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1893.

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PARLIAMENT OF TASMANIA.

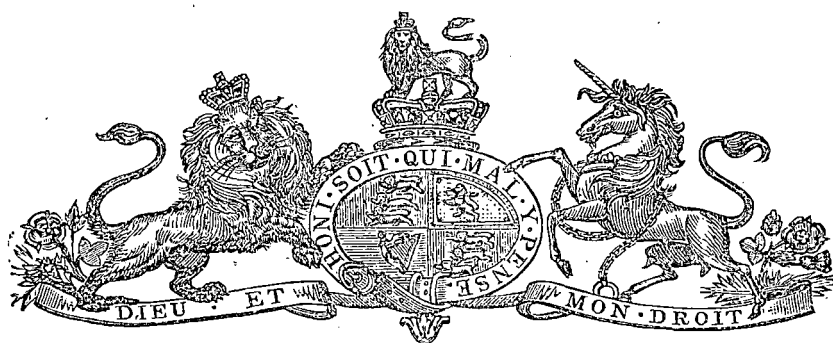
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COUNCIL OF AGRICULTURE, TASMANIA :

ANNUAL REPORT.

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Presented to both Houses of Parliament by His Excellency's Command



## COUNCIL OF AGRICULTURE, TASMANIA.

### ANNUAL REPORT.

SIR,

WE have the honor to present the first Annual Report of the work of the Council of Agriculture, extending over the twelve months beginning 1st May, 1892, and ending 30th April, 1893.

#### APPOINTMENT OF COUNCIL.

The First Council was appointed under the provisions of "The Council of Agriculture Act, 1891," (55 Vict. No. 43), and the names of the Members published in the *Gazette*, May 2nd, 1892.

#### NAMES AND QUALIFICATIONS.

The following are the names of the Members, together with their addresses and the branches of Agriculture to which they devote attention:—

SHOOBRIDGE, W. E., Bushy Park, Glenora, (President) grows hops and fruit on an extensive scale, besides which keeps a large dairy, grows and prepares chicory for market, evaporates fruit, and combines with all, cereal-growing and stock-feeding. PIESSