sir Robert Stout

Ayrshire Cow or Heifer (over 12 months old)—

William Cumming & Son—Favourite of Munnoch

SECTION XIV.—JERSEYS.

Bull, 3 years old or over—

- First prize : A. E. Clark, Whittlesea—Laddie Coomassie (imp.)
 Second do : Thomas Kenny, Rose Hill, Balwyn—What's Wanted
 Third do : J. J. Gillespie, Point Nepean Road, Brighton—Freeman

Bull, 2 years old—

- First prize : F. G. Lucas, Cleehill, North Brighton—Oberon
 Second do : James McCulloch, Barholm, Oakleigh—Oakleigh
 Third do : James McCulloch, Oakleigh—Magnet's Lad

Bull, 1 year old—

- First prize : William D. Peter, Dunalister Farm, Oaklands Junction—Neat Lad
 Second do : George S. Vowell, Hampton Road, Sandringham—Count Baronne
 Third do : Andrew McGregor, Carsaig, Yan Yean—Nonpareil

Cow, 4 years old or over (in milk)—

First prize : Frederick Peppin, East St. Kilda—Baggage

Second do : James M'Culloch, Oakleigh—Magnet

Third do : W. Woodmason, Malvern—Bijou

Cow, 4 years old or over (in calf)—

First prize : W. Woodmason, Malvern—Lady Grey

Second do : Campbell and Sons, Kirk's Bazaar, Melbourne
—Wray's Queen

Third do : W. Woodmason, Malvern—Queen of Jerseys

Heifer, 3 years old (giving milk or in calf)—

First prize : George S. Vowell, Sandringham—Favourite
8th

Second do : E. Christie, Toorak—Fuschia

Third do : William D. Peter, Oaklands Junction—Lydia

Heifer, 2 years old—

First prize : J. J. Gillespie, Brighton—Queen of Newlands

Second do : W. Woodmason, Malvern—Blanche

Third do : Thomas Kenny, Balwyn—Favourite

Heifer, 1 year old—

First prize—W. Woodmason, Malvern—Hazel

Second do : Thomas Kenny, Balwyn—Neat Queen

Third do : Andrew M'Gregor, Yan Yean—Snowflake

*Special Prize, best pair of Jersey Calves, either sex, under 12
months old bred by exhibitor—*

Andrew M'Gregor—Nonpariel and Snowflake

GRAND CHAMPION PRIZES OF AUSTRALIA.

Jersey Bull (over 12 months old)—

A. E. Clarke—Laddie Coomassie (imp)

Jersey Cow or Heifer (over 12 months old)—

W. Woodmason, Malvern—Lady Grey

SECTION XV.—HOLSTEINS.

Bull, 3 years old or over—

First prize : Frederick Peppin, East St. Kilda—Dairyman

Bull, 2 years old or under—

First prize : Frederick Peppin, East St. Kilda—Eastward

Cow, 3 years old or over (giving milk or in calf)—

First prize : Frederick Peppin, East St. Kilda—Mayrose

SECTION XVI.—BRITTANIES.

Bull, 3 years old or over—

First prize : George Johnson, Angler's Hotel, Ascot Vale—
Leopold 2nd.

Cow, 3 years old or over (giving milk or in calf)—

First prize : R. M'Keena, Emilyville, Ascot Vale—Minnie
Warren

Second do : George Johnson, Ascot Vale—Champion Minnie

Third do : C. H. M'Meikan, Seaford, Altona Bay—Ruby

SECTION XVII.—DAIRY COWS.

Cow in milk, any breed or age—

First prize : A. Graham, Bolinda—Bolinda

Second do : William M'Nab and Bros., Tullamarine—Jean

Third do : M'Nab Bros., Victoria Bank, Tullamarine—Louisa
7th

Cow (in calf), any breed or age—

First prize : William M'Nab and Bros., Tullamarine

Second do : William Cumming and Sons, Mount Fyans—
Violet (5451 A.H.B.)

Third do : W. Woodmason, Malvern—Cowslip

GRAND CHAMPION PRIZE OF AUSTRALIA.

Dairy Cow (in milk or in calf), £10—

A. Graham, Bolinda—Bolinda

SECTION XVIII.—FAT CATTLE.

Judged as Best Butcher's Cattle.

Pair of Fat Oxen—

First prize : Gibson Bros., Brookdale, Top Creek

Second do : Frederick George Docker, Bontharambo, Wan-
garratta

Third do : Thomas Baird, Dundullimal, Dubbo, N.S.W.

Fat Ox—

First prize : Thomas Baird, Dubbo, N.S.W.

Second do : Gibson Bros., Top Creek

Pair of Fat Cows or Heifers—

Second prize : Black Bros., Mount Noorat, Noorat

Fat Cow or Heifer—

First prize : Henry Beattie, Diggers' Rest

Second do : Gibson Bros., Top Creek.

SECTION XIX.—CATTLE DERBIES.

Shorthorn Derby Sweepstakes, 1890—

Hon. Sir W. J. Clarke—Bolinda Duchess of Derrimut 30th

Ayrshire Derby Sweepstakes, 1890—

William Cumming and Sons—Princess Thyra of Fyans
(5460 A.H.B.)

SECTION XX—MERINO SHEEP.

Ram, over two years and 6 months old—

First prize : William Cumming and Sons, Darlington.

Second do : William Cumming and Sons, Darlington

Third do : Thomas Russell, Warrook, Rokewood.

Ram, under 2 years and 6 months, and over 1 year and 6 months old—

First prize : William Cumming and Sons, Darlington—
Sir Ronald

Second do : William Cumming and Sons, Darlington.

Third do : Thomas Russell, Rokewood

Ram, under 1 year and 6 months old—

First prize : William Cumming and Sons, Darlington

Second do : Thomas Russell, Rokewood

Third do : Thomas Russell, Rokewood

Ewe, over 2 years and 6 months old—

First prize : William Cumming and Sons, Darlington

Second do : William Cumming and Sons, Darlington

Third do : Thomas Russell, Rokewood

Ewe, under 2 years and 6 months old, and over 1 year and 6 months old—

First prize : William Cumming and Sons, Darlington

Second do : William Cumming and Sons, Darlington

Third do : Thomas Russell, Rokewood

Ewe, under 1 year and 6 months old—

First prize : William Cumming and Sons, Darlington

Second do : William Cumming and Sons, Darlington

Third do : Thomas Russell, Rokewood

GRAND CHAMPION PRIZES OF AUSTRALIA.

Merino Ram (any age)—

William Cumming and Sons

Merino Ewe (any age)—

William Cumming and Sons

SECTION XXI.—LINCOLNS.

Ram, over 2½ years old—

First prize : John Christie, Garvald Vale, Byaduk

Second do : Leonard R. Carter, Scale Park, Clunes

Third do : John Christie, Byaduk

Ram, under 2½ years and over 1½ years old—

First prize : Thomas Bath, Ceres, Learmonth

Second do : Andrew Hermiston, Maiden Hills, Evansford

Third do : T. E. Powling, Fernlea Park, Framlingham

Ram (Ram unshorn), not more than 15 months old—

First prize : Thomas Bath, Learmonth

Second do : Andrew Hermiston, Evansford

Third do : Thomas Bath, Learmonth

Ewe (any age), with Lamb at foot—

First prize : W. and R. Forsyth, Rowcbester Park, Hamilton

Second do : Leonard R. Carter, Clunes

Third do : T. E. Powling, Framlingham

Ewe, over 2½ years old—

First prize : Andrew Hermiston, Evansford

Second do : W. and R. Forsyth, Hamilton

Third do : A. E. Walter, Devon Farm, Hamilton—Tulip

Ewe, under 2½ years and over 1½ years old—

First prize : Andrew Hermiston, Evansford

Second do : W. and R. Forsyth, Hamilton

Third do : Leonard R. Carter, Clunes

Ewe (unshorn), not more than 15 months old—

First prize : A. E. Walter, Devon Farm, Hamilton—Jewel

Second do : W. and R. Forsyth, owchester Park, Hamilton

Third do : A. E. Walter, Hamilton—Nancy

GRAND CHAMPION PRIZES OF AUSTRALIA.

Lincoln Ram (any age)

Thomas Bath

Lincoln Ewe (any age)—

Andrew Hermiston

SECTION XXII.—LEICESTERS.

Ram, over 2½ years old—

First prize: Hon. W. M'Culloch, Colac—Lord Polwarth
(imp.)

Second do : Leonard R. Carter, Clunes—

Third do : John C. Cochrane, Aitkenside, Ceres—Border
King

Ram, under 2½ years and over 1½ years old—

First prize : Andrew Hermiston, Evansford —

Second do : Leonard R. Carter, Clunes —

Third do : William Jeffrey, Glencairn, Coimadai

Ram (unshorn), not more than 15 months old

First prize : John C. Cochrane, Ceres—Earl of Hopetoun

Second do : Leonard R. Carter, Clunes

Third do : Andrew Hermiston, Evansford

Ewe (any age), with lamb at foot—

First prize : Leonard R. Carter, Clunes

Second do : Leonard R. Carter, Clunes

Third do : Hon. Sir W. J. Clarke, Lancefield Junction—
Border Leicester

Ewe, over 2½ years old—

First prize : William Jeffrey, Coimadai

Second do : Andrew Hermiston, Evansford

Third do : Leonard R. Carter, Clunes

Ewe, under 2½ years and over 1½ years old—

First prize : Andrew Hermiston, Evansford

Second do : William Jeffrey, Coimadai

Third do : Leonard R. Carter, Clunes

Ewe (unshorn), not more than 15 months old—

First prize : Andrew Hermiston, Evansford

Second do : John C. Cochrane, Ceres

Third do : George Hogarth, "Balburn," Breadalbane, Tasmania

GRAND CHAMPION PRIZE OF AUSTRALIA.

Leicester Ram (any age)—

Hon. W. M'Culloch—Lord Polwarth

Leicester Ewe (any age)—

Leonard R. Carter

SECTION XXIII.—SOUTHDOWNS.

Ram, over 12 months old—

First prize : Frederick Peppin, East St. Kilda—Hawkridge

Second do : W. G. Hogarth, Kirkdale Lodge, Evandale

Third do : Bright and Howe, Corop

Ewe, over 12 months old—

First prize : Frederick Peppin, East St. Kilda

Second do : Bright and Howe, Corop

Third do : Bright and Howe, Corop

SECTION XXIV.—HAMPSHIRE DOWNS.

Ram, over 12 months old—

First prize : Hon. W. M'Culloch, Colac

Second do : Hon. W. M'Culloch, Colac

Ewe, over 12 months old—

First prize : Hon. W. M'Culloch, Colac

Second do : Hon. W. M'Culloch, Colac

SECTION XXV.—SHROPSHIRE DOWNS.

Ram, over 12 months old—

First prize : Henry Beattie, Diggers' Rest

Ewe, over 12 months old—

First prize : Henry Beattie, Diggers' Rest—(Imp.)

Second do : Henry Beattie, Diggers' Rest—(Imp.)

SECTION XXVI.—FAT SHEEP.

GRASS FED.

Pen of Fat Long wool Wethers (not less than 5)—

First prize : Stuart Murray, Wool Wool, Colac

Second do : A. S. Chirnside Koort Koortnong, Camperdown

Third do : A. S. Chirnside, Camperdown

Pen of Fat Long-wool Ewes (not less than 5)—

First prize : Stuart Murray, Colac

Second do : James Boyd, Pomborneit

Pen of Fat Lambs, any breed (not less than 5)—

First prize : John Maltzahn, Merry Creek, Campbellfield

Second do : John Maltzahn, Campbellfield

Third do : Bright and Howe, Corop

SECTION XXVII.—SWINE.

BERKSHIRES.

Boar, over 12 months old—

First prize : William Jefferey, Coimadai—Lord Elcho

Second do : W. Woodmason, Malvern—Young Berkley

Third do : John Cock, Broadmeadows—Earl of Spring Bank

Boar, under 12 months old—

First prize : W. and R. Forsyth, Rowchester Park, Hamilton

Second do : H. G. Minnis, Melton—Chiverton King

Third do : H. Lane, Gower-street, South Preston—Duke of Gower

Sow, over 12 months old (suckling her own litter, of not less than 6 pigs not more than 8 weeks old)—

First prize : A. Graham, Bolinda

Second do : W. Woodmason, Malvern—Duchess

Third do : H. Lane, Garwell, Preston—Daisy 3rd

Sow, over 12 months old—

First prize : R. Carter, Scale Park, Clunes

Second do : John Reddan, Bulla—Lady Hamilton

Third do : John Love, Tullamarine—Lady Chiverton 1st

Sow, under 12 months old—

First prize : Hon. J. H. Angas, Angaston, S.A.—Lady Barrett 15th

Second do : Hon. J. H. Angas, Angaston, S.A.—Spot 14th

Third do : Hon. J. H. Angas, Angaston, S.A.—Lady Severn 36th

BLACK BREEDS, INCLUDING ESSEX, SUFFOLK, &c.

Boar, under 12 months old—

Second prize : A. Crichton, Gembrook—Nugget

Sow, over 12 months old—

First prize : A. Crichton, Gembrook—Bess

Pen of Six Bacon Pigs, any breed—

First prize : John Spriggs, Devenish

Pen of Six Pork Pigs, any breed—

First prize : John Spriggs, Devenish

GRAND CHAMPION PRIZES OF AUSTRALIA.

Boar (any age)—

William Jeffrey—Lord. Elcho

Sow (any age)—

Leonard R. Carter

SECTION XXVIII.—POULTRY.

Brahma (dark pencilled), old—

First prize : Charles Fox, Eastern Market, Melbourne

Second do : D. C. Morpeth, Filson-street, Ascot Vale

Third do : D. C. Morpeth, Filson-street, Ascot Vale

Brahma (dark pencilled), young—

First prize : Charles Fox, Eastern Market

Second do : Charles Fox, Eastern Market

Third do : John W. Clarke, Tivoli Place, Punt Hill, South Yarra

Brahma (light pencilled), old—

First prize: William Anderson, Flemington Poultry Farm
 Second do: E. G. Dickins, Fitzroy-street, Geelong West
 Third do: Charles Fox, Eastern Market

Brahma (light pencilled), young—

First prize: William Anderson, Flemington Poultry Farm
 Second do: Charles Fox, Eastern Market
 Third do: Alexander Anderson, Poultry Farm. Lara

Cochin (buff and cinnamon), old—

First prize: Charles Fox, Eastern Market
 Second do: William T. Wright, Aberfeldie, Essendon
 Third do: John W. Clarke, South Yarra

Cochin (buff and cinnamon), young—

First prize: B. Hall, Wattle-tree-road, Malvern
 Second do: James Pirrie, Type-street, Richmond
 Third do: William Rogerson, 240 Holden-street, North Fitzroy

Cochin (white), old—

First prize: Thomas Whitelaw, 145 Anderley-street, West Melbourne
 Second do: William T. Wright, Essendon
 Third do: Robert Duff, Princes-street, Carlton

Cochin (white), young—

First prize:—James Langford, Federation-street, Ascot Vale
 Second do: Thomas Whitelaw, 145 Anderley-street, West Melbourne
 Third do: William T. Wright, Essendon

Cochin (Grouse or Partridge), old—

First prize: William T. Wright, Essendon
 Second do: John Felmingham, Devon
 Third do: John Felmingham, Devon

Cochin (Grouse or Partridge), young—

First prize: William T. Wright, Essendon
 Second do: John W. Clarke, South Yarra
 Third do: John Felmingham, Devon

Cochin (black), old—

First prize: William T. Wright, Essendon
 Second do: J. Maude, Waverley-road, Oakleigh

Cochin (black), young—

First prize: William T. Wright, Essendon
 Second do: J. Maude, Oakleigh

Game (black red), old—

First prize : William Anderson, Flemington Poultry Farm
 Second do : Charles Eox, Eastern Market

Game (black red) young—

First prize : Albert Elliott, Hodge's Brewery, Geelong
 Second do : Charles Fox, Eastern Market
 Third do : Albert Elliott, Geelong

Game (brown red), young—

First prize : William Rogerson, 240 Holden-street, Fitzroy

Game (Duckwings), young—

First prize : Charles Fox, Eastern Market
 Second do : Charles Fox, Eastern Market

Game (Duckwings), old—

First prize : Charles Fox, Eastern Market
 Second do : Charles Fox, Eastern Market

Game (red piles), old—

First prize : William Anderson, Flemington Poultry Farm

Game (red piles), young—

First prize : William Anderson, Flemington Poultry Farm

Game (white) any age—

First prize : James Sleeth, Straker-street, Port Melbourne
 Second do : James Sleeth, Port Melbourne

Malay, old—

First prize : Woodhouse and Fitts, 245 George-street, Fitzroy
 Second do : Walter Aitkin, Washington-street, Essendon
 Third do : J. L. Swan, Essendon

Malay, young—

First prize : Walter Aitkin, Essendon
 Second do : J. L. Swan, Essendon

Dorking (colored), old—

First prize : W. G. Whicker, Diamond Creek
 Second do : E. G. Dickins, Fitzroy-street, Geelong West
 Third do : G. Harvey, Mitchell-street, Northcote

Dorking (colored) young—

First prize : W. G. Whicker, Diamond Creek
 Second do : G. Harvey, Mitchell-street, Northcote

Dorking (silver greys) old—

First prize : Frank M. Vicary, Charles-street, Ascot Vale
 Second do : W. J. Whicker, Diamond Creek
 Third do : John Felmingham, Devon

Dorking (silver greys) young—

First prize : E. J. Dickins, Geelong West
 Second do : A. Clark, Bon Accord, Poultry Farm, Fawkner
 Third do : Frank M. Vicary, Charles-street, Ascot Vale

Spanish, old—

First prize : Charles Fox, Eastern Market
 Second do : John Johnston, Tunbridge-street, Flemington
 Third do : John Johnston, Flemington

Spanish, young—

Second prize : W. G. Whicker, Diamond Creek

Andalusian, any age—

First prize : F. G. Edmonson, Woodlands-street, Essendon
 Second do : Thomas Cross, Hotham-street, Footscray
 Third do : Alan Jacques, Balwyn-road, Balwyn

Minorca, any age—

First prize : H. Greaves, Heidelberg
 Second do : H. Greaves, Heidelberg
 Third do : Charles Fox, Eastern Market

Leghorn (white), any age—

First prize : W. J. Whicker, Diamond Creek
 Second do : John Felmingham, Devon (young)
 Third do : Alexander Anderson, Poultry Farm, Lara

Leghorn (brown), any age—

First prize : Alexander Anderson, Poultry Farm, Lara
 Second do : John Branch, Lara
 Third do : E. J. Dickins, Geelong West

Houdan, old—

First prize : E. J. Dickins, Geelong West
 Second do : Charles Fox, Eastern Market

Houdan, young—

First prize : Alexander Clark, Fawkner
 Second do : E. G. Dickens, Geelong West
 Third do : G. Harvey, Mitchell-street, Northcote

Plymouth Rock, old—

- First prize : W. J. Whicker, Diamond Creek
 Second do : John W. Clarke, South Yarra
 Third do : The Aylesbury Milk Farm Co., Pakenham

Plymouth Rock, young—

- First prize : H. Huntington Peck, Pascoe Vale
 Second do : Alexander Anderson, Lara
 Third do : Charles Fox, Eastern Market

Wyandotts, any age—

- First prize : W. J. Whicker, Diamond Creek
 Second do : F. G. Edmondson, Woodlands-street, Essendon
 Third do : F. G. Edmondson, Essendon

Langshans, any age—

- First prize : J. Maude, Waverley-road, Oakleigh
 Second do : F. G. Edmondson, Essendon
 Third do : F. G. Edmondson, Essendon

Hamburgh (silver spangled) any age—

- First prize : D. C. Morpeth, Ascot Vale
 Second do : W. J. Whicker, Diamond Creek
 Third do : R. Saunders, Willow-street, Essendon

Hamburgh (golden spangled), any age—

- First prize : S. S. Blair, Whitby-street, W. Brunswick

Hamburgh (silver pencilled), any age—

- First prize : S. T. Maxwell, Melbourne road, Newport
 Second do : W. H. Jenkin, Glenlyon road, Brunswick

Hamburgh (golden pencilled), any age—

- First prize : S. T. Maxwell, Newport
 Second do : Colin Junner, Moor-street, Footscray
 Third do : Alexander Anderson, Lara

Hamburgh (black), any age—

- First prize : T. G. Hone, Springfield Road, Box Hill
 Second prize : T. J. Hone, Box Hill
 Third do : James R. Clarke, Punt Hill, South Yarra

Polish (black with white crest), any age—

- First prize : William Rogerson, 240 Holden-street, North Fitzroy

Polish (silver spangled), any age—

- First prize : J. Maude, Oakleigh

Polish (golden spangled), any age—

- First prize : Alexander Clark, Fawkner
 Second do : Alexander Clark, Fawkner
 Third do : Miss S. Brown, South-street, Ascot Vale

Bantam (black red and duckwings), any age—

- First prize : William McKay, Meat Preserving Works,
 Flemington
 Second do : William McKay, Flemington
 Third do : Albert Elliott, Geelong

Bantam (any other colour), any age—

- First prize : Alexander Anderson, Lara
 Second do : W. S. Munro, Park House, Middle Brighton
 Third do : William Rogerson, North Fitzroy

Any other Pure Bred or Variety, any age—

- First prize : P. A. Weston & Co., 258 Elizabeth-street

Turkeys, any age—

- First prize : William Anderson, Flemington Poultry Farm
 Second do : S. S. Blair, Whitby-street, West Brunswick

Guinea Fowl, any age—

- First prize : William Rogerson, North Fitzroy

Gander and Goose, any age—

- First prize : Mrs. M. Purdy, Footscray
 Second do : S. T. Maxwell, Melbourne-road, Newport
 Third do : S. T. Maxwell, Newport

Drake and Duck (Aylesbury), any age—

- First prize : P. Briggs, Chesterville-road, South Brighton
 Second do : P. Briggs, South Brighton
 Third do : W. J. Whicker, Diamond Creek

Drake and Duck (Rouen), any age—

- First prize : Frederick Peppin, East St. Kilda
 Second do : William Rogerson, North Fitzroy
 Third do : G. Harvey, Mitchell-street, Northcote

Drake and Duck (Pekin) any age—

- First prize : William Anderson, Flemington Poultry Farm
 Second do : P. Briggs, South Brighton
 Third do : P. Briggs, South Brighton

Drake and Duck (any other variety) any age—

- First prize : G. Harvey, Mitchell-street, Northcote
 Second do : Alexander Anderson, Lara

SECTION XXIX.—DOGS.

Mastiff Dog—

First prize : John H. Connell, Jolimont-road, Jolimont—
Taunton II.

Second do : Mrs. John H. Connell, Jolimont-road, Jolimont
—Bayard

Commended : Frank Connell, Albert Park—Faust

Mastiff Bitch—

First prize : John H. Connell, Jolimont—Zoe 2nd.

Second do : Thomas McGovrea, Willow-street, East St
Kilda—C. Zarina

Mastiff Puppy (under 12 months), Dog or Bitch—

Second do : J. M. Anderson, Melbourne-road, North Williams-
town

Newfoundland Dog—

First prize : John Connor, 191 Punt-road, Richmond—
Warrior

Newfoundland Bitch—

First prize : John Connor, Richmond—Rose

St. Bernard Dog—

First prize : Charles Ridley, Elizabeth-street, North Richmond,
—Roderick Dhu (imp.)

St. Bernard Bitch—

First prize : Captain J. R. Clark, Market-street—Lady Una
4th

Second do : Charles Ridley, 127 Elizabeth-street, North Rich-
mond—Lady Chester

Very highly commended : Edward J. A. Akerman, 174 Richard-
son-street, Albert Park—Blythe Lass

Commended : O. H. Macmeikan, Seaford, Altona Bay—Rose

St. Bernard Puppy (under 12 months), Dog or Bitch—

First prize : A. E. Scott, Buckley street, Footscray—Lady 5th

Second do : George Gladwin, Racecourse-road, Newmarket—
Nell

Greyhound Bitch—

First prize : C. Jenkin Coles, 666 Bourke-street—Choppin-
nette (446)

Second do : A. Kellet, 9 Docker-street, Richmond—Killarney

Very highly commended : Alexander Ellis, 422 George-street,
Fitzroy—Lady Loch

Deerhound—

First prize : I. Gidney, Stradford Villa, Hotham Hill—Sassin
 Second do : G. H. Macmeikan, Altona Bay—Ruby

Pointer Dog—

First prize : W. J. Smyth, Pyramid Hill—Daylesford Shot

Setter (English), Dog—

First prize : J. C. Stevenson, Albany-road, Toorak—Mentor
 Second do : J. L. Swan, Essendon—Disco

Setter (English), Bitch—

First prize : J. L. Swan, Essendon—Rose
 Second do : B. S. Muir, Raleigh-street, Essendon—Dora

Setter (Gordon), Dog—

First prize : W. Haddon, Heronwood, Anderson-street, South Yarra—Heronwood Rake

Setter (Gordon), Bitch—

First prize : W. Haddon, Anderson-street, South Yarra—Heronwood June
 Second do : W. Haddon, Anderson-street, South Yarra—Heronwood Blanche
 Highly commended : D. O. Morpeth, Ascot Vale—Meg (841)

Setter (Irish) Dog—

First prize : M. Conway, Victoria Hotel, Sandhurst—Young Garry

Retriever Dog or Bitch—

First prize : J. Maude, Oakleigh—Lucifer (imp.)

Bull Dog—

First prize : Edward Dombain, Victoria-road, Hawthorn
 Second do : J. T. E. Harrap, Brunswick-street, N. Fitzroy—Jubilee Plunger (2583)

Bull Bitch—

First prize : J. T. E. Harrap, N. Fitzroy—Jubilee (2601)
 Second do : J. T. E. Harrap, N. Fitzroy—Jubilee Mercy (2600)

Spaniel (over 30 lb.) Dog—

First prize : George R. King, Caroline-street, South Yarra—Staley Bran
 Second do : A. Henshall, Bank-street, Ascot Vale—Bob
 Very highly commended : Thomas Wylie, 144 Bank-street east, South Melbourne—Sancho

Spaniel (over 30 lb.) Bitch—

Second prize : D. C. Morpeth, Ascot Vale

Spaniel (under 30 lb.) Dog—

First prize : Edward Warriner, Lysterfield—Osseo

Second do : John W. Clarke, South Yarra—Tivoli Shot

Spaniel (under 30 lb.) Bitch—

First prize : S. H. and E. A. Whittaker, St. James' Park
Malvern—Hobart Lady Danesbury

Second do : H. Ellis, Grand View Terrace, Moonee Ponds—
Princess Royal

Collie (rough) Dog—

First prize : Harry P. Henty, William-street—Scottie

Second do : William T. Wright, Aberfeldie, Essendon—
Aberfeldie Laird

Highly commended : S. Grimwood, St. Kilda—Fritz

Highly commended : R. Stevenson, Alpin Grove, Hawthorn
—Charlie

Collie (rough) Bitch—

First prize : W. T. Wright, Aberfeldie, Essendon—Aber
feldie Lassie

Second do : E. Carmichael, Molesworth-street, Auburn—
Lothian Ross

Very highly commended : E. Carmichael, Molesworth-street,
Auburn—Lothian Lassie

Collie (smooth) Dog—

First prize : Alan Jacques, Balwyn-road, Balwyn—Fido

Collie (smooth) Bitch—

First prize : Joseph Davidson, 16 Reed-street, Albert Park
—Paradise Lassie (1610)

Second do : James Parsons, Dover-street, Williamstown—
Hughie

Fox Terrier (open class) Dog—

First prize : W. Beilby, Darling-street, South Yarra—Resist

Second do : W. Beilby, South Yarra—Arius

Very highly commended : F. W. Haddon, Anderson-street,
South Yarra—Heronwood Bob

Fox Terrier (open class) Bitch—

First prize : W. Beilby, Darling-street, South Yarra—Mel-
bourne Vixen

Second do : W. Beilby, Darling-street, South Yarra—Hog-
naston Daisy

Very highly commended : F. W. Haddon, Anderson-street,
South Yarra—Heronwood Mab

Fox Terrier (colonial) Dog—

- First prize : T. Brown, Albury, c/o J. W. Siddeley—Melbourne Bluelight
 Second do : F. W. Haddon, Anderson-street, South Yarra—Heronwood Bob

Fox Terrier (colonial) Bitch—

- First prize : J. W. Siddeley, "Shelford," St. Kilda—Shelford Opal
 Second do : F. W. Haddon, Anderson-street, South Yarra—Heronwood Mab
 Very highly commended—H. M. Curtis, John-street Fitzroy—Biddy

Fox Terrier (colonial) Dog Pup, under 12 months old at date of entry—

- First prize : J. W. Siddeley, St. Kilda—Shelford Bluefire
 First prize : W. Beilby, Darling-street, South Yarra—Melbourne Match
 Very highly commended—A. Holcroft, 136 Punt-road, South Yarra—Terrible Dick

Fox Terrier (colonial) Bitch Pup, under 12 months old at date of entry.

- First prize : J. W. Siddeley, St. Kilda—Shelford Topaz
 Second do : W. Beilby, Darling-street, South Yarra—Melbourne Malice

Dachshund Dog—

- First prize : John Detmold, Balaclava —Sour Krout
 Second do : J. L. Purves, Q.C.—Arizona

Dachshund Bitch—

- First prize : John Detmold, Balaclava—Herzen Frende

Terrier (rough coated blue) 7 lb or over—

- First prize : Thomas Cross, 104 Newry-street, North Fitzroy—Northumberland Laddie
 Second do : Robert Lowrie, Batman-street, North Fitzroy—Northumberland Noddie

Terrier (rough coated sandy), 7 lb. or over—

- First prize : J. Browne, 23 Bloombury-street, Abbotsford—Bloombury Jack

Terrier (Irish) Dog or Bitch—

- First prize : John E. Dynon, 406 and 408 Lonsdale-street—Donnybrook
 Second do : John E. Dynon, 406 and 408 Lonsdale-street—Barney 5th

Terrier (bull) Dog—

First prize : F. Marsh, Education Department, Melbourne—
Crib

Second do : F. Marsh, Melbourne—Donald Dinnie

Terrier (bull) Bitch—

First prize : J. C. Valentine, care J. Maude, Oakleigh—
Windermere Countess

Second do : F. Marsh, Melbourne—Nida

Terrier (toy), under 7 lbs—

First prize : Mrs. Crocker, Filson-street, Ascot Vale—Nippy

Pug Dog—

First prize : George F. Webb, Chapel-street, Prahran—
South Suburban Baron 2nd

Pug Bitch—

First prize : George F. Webb, Chapel-street, Prahran—South
Suburban Ruby

EXTRAS.

First prize : S. D. Merriman, 77 Cecil-street, South Melbourne
—Pomeranian Bitch

Second do : J. Hamilton, Blair-street, Brunswick

Highly commended : Thomas Foley, Kilmore East—Floss

Highly commended : Thomas Foley, Kilmore East—Countess

SECTION XXX.—CARRIAGES, BUGGIES, SPRING
CARTS, DRAYS, &c.

Landau—

First prize : G. F. Pickles and Sons, 340 Latrobe-street

Second do : Daniel White and Co. Limited, St. Kilda-road

Third do : Daniel White and Co. Limited, St. Kilda-road

Brougham—

First prize : G. F. Pickles and Sons, 340 Latrobe-street

Second do : G. F. Pickles and Sons, 340 Latrobe-street

Barouche—

First prize : Daniel White and Co. Limited, St. Kilda-road

Mail Phaeton—

First prize : G. F. Pickles and Sons, 340 Latrobe-street

Second do : G. F. Pickles and Sons, 340 Latrobe-street

Victoria Phaeton—

First prize : Daniel White and Co. Limited, St. Kilda-road
 Second do : J. H. Burton and Sons, 48 and 50 Latrobe-street
 Highly commended : Burton and Knox, Hawthorn

Pony Phaeton (with Hood)—

First prize : G. F. Pickles and Sons, 340 Latrobe-street
 Second do : Waring Brothers, 490 Elizabeth-street

Pony Phaeton (without Hood)—

First prize : Burton and Knox, Hawthorn
 Second do : G. F. Pickles and Sons, Latrobe-street
 Highly commended : Waring Brothers, 490 Elizabeth-street
 Highly commended : J. H. Burton and Sons, 48 Latrobe-street

Jump Seat Buggy (with Hood)—

First prize : Daniel White and Co., Limited, St. Kilda-road
 Second do : J. H. Burton and Sons, Latrobe-street

Jump Seat Buggy (without Hood)—

First prize : G. F. Pickles and Sons, 340 Latrobe-street
 Second do : Danyon Bros., Carlisle-street, St. Kilda

Goddard Buggy—

First prize : Daniel White and Co., Ltd., St. Kilda-road
 Second do : Hanna and Anderson, Union-road, Ascot Vale
 Highly commended—Burton and Knox, Hawthorn

Double Abbott's Buggy (with Hood)—

First prize : Daniel White and Co., Ltd. St. Kilda-road
 Second do : G. F. Pickles and Sons, 340 Latrobe-street

Double Abbott's Buggy (without Hood)—

First prize : G. F. Pickles and Sons, 340 Latrobe-street
 Second do : Burton and Knox, Hawthorn

Single Abbott's Buggy (with Hood)—

First prize : Broatch and Foy, Elizabeth-street
 Second do : Burton and Knox, Hawthorn

Single Abbott's Buggy (without Hood)—

First prize : Broatch and Foy, Elizabeth-street
 Second do : Hanna and Anderson, Union-road, Ascot Vale
 Highly commended—House Bros., Melville-street, Numurkah

Coal Box Buggy (with hood).—

First prize : G. F. Pickles and Sons, 340 Latrobe-street
 Second do : Daniel White and Co., Limited, St. Kilda Road

Coal Box Buggy (without hood).—

First prize : G. F. Pickles and Sons, 340 Latrobe-street

Timkin's Bugg (with hood).—

First prize : American Carriage Works, Victoria Parade

Second do : Burton and Knox, Hawthorn

Whitechapel Cart.—

First prize : Shannon and Fletcher, New-street, North Brighton

Waggonette (for private use).—

First prize : Daniel White and Co. Limited, St. Kilda Road.

Second do : G. F. Pickles and Sons, 340 Latrobe-street

Highly commended : Sandhurst Rolling Stock Co., Sandhurst

Waggonette (for hire).—

First prize : Wilson and Bolt, Federal Carriage Works Flemington

Second do : Wain Bros., Church-street, Richmond

Hansom Cab (for private use).—

First prize : G. F. Pickles and Sons, 340 Latrobe-street

Second do : Daniel Whyte and Co., Limited, St. Kilda Road

Hansom Cab (for hire).—

First prize : Daniel White and Co. Limited, St. Kilda Road

Second do : Wain Bros., Church-street Richmond

Express Waggon.—

First prize : Sandhurst Rolling Stock Company, Sandhurst

Second do : G. F. Pickles, and Sons, 340 Latrobe street

Farmer's Waiggonette—

First prize : George Black and Son, York-street, South Melbourne

Second do : Broatch and Foy, Elizabeth-street

Spring Cart (for Farmer's use)—

First prize : Rooke and Scott, Riversdale-road, Camberwell

Second do : George Black and Son, York-street, South Melbourne

Lorry—

First prize : Cameron and Leydon, 54 Iffla-street, South Melbourne

Second do : Purkiss and Coates, Macauley-road Kensington

Farm Waggon—

First prize : Kelly and Preston, Crewick-road, Ballarat
 Second do : Kelly and Preston, Creswick-road, Ballarat

Farm Dray—

First prize : J. and B. West, Essendon
 Second prize : Kelly and Preston, Creswick-road, Ballarat

Hay Dray—

First prize : Kelly and Preston, Creswick-road, Ballarat
 Second do : J. and B. West, Essendon

Tip Dray—

First prize : J. and B. West, Essendon
 Second do : George Parsons, Flemington

EXTRAS.

Highly commended: A. Stringer, High-street, St. Kilda,
 butcher's order cart
 Highly commended: J. H. Burton and Sons, 48 Latrobe-
 street, dog-cart phaeton
 Highly commended: American Carriage Works, Victoria
 Parade, racing sulky
 Commended: F. G. Pickles and Sons, 340 Latrobe-street,
 Windsor oneman waggon
 Commended: F. G. Pickles and Sons, 340 Latrobe-street,
 London buggy
 Commended: American Carriage Works, Victoria Parade,
 Whitechapel buggy
 Commended: American Carriage Works, Victoria Parade,
 piano box buggy
 Commended: Carlton, Cotterell and Co., 305 Smith-street,
 Fitzroy, ladies' C spring rustic
 Commended: Grant Bros., Port Melbourne, market gardener's
 waggon
 Commended: Grant Bros., Port Melbourne, fruit-grower's
 waggon

SECTION XXXI.—HARNESS AND SADDLERY.

Set of Pair Horse Carriage Harness—

First prize : D. Altson, Bourke-street, English
 Second do . D. Altson, Bourke-street, English
 Third do : D. Altson, Bourke-street, Colonial

Set of Double Buggy Harness—

First prize : D. Altson, Bourke-street, Colonial

Second do : D. Altson, Bourke-street, Colonial

Set of Single Buggy Harness—

First prize : D. Altson, Bourke-street, Colonial

Second do : D. Altson, Bourke-street, Colonial

Set of Waggonette Harness—

First prize : D. Altson, Bourke-street, Colonial

Second do : D. Altson, Bourke-street, Colonial

Set of Cart Harness—

First prize : D. Alston, Bourke-street, Colonial

Set of Plough Harness—

First prize : D. Altson, Bourke-street, Colonial

Gentleman's Saddle—

First prize : Kinnear and Sons, Euroa

Second do : D. Alston, Bourke-street, Colonial

Stock Saddle (for Station use)—

First prize : Kinnear and Sons, Euroa

Second do : D. Altson, Bourke-street, Colonial

Lady's Saddle—

First prize : D. Altson, Bourke-street, English

Second do : D. Altson, Bourke-street, English

Collection of Saddlery and Harness—

First prize : D. Altson, Bourke-street

Specially Commended for Excellence of Saddles : Daniel
Topp, 392 Bourke-street

SECTION XXXII.—FARM PRODUCE.

Wheat—

GRAND CHAMPION PRIZE OF AUSTRALIA.

William Lewis, Shepherd Flat, red straw

Second do : Roberts and Parry, Franklinford, purple straw

Third do : M. Bodey, Rupanyup

Oats, long—

GRAND CHAMPION PRIZE OF AUSTRALIA.

William Lewis, Brynmêl, Shepherd Flat
 Second do : Richard A. Colliver, The Grange, Lancefield,
 Tartarian

Oats, short—

GRAND CHAMPION PRIZE OF AUSTRALIA.

Roberts and Parry, Brynhyfryd Farm, Franklinfoord, Polish
 Second do : F. Levin, c/o A. Polson, Ararat
 Third do : William Lewis, Shepherd Flat

Barley, English—

GRAND CHAMPION PRIZE OF AUSTRALIA.

Richard A. Colliver, The Grange, Lancefield, Chevalier
 Second do : George G. Harcourt, Green Park, Devenish
 Third do : W. Strawhorn, Franklinfoord

Barley, Cape—

GRAND CHAMPION PRIZE OF AUSTRALIA.

F. Levin, c/o A. Polson, Ararat

GRAND CHAMPION PRIZE OF AUSTRALIA.

Peas, Field, white—

William Lewis, Brynmêl, Shepherd Flat

GRAND CHAMPION PRIZE OF AUSTRALIA.

Peas, Field, Dun or other variety—

Roberts and Parry, Brynhyfryd Farm, Franklinfoord, Dun
 Second do : William Lewis, Brynmêl, Shepherd Flat, Dun

GRAND CHAMPION PRIZE OF AUSTRALIA.

Collection of Grass Seeds—

William Lewis, Brynmêl, Shepherd Flat

GRAND CHAMPION PRIZE OF AUSTRALIA.

Hops—

Edmund Jeffery, Tasmania, c/o Bucknall and Ashton, 34
 Queen-street

Second do : Ormiston, c/o James Henty & Co., William-st,
 Third prize : C. Hoppner, c/o James Henty & Co., William-st.

GRAND CHAMPION PRIZE OF AUSTRALIA.

Potatoes, any variety—

Reidy Bros., Bungaree

Second prize : John Dunn, Bullingarook

Third do : John Morey, Cheltenham

Mangolds, long—

First prize : John Goldie, Clark Brae, Port Fairy

Second do : W. Woodmason, Malvern

Third do : John S. Morgan, Sambourne Farm, Thomastown

Mangolds, globe—

First prize : John Goldie, Clarke Brae, Port Fairy

Second do : D. G. Clark, Richmond Vale, Carrajung, South
Gippsland

Third do : J. F. Deppeler, Yinnar, Gippsland

Carrots, Field—

First prize : W. Woodmason, Malvern

Second do : J. F. Deppeler, Yinnar, Gippsland

Third do : J. F. Deppeler, Yinnar, Gippsland

*Turnips, Swede—*First prize : D. G. Clark, Richmond Vale, Carrajung, South
Gippsland

Second do : George Clark, Carrajung, South Gippsland

Third prize : Benjamin Jiggins, Drysdale

Cabbages, any variety—

First prize : John Morey, Cheltenham

Silage (sweet, 2 cwt.)—

First prize : Council of Agricultural Education, Cashel

Second do : John Benn, Coolart

Third do : John S. Morgan, Thomastown

Silage (sour, 2 cwt.)—

First prize : Council of Agricultural Education, Cashel

Second do : Frederick Peppin, East St. Kilda.

EXTRAS.

Highly commended : M. Landy, Briagalong, seedling potato

Highly commended : B. Rowbottom, Harcourt Parade, South
Richmond, colonial maltHighly commended : John Dunn, Bullingarook, potatoes,
kidneys, early

- Highly commended : John Dunn, Bullingarook, potatoes
pink eyes
- Highly commended : John Dunn, Bullingarook, potatoes,
Browns River
- Highly commended : William L. Lempriere Balaclava,
Jerusalem Artichokes
- Highly commended : R. G. Ely, Glenelg, Keilor, cactus,
rendered edible for stock, &c.

SECTION XXXIII—DAIRY PRODUCE.

Cheese (old)—

- First prize : Joseph Blain, Yallock Homestead, Gravoc
Second do : T. M. Powling, Framlingham
Third do : Thomas Hay, Cobden

Cheese (under 6 months old)—

- First prize : W. H. Clark, Garvoc
Second do : Thomas Hay, Cobden
Third do : Robert R. Ely, Neereman, Maldon

GRAND CHAMPION PRIZE OF AUSTRALIA.

Cheese—

Joseph Blain

Salt Butter, suitable for export, (lodged with the Secretary one month before the Show)—

- First prize : James Wilson, 628 Bourke-street, W.
Second do : Rosebrook Cheese and Butter Factory, Rosebrook,
Port Fairy
Third do : Mrs. Jane Wilson, 6 Murphy-street, South Yarra

GRAND CHAMPION PRIZE OF AUSTRALIA.

Salt Butter—

James Wilson

Box of Print or Roll Butter, not less than 25 lbs., in pounds or half-pounds—

The neatness of packing, and box best suited for a journey to market being taken into consideration.

- First prize : Roberts and Parry, Franklindford,
Second do : Stewart Bros., Stewarton, Newstead
Third do : C. Yeaman, Shadyside, Tennyson

Powdered Butter (5 lbs.), powdered with salt, as usually sent to market (without print or private mark)—

- First prize : William Lewis, Shepherd Flat
Second do : Roberts and Parry, Franklindford
Third do : C. Yeaman, Tennyson

Fresh Butter, without any salt, without print or private mark—

First prize : Roberts and Parry, Brynhyfyd Farm, Frank-
linford

Second do : Thomas Longmire, Werona

Third do : William Lewis, Shepherd Flat

Special Prize awarded to the best butter trophy—

Miss McInnes, 13 Trealand-street, West Melbourne

GRAND CHAMPION PRIZE OF AUSTRALIA,

Powdered or Fresh Butter—

Messrs. Roberts and Parry

Bacon—

First prize : J. C. Hutton, Belfast-road, Warrnambool

Second do : F. W. Gazzard, "Tooram," Allansford

Third do : Grimes and Co., Moreland-road, Brunswick

GRAND CHAMPION PRIZE OF AUSTRALIA.

Bacon—

J. C. Hutton, Warrnambool

Hams—

First prize : King, Smith and Kenihan, Bastings-street,
Northcote

Second do : King, Smith and Kenihan, Bastings-street,
Northcote

Third do : King, Smith and Kenihan, Bastings-street, North-
cote

GRAND CHAMPION PRIZE OF AUSTRALIA.

Hams—

King, Smith and Kenihan

EXTRAS.

Special mention : Council of Agricultural Education—Lon-
gerenong Salt Butter

" " Pail Powdered Butter

" " Kegs or Tubs Butter

Hon. mention : C. Ziebell and Son, Craigieburn, Sausages,
Lard, &c. (curers' goods)

" " R. G. Wilson and Co., Swanston-street,
Stilton cheese

SECTION XXXIV.—WINES.

Red Wine, light dry, two years old or over—

First prize: Robert H. Caldwell, 495 Collins-street W.

Second do: Nicholas Fortune, Miramichi Vineyard, Rutherglen

Third do: Hans W. H. Irvine, Great Western Vineyard, Great Western

Red Wine, full bodied, sweet, two years old or over—

First prize: R. G. Wilson and Co., Swanston-street—
Shiraz No. 7

Second do: R. G. Wilson and Co., Swanston-street—
Constantia

Third do: Hans W. H. Irvine, Great Western

White Wine, light dry, two years old or over—

First prize: Hans H. W. Irvine, Great Western

Second do: H. M. Gooch and Co., 485 Collins-street W.

Third do: Frederick Grosse, 465 Collins-street W.—Chablis

White Wine, full bodied, sweet, two years old or over—

First prize: G. S. Smith and Sons, 503 Bourke-street—
Pedro Ximenes

Second do: H. M. Gooch and Co., 485 Collins-street W.

Third do: Oakley Adams and Co., Imperial Chambers, Bank
Place

Muscat Wine, 2 years old or over—

First prize: Oakley, Adams and Co., Imperial Chambers—
Muscat

Second do: Henry Schluter, Rutherglen

Third do: H. M. Gooch and Co., 485 Collins-street, W.

Red Wine, light dry, 1889-90—

First prize: Frederick Grosse, 465 Collins-street, W.—
Carbinet

Second do: Nicholas Fortune, Rutherglen

Third do: Hans W. H. Irvine, Great Western

Red Wine, full bodied, sweet, 1889-90—

First prize: Frederick Grosse, 465 Collins-street, W.—Her-
mitage

Second do: Henry Schluter, Rutherglen, 1889-90

Third do: Hans W. H. Irvine, Great Western

White Wine, light dry, 1889-90—

- First prize : Hans W. H. Irvine, Great Western
 Second do : Hans W. H. Irvine, Great Western
 Third do : Nicholas Fortune, Rutherglen

White Wine, full bodied, sweet, 1889-90—

- First prize : Hans W. H. Irvine, Great Western
 Second do : Hans W. H. Irvine, Great Western
 Third do : John Trotman, Kurraca, Wedderburn—Sweet
 Pineau, 1889

Muscat Wine, 1889-90—

- First prize : Hans W. H. Irvine, Great Western
 Second do : G. S. Smith and Sons, 503 Bourke-street West
 Third do : Henry Schulter, Rutherglen, 1889-90

Dry Wine, six samples—

GRAND CHAMPION PRIZE OF AUSTRALIA.

Hans W. H. Irvine

Sweet Wine, six samples—

GRAND CHAMPION PRIZE OF AUSTRALIA.

H. M. Gooch & Co.

SECTION XXXV.—PRESERVES, SPECIAL PRODUCTS,
 &c. (COLONIAL).

Collection of Oilman's Stores—

- First prize : Mrs. G. W. Robinson, Hillsley, Narre Warren

Collection of Preserved Fruits, Jams, Jellies, Pickles, &c. (home made)—

- First prize : Mrs. Coy, High-street, Rushworth
 Second do : Mrs. G. W. Robinson, Narre Warren

Collection of Dried Fruits—

- First prize : Mrs. Coy, High-street, Rushworth
 Second do : Council of Agricultural Education, Cashel
 Third do : Mrs. G. W. Robinson, Hillsley, Narre Warren

Olive Oil.—

- First prize : Council of Agricultural Education, Cashel

New Farm Product (worthy of cultivation).—

First prize : J. F. Deppeler, Yinnar, Gippsland—American broom corn

Second do : Council of Education, Cashel

EXTRAS.

Highly commended : Joseph Marshall, 264 Wellington-st ree Collingwood—Tomato Sauce

Highly commended : Mrs. Coy, High-street, Rushworth—Collection of home-made candied fruits

Highly commended : C. Devers, High-street, Northcote—Hams, bacons, sausages, &c. (collection)

SECTION XXXVI.—MANURES.

Collection of Artificial Manures—

First prize : Cuming, Smith and Co., 65 William-street, Melbourne

Second do : The Victorian Farmers' Loan and Agency Co. Limited

SHEEP-SHEARING MACHINE CONTEST.

Sheep-shearing Machine (tried on grounds).—

First prize : F. W. Wolseley, Melbourne Club—Wolseley's



Donations to Prize Fund, 1890.

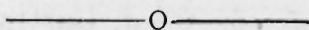
The Council, anxious to show their appreciation of the continued liberality of donors to the prize fund, and in some measure to recognise the same, have resolved to present donors of less than £3 3s. with a ticket admitting themselves and two ladies to the Show Grounds; donors of £3 3s. with an invitation to luncheon on the official opening day; donors of £5 5s. with a ticket admitting themselves to the yards, stand, and luncheon on the official opening day; and donors of £10 10s. and upwards with a ticket admitting them with two ladies to the ground and grand stand during the Show, and themselves to the luncheon on the official opening day

	£	s.	d.		£	s.	d.
Robert Clark (per) ...	42	0	0	Wilson & MacKinnon ...	10	10	0
Sir W. J. Clarke, Bart....	26	5	0	G. Ramsden ...	10	10	0
C. H. James ...	21	0	0	Dalgety & Co. ...	10	10	0
Dr. Plummer ...	10	10	0	Hon. W. McCulloch ...	10	10	0
Hon. T. Branton...	10	10	0	Robert Simson ...	10	0	0
David Mitchell ...	10	10	0	S. G. Staughton ...	10	0	0
. R. McGregor ...	10	10	0	Cuming, Smith & Co. ...	10	0	0
Frederick Peppin ...	10	10	0	Messrs. Miller ...	10	0	0
b Smith ...	10	10	0	J. M. Peck & Son ...	5	5	0
J. H. Finlay ...	10	10	0	Melbourne Tramway Co.	5	5	0
W. Wragge ...	10	10	0	R. Harper & Co. ...	5	5	0
John Blyth & Co., ...	10	10	0	W. Peterson & Co. ...	5	5	0
Trenchard & Co. ...	10	10	0	Gilmour & MacGibbon...	5	5	0
Hon. J. H. Angus (S.A.)	10	10	0	Arthur & Co. ...	5	5	0
Australian Mortgage and				L. Stevensons & Sons ...	5	5	0
Agency Co. ...	10	10	0	Robert Reid & Co. ...	5	5	0
Australian MortgageLand				Banks and Co. ...	5	5	0
and Finance Co. ...	10	10	0	Beath Scheiss & Co. ...	5	5	0
Union Mortgage and				Montgomery's Brewery			
Agency Co. ...	10	10	0	Co. ...	5	5	0
The Commercial Bank...	10	10	0	London Chartered Bank	5	5	0
Goldsbrough, Mort & Co.	10	10	0	City of Melbourne Bank	5	5	0
McLen Bros. & Rigg ...	10	10	0	Union Bank ...	5	5	0
James McEwan & Co. ...	10	10	0	Land Mortgage Bank ...	5	5	0
John Sanderson & Co. ...	10	10	0	Bank of Australasia ..	5	5	0
New Zealand Loan& Mer-				The National Bank ...	5	5	0
cantile Agency Co.,Ltd.	10	10	0	The Bank of Victoria ...	5	5	0
Grice, Sumner & Co. ...	10	10	0	English, Scottish, and			
Mars Buckley ...	10	10	0	Australian Chartered			
T. Edols ...	10	10	0	Bank ...	5	5	0
McCracken's City Brew-				The Standard Bank of			
ery Co....	10	10	0	Australia ...	5	5	0

	£	s.	d.		£	s.	d.
Cozens & Harvey ...	5	5	0	J. Kitchen & Sons ...	5	5	0
Fisken, Valentine & Co.	5	5	0	James Service & Co. ...	5	5	0
Frank Madden ...	5	5	0	Joseph Clarke ...	5	5	0
C. J. & T. Ham ...	5	5	0	D. Altson ...	5	5	0
Dougharty & Parker ...	5	5	0	Craig, Williamson and			
Victorian Farmers' Loan				Thomas ...	5	5	0
& Agency Co. ...	5	5	0	J. Bartram & Son ...	5	5	0
Joshua Bros. ...	5	5	0	W. Hay ...	5	0	0
Connell, Hogarth & Co.	5	5	0	Dennys, Lascelles & Co.	5	0	0
Tankard Malting Co. ...	5	5	0	C. M. Lloyd ...	5	0	0
Colonial Sugar Refining				James Garton ...	3	3	0
Co. ...	5	5	0	Shevill & Co. ...	3	3	0
A. McGregor ...	5	5	0	W. Willis & Co. ...	3	3	0
John Robertson ...	5	5	0	A. Mair & Co. ...	3	3	0
N. Billing & Son ...	5	5	0	M. Larkin ...	3	3	0
G. Webster & Co. ...	5	5	0	Andrew King & Co. ...	3	3	0
E. Rowlands ...	5	5	0	John Cookson ...	3	3	0
Paterson, Laing & Bruce	5	5	0	Lynch, McDonald & Co.	3	3	0
Brahe & Gair ...	5	5	0	Peyton, Dowling & Co. ...	3	3	0
Huddart, Parker & Co.	5	5	0	A Donor ...	3	3	0
Andrew Agnew ...	5	5	0	D. Leslie ...	3	3	0
Sargood, Butler & Nichol	5	5	0	W. Detmold ...	3	3	0
The Mutual Store ...	5	5	0	J. J. Miller ...	3	3	0
Peter Johns ...	5	5	0	R. G. Wilson ...	3	3	0
Taylor, Buckland & Gates	5	5	0	Smith MacDonal	3	3	0
C. D. Straker ...	5	5	0	J. F. Hamilton ...	3	3	0
Hon. Dr. Beaney ...	5	5	0	Law, Somner & Co. ...	3	3	0
W. Adamson (Brunning				Melville, Mullen & Slade	3	3	0
& Woodmason) ...	5	5	0	Chambers & Seymour ...	2	2	0
A. McEdward ...	5	5	0	George Steadman ...	2	2	0
Robertson & Moffat ...	5	5	0	Butler & Moss ...	1	1	0
R. Gamlin ...	5	5	0	W. Hudson & Co. ...	1	1	0
D. Syme & Co. ...	5	5	0	Hon. S. Fraser ..	1	1	0
George Robertson ...	5	5	0	G. L. Allan ...	1	1	0
Morris & Meeks ...	5	5	0				
W. Taylor ...	5	5	0				
				Total ...	£813	2	0



REPORT ON SYDNEY SHOW.



To the President and Council of the Royal Agricultural Society of Victoria.

Gentlemen,—I have the honor to report that I visited the exhibition of the Agricultural Society of New South Wales, which was held in Sydney from the 2nd to the 8th of this month. The arrangement of the yards has not been materially altered, nor have any new buildings been erected since the Centennial Exhibition, so that in this connection I have nothing to add to my last report. The show as a whole was not equal to previous exhibitions of the Society which I have visited, and was not regarded as a success even by those most intimately connected with its management. The thoroughbred stallions made a fair display, but not at all equal to what has been seen in the Sydney yards, and the mares and young stock were not largely represented. It may be well to mention that the absence of stock from the studs of the late Mr. Andrew Town, who used to exhibit largely in all classes of horse stock, in itself made a great difference in the number of exhibits. Some grand specimens of coaching stallions were shown, as well as a number of high-class roadster and trotting stallions, all in fine condition; but the young stock from these horses was disappointing. The draught horse stock were poorly represented. Four-in-hand teams, carriage and buggy horses, hackneys and ladies' hackneys, were of a very high class, and made an excellent display, being one of the best features of the show; and the parades of these light horses on the Society's beautiful couch-grass-clad oval was a treat to see. It was noticeable that the prize-takers, which showed great quality, and were not wanting in size, were by thoroughbred sires, and, in many instances, were nearly or quite thoroughbred themselves. The hunters, which did not muster strongly, included, however, some good horses. A new feature in the hunters' trial was a water jump, consisting of a low paling fence swung into the wings, so as to tip over if struck, with a deep trench 15 feet wide, full of water on the landing side; but it proved such a formidable obstacle that after bringing several horses and riders very ludicrously to grief on the first day, it was left out in the trials on the second day. There was a fine show of pony stallions and ponies, all brought out in grand condition, and the special building for them (to which I

alluded in a previous report) seemed to act as quite a loadstone in drawing to it the juvenile patrons of the show. The Shorthorn cattle occupied only a few stalls, but there were some animals, especially one family of females, of great merit. There were very few Hereford cattle, but one or two of those exhibited were fine specimens of the breed. Ayrshires formed the largest cattle class in the show, the competition amongst the fashionable strains of this breed being well maintained, and Jerseys in the aged classes were well represented. There were one or two superior dairy cows, some pens of good fat stock, and a few yearling grass-fed Shorthorn heifers entered as extras. No sheep, except one pen of longwools, were shown, it being the intention of the Society to hold a sheep show, and trials of sheep shearing machines and sheep dogs in July. There was a fair exhibit of swine, the white breeds occupying a larger proportion of the pens than is ever the case at a Victorian show. Dogs made up a very creditable section, and poultry and pigeons were well represented. In the farm produce section some remarkably fine collections of agricultural productions were exhibited in trophy form, these trophies being the most striking and successful feature in the show, and a mode of exhibiting agricultural products which I should like to see introduced at our show. Fruit was staged to a considerable extent, a speciality being some fruit of the tree tomato (*cyphomandra betacea*.) The tree tomato is a perennial, growing to a height of 10 to 12 feet, and presenting a beautiful sight when laden with its fruit, which is very delicious. Though the courtesy of the exhibitor I was fortunate in securing some of the fruit for seed.* Dairy produce was fairly represented, there being a large exhibit of potted butter, and some exhibits of bacon and hams. Amongst miscellaneous articles there were some attractive exhibits of honey and bees working, together with all the appliances of the apiarian. An interesting item was an exhibit of the little native bee with its cells and honey. Cream separators were exhibited at work. The show of machinery and implements, never a strong feature in the Sydney show, was not an extensive one, but comprised, amongst other novelties, three different sheep shearing machines in actual operation. A van with chilled mutton brought down from Bourke was on exhibition, the mutton being in excellent condition after its long journey, and the success of this expedient should be very cheering to pastoralists. The Society was favoured with delightful weather during the show, which was fairly well patronised by the public, so that the Council should reap a good profit. At the banquet on the grounds, which was attended by His Excellency the Governor and other prominent citizens, and at which I, as your representative, was present, the Ministry, the Opposition and the Mayor each and all promised the Society assistance in securing a better tenure of their grounds, and as the Council has received an accession of

new members who, with the others, are determined to take advantage of the present improved aspect of affairs, and push matters on, the prospects of the Society appear most encouraging. The action of our Society in co-operating with the New South Wales Society in obtaining concessions from the railways for judges from this colony was much appreciated, as was also the fact of the Council having nominated so many of its members as judges, and it is probable that, by way of reciprocity, a number of gentlemen of undoubted qualifications will be secured from New South Wales as judges at our next show.

I have the honour, &c., &c.

THOMAS PATTERSON,

Secretary.

Melbourne, 12th April, 1890.

* NOTE.—The seeds, which resemble those of the ordinary tomato, have germinated readily and grown well, the plants having been already freely distributed. The tree grows rapidly, and independently of its fruit, is a beautiful foliage plant, with leaves over eighteen inches long, by more than twelve inches broad. It comes into bearing in about eighteen months, and its fruit, (Mr. W. A. B. Greaves, from whom I obtained the seed, assures me) is really delicious, so that the cyphomandra should be quite an acquisition to the colony.—T. P.—10/2/91.



PRACTICE WITH SCIENCE.

A LECTURE DELIVERED BEFORE THE ROYAL AGRICULTURAL SOCIETY OF VICTORIA, BY MR. R. HEDGER-WALLACE, DEPARTMENT OF AGRICULTURE, VICTORIA.

MR. PRESIDENT AND GENTLEMEN,

I have taken to-day for the title of my lecture the well-known motto of the Royal Agricultural Society of England. I thought it would be appropriate as I am a life member of that Society, and I am your first lecturer since you also became a Royal Society. I stand here as an ambassador from the Old Royal, which has just celebrated its jubilee, to congratulate you as the Young Royal Agricultural Society of Victoria on your incorporation as a Royal Society, and to place before you some of the experiences or data which have been collected during the past fifty years—the lifetime of the Royal in the Motherland.

Let us inquire into the objects of the farmer. The farmer's object is to raise from a given extent of land the largest quantity of the most valuable produce at the least cost, in the shortest period of time and with the least permanent injury to the soil. How does Science aid the farmer in accomplishing his objects. (1). By collecting, investigating and, if possible, explaining all known facts in practical husbandry. Many ascertained facts appear inexplicable to the uninstructed many even opposite and contradictory, which known principles clear up and reconcile, yet there are many more which only prolonged research can enable us to explain. (2). The farmer is aided by observations and experiments made in the field or in the laboratory from which principles are deduced, more or less applicable in all circumstances. Such principles will explain useful practices and confirm their propriety. They will also account for contradictory results, and will point out the circumstances under which this or that practice may most prudently and most economically be adopted. To deduce principles from collections of facts is attended with much difficulty in all

departments of knowledge ; in agriculture it is an unusually difficult task. (3). Science suggests improved, and perhaps previously unthought of, methods of fertilising the soil. The explanation of old errors will not only guard the practical man from falling into new ones but will suggest improvements undreamt of before. The true explanation of one practice will point out other new practices (4). Science aids the farmers by analysing his soils, manures and vegetable products. Again (5). Science explains how plants grow and are nourished, and how animals are supported and most cheaply fed. We desire to know what foods plants require, whence they obtain it, and how they take it in, also what kind and quantity of food the animal requires, what purposes different kinds of food serve and how any given quantity can be turned to the best account. There are certain peculiarities of soil, both physical and chemical, which are best fitted to promote the growth of each of our most valuable crops. There are also certain ways of cultivating and manuring, and certain kinds of manure which are specially favourable to each, and these again vary with every important modification of climate. So different kinds and breeds of domestic animals thrive best upon different kinds of food or require different proportions of each, or to have it prepared in different ways or given at different times. Among animals of the same species also, the growing, the full-grown, the fattening and the milking animal, respectively, require a peculiar adjustment of food in kind, quantity, or form.

I said the farmer's object was to raise the greatest quantity of produce with the least permanent injury to the soil. This raises the question of soil exhaustion. The exhaustion of land is brought about by the constant removal of crops without adding a due equivalent in the form of manure, and is due to the removal of what is known as the available plant food. This available food occurs in very small quantities, not easy to state in percentage. The term exhaustion as used by farmers is relative rather than positive. A soil may be exhausted for wheat-growing when it can still support barley. Exhaustion does not infer the complete removal of available plant food, but only such a withdrawal of it as prevents remunerative returns being obtained. It is a condition of soil which relates only to the immediately available plant food, and consists in lowering the amount down to an unremunerative level. It will now be seen that two means are open to farmers for restoring the lost balance between the wants of a good crop and the capabilities of a soil for supplying them, viz.:

manuring and tillage. Manuring is a direct addition of extraneous fertilising matter. Tillage operates by mechanically reducing the soil to a fine condition and exposing new surfaces to the natural forces; this acting upon the unavailable plant food liberates it, renders it soluble and accumulates it in the soil. These natural forces act not only on the mineral matter, but upon the organic matter, causing the formation of nitrates. Herein lies the secret of fallowing. Partly by the introduction of fertilising matter and partly out of the resources of the soil itself the field becomes once more stocked with available plant food and the land again becomes fertile. A virgin soil is simply a soil in which fertility has accumulated for ages, owing to the operation of natural forces upon its mineral parts and the storing up of organic matter and organic nitrogen by the decay of successive generations of plants. Most cultivated soils are, so to speak, on the margin of exhaustion. A single corn crop is sufficient in most cases to lower the amount of available plant food to such a degree as to need artificial help. In other cases, two corn crops taken in succession would serve to render further exhaustive cropping unremunerative, while in some few instances land will stand a more scourging succession of crops.

It is this condition of approximate exhaustion which renders fallowing so effective in keeping up the standard of fertility. The margin of fertility is raised above what is needed for remunerative cultivation, and then, by the removal of crops, it is lowered so as to need further assistance. This standard of fertility varies with the crops grown. Thus exhaustion is a relative term, and the necessary amount of available plant food varies with circumstances. A period of rest though very beneficial is not indispensable. The continuous and luxuriant growth of forests is an instance of the power of soils to maintain vegetation uninterruptedly. The practice of fallowing land is very ancient, and no doubt originated in necessity. Originally the time of rest consisted in abandoning the ground for a period probably extending over many years, after which it was found to have recovered its powers of production. The art of systematic fallowing was understood by the Romans and introduced by them into England. It was not practised in Scotland till the eighteenth century. Mr. J. C. Morton, the well-known agricultural authority writing in 1850, says, "Many are old enough to remember the wonderful improvement effected in Scotland through the introduction of the bare fallow system. Previously to the introduction of the bare fallow, the ordinary practice was to crop land repeatedly with grain

until it ceased to produce enough to pay for seed, labour and rent. It was then allowed to remain in grass until the operation of natural causes had in some degree repaired the former damage it had sustained when it was again broken up and the same scourging process resumed." I have already noted that Science aids the farmer by analysing his soils, manures and vegetable products, and suggesting improved and, perhaps, previously unthought of, methods of fertilising the soil. As all agriculturists are aware of the many different constituents which chemical analysis has shown plants to be made up, three only, generally speaking, need especially engage the attention of farmers; and these three are nitrogen, phosphoric acid, and potash. It is not that these three are alone necessary to the plant, but that the other constituents are always present in the soil in more than sufficient quantity for the needs of the plant, and that it is only these three constituents that the farmer need supply to his crops as manure. The question of manuring is thus limited to these three substances, and all manures are valued according to the proportion in which they contain these valuable constituents.

But although so far simplified, the question of manuring is still far from being completely solved, and a vast amount of experimental work will require to be yet performed before we shall be in a position thoroughly to understand it, and to intelligently apply our manures in the most economical manner possible. This arises from the fact that although we have limited the question of manuring to the three above-mentioned substances, we have much to discover as to the relative value of the different compounds in which these substances are obtainable. We have nitrogen in a variety of forms, as nitrate of soda, sulphate of ammonia, dried blood, shoddy, fish guano, meat meal, bones, etc.; phosphoric acid in the forms of superphosphate of lime, guano, bone meal, coprolites, basic slag, etc.; while, lastly, we have potash, as nitrate of potash, muriate of potash, sulphate of potash, kainit, etc. Now, although the nitrogen, phosphoric acid, and potash in these many and varied forms are eventually of the same value to the plant, they differ very much in the rate at which they become available as plant food. It is this that determines their manurial value, and is the first point to be found out whenever a new fertiliser comes into the market. How does it compare with the other fertilisers of a similar nature already in the market? Is it quicker or slower than they are in its action on the plant? These are the questions which are naturally at first asked; and according to the way in which they are answered is the relative value of the new fertiliser to be determined.

But it may be asked, how are these questions to be answered? Is it possible, for instance, by submitting the substance to some quickly performed chemical test, such as ascertaining its solubility in pure water, carbonic acid water, or dilute acid solutions—to obtain its comparative value as a fertiliser? Now, although it cannot be denied that such tests are extremely valuable as affording us information for approximately determining the comparative value of the substance as a fertiliser, they are until they have been verified by actual field experiment, by no means to be implicitly relied on. It is true that with regard to feeding stuffs the chemist may imitate artificially what takes place in the process of digestion in an animal's stomach, and in this way arrive at a conclusion as to the digestibility of the feeding stuffs he is thus testing. But whereas it is possible to imitate, to a certain extent at any rate, the process of digestion, it is impossible to devise artificial tests which will correspond to those a manure is subject to in the soil, in the course of nature.

Hence we must have resort to actual experiment with the plant itself. Such experiments are not only extremely difficult to carry out, but require a considerable amount of time. This arises from the fact that soils, as well as climatic conditions, differ so much; the results of experiments are thus often very apt to be contradictory, and difficult to intelligently understand, and a very large number of experiments have to be gone through before they can be held to have demonstrated any theory. They ought further to be carried out by a number of experimenters, working independently of one another, in different parts of the country, so that the chances of error may be thus minimised. From these causes, as well as from numerous other ones, a new fertilizer always takes a considerable time before its true comparative value can be laid before the agricultural public. One of the latest of these fertilizers which science has offered the farmers is basic slag, or as it is called in Germany, Thomas slag. "Basic slag", or as it might be more correctly called, "Thomas" slag, is a by-product obtained in the manufacture of steel by what is known as the "basic" process. In the year 1879 an improvement in the well known "Bessemer" process was patented by Messrs. Gilchrist and Thomas. It must be explained that in the manufacture of steel from pig-iron certain impurities in the raw material have to be got rid of in order to produce a good steel. Among these impurities one of the most important is *phosphorus*. This is owing to the fact that even a very small percentage of phosphoric acid in steel has the effect of rendering it brittle. The

extraction of the phosphorus from the raw material was formerly, however, attended with very serious difficulties and had the effect naturally of rendering steel a costly article, inasmuch as only purer kinds of pig-iron could be used for the purpose. By the introduction, however, in 1879 of the "Thomas Gilchrist" or "Basic" process, these difficulties were very largely overcome and the employment of even such impure irons as the Cleveland (containing comparatively a large percentage of phosphorus) was rendered possible, and the price of steel consequently generally very much reduced. It did not seem, however, for some years after the introduction of this ingenious process to have struck anyone that this rich phosphatic by-product might prove a valuable addition to our artificial fertilizers. The result was that the "Thomas" slag was treated as another of the only two numerous valueless by-products, which seem to be necessarily incidental to most of our chemical and other manufactures, and was allowed to accumulate in large quantities without being used for any purpose.

In 1883 some short articles published in Germany on the subject were the means of first drawing the attention of the public to its importance as a manure. During the years 1884-85 numerous experiments were carried out on the subject in the same country; and from then up to the present hour it has become more and more extensively used in Germany, till its consumption now amounts to over 300,000 tons. The slag consists mainly of phosphate of lime, silicate of lime, free lime, free magnesia, and oxides of iron and manganese. Its composition, of course, naturally varies; but the following may be taken as an average analysis:—

Phosphoric acid	17 per cent.
Lime in combination with phosphoric, silicia, sulphuric and carbonic acids...	40 „
Free lime	15 „
Oxides of iron	12 „

As a rule, the phosphoric acid varies considerably, ranging from 10 to 30 per cent. This is owing to the difference in the percentage of phosphorus in the raw material and the quantity of lime added. This, gentlemen is one out of many examples of Science offering the farmer a new fertilizer. I have been speaking about soil exhaustion and fallowing, following this with a sketch of a fertilizer which Science has offered as a renovator, I want to carry you still further with me and speak about the waste of nitrogen in the soil and the absorption of nitrogen by plants.

During recent years Sir Jno. Lawes, and Dr. Gilbert have investigated the subject of the waste of nitrogen in soils, owing to the dissolving action of the rainfall upon nitrates and their washing through into the deeper and inaccessible sections of the soil. They have shown that this waste is greater upon land which does not carry a crop and that it is entirely arrested when the upper surface of the soil is permeated by a mat of root fibres. These seize upon and hold nitrates and fix them in the body of the growing plants, thus preserving them as food for animals and finally retain them for further use in the form of fertilizing matters for the succeeding crop. Not only do the roots of growing crops absorb nitrates, but mineral matters, and by their penetrative powers they ransack the subsoil and bring matter to the surface which was not previously available. Let me draw your attention to the views now held as to the absorption of nitrogen by plants.

Since the apparently conclusive experiment of Boussingault, which were completed as long ago as 1854, it has been accepted as an axiom in physiological botany that the free nitrogen of the atmosphere is useless to plants for the purpose of assimilation, and that the exclusive source of their nitrogenous compounds is the soluble nitrates in the soil. But like so many generally accepted beliefs, very grave doubt is now thrown on the correctness of this view by Dr. B. Frank. In his papers the results are given of a series of experiments which he considers to prove the point that the amount of nitrogen in the tissues of the plant is in excess of that which could possibly be due to the soluble nitrates absorbed from the soil. The nitrogen which must thus have been absorbed through the leaves directly from the atmosphere, is perhaps in the tissues in the form of organic nitrogenous compounds, not of nitrates. The nitrates present in the tissues of plants, the amount of which varies greatly with different plants, are entirely absorbed as such through the roots. Dr. Frank believes that the low forms of vegetable life, as *Oscillaria*, *Ulothrix*, *Pleurococcus*, *Chlorococcum*, and the protonemes of mosses, have especially this power of removing free nitrogen from the atmosphere, and forming therefrom nitrogenous compounds, but that the property is probably common to all vegetable organisms which contain chlorophyl, and that, like the assimilation of carbon, it is a function of their chlorophyl. Drs. Hellriegel and Willfarth have put forward another view—that there is an essential difference between the way in which Leguminosæ obtain their nitrogen, and that of other plants. They claim to have determined by experiment that the growth of barley and oats is in direct proportion to the amount of nitrates absorbed from the soil, and that they are totally unable to

live in a soil entirely deprived of nitrates. This is not the case on the other hand, with vetches, which may grow luxuriantly in a soil containing no nitrogen, and which must, therefore, obtain their nutriment from some other source, viz. :—the free nitrogen of the atmosphere. The authors advance the theory that they do not do this directly, but through the instrumentality of the microbes contained in the tubers which occur on the roots of the vetch, bean, and many other plants belonging to the Leguminosæ. These microbes, therefore, carry on a symbiotic existence with the host plant, the microbes contained in the soil not being available for this purpose.

To this Dr. Frank replies, dissenting from the distinction drawn by Hellreigel and Willfarth between Leguminosæ on the one hand and grasses and other orders of plants on the other hand, all of which, he maintains are, in certain conditions, capable of assimilating directly the free nitrogen of the air. He further points out that there is no single direct observation to connect the "bacteroids" in the root tubers of Leguminosæ with this supposed function, and that the fact of their being living organisms is subject to considerable doubt. In placing before you some of the aspects of Agricultural Science I hope you will not look at it as book farming, for I know this has always been viewed with a certain amount of suspicion by practical Agriculturists. The real fact of the case is that those best qualified to practise the arts of the cultivator are naturally averse to take up the pen, and conversely those who are most at home in the study are often most abroad in the field. The task of either writing or speaking upon purely agricultural matters is not to be undertaken lightly if the writer values the good opinion of farmer critics who he may rest assured will not spare his shortcomings and misdoings. Some of you might remember the description of this class of gentlemen in Will Carlton's Farm Ballads.

A Writer for the Agricultural Press
 Who farmed (on foolscap) with complete success,
 Who raised great crops of produce in a wink
 And tilled large farms with paper, pen and ink,
 Who sitting indoor at a regular price,
 Gave large amounts of good out-door advice.

I would ask you now to look at the question how Science in general has affected the farmer.

The economical applications of Science in the vast improvements of the telegraph, the railroads and the steamships have changed the whole system of commerce. The effects of these have been to destroy local markets and to consolidate all into one market—the world. If our farmers want to know the names of three

persons who have knocked out the bottom of our old agricultural system I can I think tell them. Their names are Sir Charles Wheatstone, Sir Henry Bessemer, and Dr. Joule. The first, by telegraphy, has changed the whole system by which exchanges are made; the second, by his improvements in steel has altered profoundly the transportation of commodities by sea and by land; and the third, by his discoveries of the mechanical equivalent of heat, has led to great economy of coal in compound engines. The effect of these discoveries upon the transport of corn will be realised when I state that a small cube of coal, which would pass through a ring the size of a shilling, when burnt in the compound engine of a modern steamer, would drive a ton of food and its proportion of the ship two miles on its way from a foreign port. This economy of coal has altered the whole situation. Not long since, a steamer of three thousand tons, going on a long voyage, might require two thousand two hundred tons of coal and carry only a limited cargo of eight hundred tons. Now a modern steamer will take the same voyage with eight hundred tons of coal, and carry a freight of two thousand two hundred tons. While coal has thus been economised human labour has been lessened. In 1870 it required forty seven hands on board our steamships for every thousand tons capacity, now only twenty-eight are necessary. All these changes going on in the economy of fuel and of labour have led to increased production at a small cost. Four men in the United States working for one year in the growth, milling, and transportation of wheat can produce flour for a year's consumption of one thousand other men, allowing one barrel of flour to each adult. I need not elaborate this point further, for you will all see how this has acted upon agriculture. It has made the grain market one all over the world.

English farmers have had a formidable lesson given to them, that they, like other producers, must adjust themselves to changed conditions produced by the advance of science. Some farmers in other countries have had this lesson in a still ruder way. One of the most important crops in Holland, Belgium, France, and Turkey, used to be the dying material called madder. The colouring substance of that dye is now made chiefly from coal-tar, and the agricultural industry for its production has been swept away. So will the growth of indigo in India pass away. The grower of sugar canes is looking with some apprehension at the substance three hundred times sweeter than sugar that is now made from coal-tar in Germany. All industries require to re-adjust themselves to the changed conditions of modern production and competition, so that agriculture is no exception to this pressing need.

You will now understand my point, that the agriculture of all lands must alter because of the changes which applied science has introduced. It has made the market of the world one. Under these circumstances what is the farmer of the future to be?

A writer in *Blackwood's Magazine* gives the following definition of the successful farmer of the future:—"The successful farmer of the future must be well grounded in the general and technical knowledge of his business. He must look closely and more carefully into the internal working of his farm than was necessary in former times. He must watch keenly every movement of the foreign producer, study the condition and prospects of the markets, and be prepared to produce such commodities as are likely to bring him the best return. He must not tie himself to the growing of certain crops and the rearing of certain stock merely because his forefathers did so, or because he himself found them profitable in times gone by. He must cultivate and 'open mind,' be ready and willing to avail himself of any new system and modification of practice calculated to benefit him, being careful, of course, not to attempt upon a large scale practices they are risky or have not being proved by actual test. He must not be above giving his attention to little points of detail, or to tiny dribblets of income, for in agriculture the 'day of small things' has assuredly come. Method precision, industry, forethought, economy, sound and ready judgement and intelligence—these are the elements of successful business. They are as essential to the farmer of to-day as to the busiest business men in our greatest commercial centres." To aid the farmer of the future, the theory and practice of agriculture is receiving year by year, increasing help from scientific teaching in various forms, and as the value of such teaching comes to be better understood and more generally appreciated, the farmer will be the better able to compete with his rivals. Agriculture is so intimately associated with so many distinct departments of natural science, that the successful farmer must ever be a man of science, if we use the much abused term of science in its strict and only legitimate sense, as referring to systematic organized knowledge, the result of careful and accurate observation of the subjects of which it treats, rather than to improvised theories and crude generalizations, which too often take shelter under the name of "science."

Among the more important sciences bearing closely on agricultural practice, we may name Geology and Chemistry, in connection with the various kinds of soil, and the manures which will supply at a minimum of cost, the deficiencies of each, in the growth of the respective crops in the rotation. Animal Physiology and Pathology are no less needed in con-

nection with the rearing of stock, and their successful management in health and disease; while Botany and Vegetable Physiology are hardly less important to the farmer who would profitably cultivate the various crops he sows, and at the same time discourage, at a minimum of cost, the noxious weeds, with which, if allowed to do so, nature would so liberally stock his land. Again, in order to cope with the ravages, of, we fear, an increasing variety of insect pests, and to form a sound judgment on the *pros* and *cons* of the vexed question of the *agricultural* influence of some of our common birds, the intelligent farmer looks to Entomology and Ornithology; while the yearly increasing complication of farm-machinery makes a corresponding knowledge of Mechanics valuable for the selection and management of the implements he buys. The important influence on farming operations of every kind, of the temperature, rainfall, and sunshine, and especially the distribution of each over the different seasons of the year, must ever give to the science of Meteorology a special interest to farmers. Indeed few industries, if any, draw so largely as does agriculture, on so wide a range of scientific observation, and in perhaps still fewer do the various departments of science needed dovetail so intimately into each other as to make it difficult to say which is the most important. The intelligent farmer of the present day is earnestly endeavouring to improve his art, and he is willing, nay anxious to obtain the co-operation of scientific men, in order to increase his knowledge of the theory as well as the practice of his ancient calling. Indeed he not only admits the utility of science in Agriculture but often places an undue degree of value upon the theories of the Chemist, of the Botanist and of the Geologist. This is encouraging to the men of Science, but on the other hand they must admit that by far the greater portion of the sum of human knowledge has been derived from the experience and observation of men utterly unacquainted with Science, in the ordinary signification of that term. This portion of our knowledge is also in its practical application the most valuable. Countless millions of men during many thousands of years have incessantly been occupied in improving the processes of mechanical Agriculture which as an Art has consequently being brought to a high degree of perfection; but scientific Agriculture is a creation of almost our own time, and the number of its cultivators is small, all its theories cannot therefore at present claim that degree of confidence which as a rule is only reposed in the opinions founded on the experience of practical workers in the field. Still the farmer has derived a great amount of useful information from the Chemist and Physiologist; and they alone can explain to him the

causes of the various phenomena which the different branches of his art present. It has to be acknowledged that there was a time when it was the fashion of the man of Science to look down with contempt from the lofty pedestal on which he placed himself, upon the lessons of practical experience read to him by the cultivator of the soil ; whilst on the other hand it is just as true the farmer treated as foolish visionaries those who applied the teachings of Science to the improvement of their art. This state of things has I trust now passed away. The scientific man no longer despises the knowledge of the mere farmers, but turns to good account the information derivable from their experience ; whilst the farmer on the other side has ceased to speak in contemptuous terms of mere book learning. It is to this happy combination of the scientist with the practical man that recent advances in agriculture is due, but on one point there is still a little misunderstanding. The practical man will meet you with the question, what do you mean by Scientific Agriculture? what is Agricultural Science? and we must acknowledge that these terms are frequently used to express different and oftentimes conflicting ideas according to the knowledge of the persons using them. Professor Tanner describes Agricultural Science as "Scientific Truths taught by the practice of Agriculture," and we may accept his definition. The laws of Agricultural Science will be most accurately learnt when they are deducted from the practice of farming. The terms Scientific Agriculture, Agricultural Science and Agricultural Chemistry are very often used as if they had the same meaning. People fail to see any distinction between Agricultural Science and the study of Chemistry, Botany, and Geology ; but this arises from imperfect knowledge. Our best writers and teachers have now accepted Professor Tanner's definition and they investigate the Science of Agricultural practice or teach the principles of Agricultural practice and as Professor Tanner well says "the experience of practical farmers is the great storehouse of Agricultural Science, and that instead of such Science being in any way opposed to practice, it is its very essence its life, the spirit by which it is animated." This Science of Agricultural Practice, what we already know, as well as what we are every day learning, must be adequately diffused among the agricultural body, and in every district means must be adopted for promoting this diffusion. The pure and abstract sciences will be doing useless work as far as agriculture is concerned unless their discoveries and suggestions be fully known to those whose benefit they are most likely to promote. We do not go to the trouble even of interesting our children. According to the present plan, a boy goes to school when five or six years old ; any little that he may have learnt about farm

work before that time soon disappears along with the interest in it, there being no means of refreshing the one or encouraging the other. All his energies for the next eight years are to be spent in his book education. If this could be carried out in practice, I would not so much object, but it is well known to those who have studied juvenile human nature, that not a sixth part of the time of nine-tenths of school-boys can be said to be really and positively spent on their work. I do not speak of the time occupied dreaming and wool-gathering, which sometimes passes for work. The remainder of the time is fully taken up with employments of their own (for boys are never idle in one sense), but all of these are far away from the business of their riper years, the thing by which they are to live and win bread for themselves and others.

The interest in home and in the daily routine of farm life is not cultivated, and is replaced by a restless desire to ramble and wander in the search for enjoyments of a more exciting nature. There is no opportunity or encouragement given to develop in boys the faculty of observation. The whole system is one of cram, cram of book-work, without connection with anything practical, and the roads by which this learning might have found vent and usefulness are allowed to fall into dilapidation and decay.

“As the boy is, so will the man be.” When the school-boy, who for years has spent the greater portion of his time idling, leaves the haunts of his idleness and goes out to the farm to work he finds he has no interest nor heart in it, and everything he tries he does badly and detests it, because he has had no experience. He soon gets disgusted, and leaves country life for some town employment or railway work, for which he is equally unsuited, and which has the reverse of an elevating influence on him, either socially or materially, and in these depressed times often leads to poverty.

To wed a man to country life, he must have more substantial and enduring ties and inducements than the fun and frolic of his boyish days.

I do not pretend to show, like a legislator, what particular course should be adopted as a remedy. I only want to point out that a great social evil is growing in our midst. We shall never have proper stability or habits or excellence of work among our farming classes until it is seen to be essential for the well-being both of themselves and the country, that their mental training must go hand in hand with their special training for their life work, which, of course, brings about the extension of their powers of observation, and the growth of a love of country life and home comforts.

Gentlemen, I speak with some experience. As a boy I attended the parish school of my parish under the good old Scotch parochial system, before the invention of the school board. Some of you gentlemen will know that under that system there was some chance of the abilities and education of boys being led into proper grooves. The clever boy of the poor man's family had every opportunity and encouragement to study and ultimately to pass into the ranks of the learned professions, but, above all, there was nothing to encourage restlessness and dissatisfaction with the habits of country life, and yet we got very little to interest us in that work which was going on daily around us, and to which some of us looked forward to as our life work. If we had, what a different aspect our parish would have to-day to those who were school-boys then, but have taken up their life work now.

If we could not get information in our youth we must seek for knowledge later on in life. Take our plant diseases. In the same way as dwellers in town have been aroused from their apathy and made to understand something what is necessary for health, so all agriculturalists should learn something of our plant diseases. It is not necessary for every farmer to be a complete master of the physiology of all the plants he grows any more than it is necessary that a householder should know all about the exact nature of typhus or typhoid, or bacteria, bacilli and other germs; but as every householder at length begins to know amongst other facts that an open drain is likely to prove fatal to life, so every farmer should know amongst other things that sour fields and rotting refuse means disease and perhaps destruction to his crops.

Practice with Science can be well illustrated in the history of the Royal Agricultural Society of England. Take the development of machinery at their shows. The portable steam engine was first introduced in 1841, the haymaker in '43, and the same year saw the first combined threshing machine and carts furnished with springs. The strawshaker and turnwrist ploughs appeared in 1845. In 1839 the farmers swarmed round the first drill machine, and 1843 saw the first machine for making drain pipes. The portable steam engine and threshing machine appeared in 1847, and Fowler's draining plough in 1850. Howard's harrows were first shown in 1844, and the M'Cormick reaper in 1851. These are just a few dates, but they mean a lot. The Royal has assisted in developing many of the machines now in common use. How? by the aid of Practice with Science—the judges tested the machines practically in the field and the Scientist brought weighing and measuring, the bases of all Science to their help and

gave them the Dynamometer. The result of working on this Scientific method was, that implement makers were told that which they could not learn at home, but which it was life or death to know, not only when they were beaten, but why they were beaten. Are proofs requisite?—Allow me to quote from an article in the last number of the Society's transactions:—"Let the steam engine reply for other classes of machinery. The case is one wherein the results of the Society's trials are measureable in pounds of coal and water, the equivalent of L. S. D., and one too in which the shape of the organism so to speak exhibits plasticity under the influence of conditional trials just as an animal does in the skilful breeder's hands. Did the Society ask for economy of coal? The prize engine of 1849 burned $11\frac{1}{2}$ lbs of coal per horse power per hour; 1850, $7\frac{1}{2}$; 1852, $4\frac{5}{8}$; 1853, $4\frac{1}{3}$; 1855, $3\frac{3}{4}$; 1856, $3\frac{1}{2}$; 1872, $2\frac{3}{4}$; 1887, 1.8."

It seems to be proved and is generally accepted that the efforts of Agricultural mechanists, who it is to be remembered are ever guided by scientific principles, have been so far successful as taken together to effect a saving on outgoings on a farm of about one-half. We are apt too often to say, gentlemen, that a machine was good in theory but failed in practice; this is a fatal error. If a machine has failed in practice it was because it was imperfect in theory, its incapacity to work demonstrates that the theory has a flaw.

I have now tried to interest you a little in the Science of Agricultural practice. It is not a *dry as dust* Science—and above all it is a science that is thoroughly practical.

If you study the arrangement on labourers in various descriptions of works you are a Scientific Agriculturist. If you can investigate and experiment in a rational and practical way, you are working scientifically. That little word Why shows the spirit of progress. As Mr. Pearson well writes "Science is not book learning, Science is not theory, it is a method of finding out." This Science of Agricultural Practice I trust will be fostered under this Royal Society as it has been under the English Royal, and with that hope I claim for it some attention at your hands.

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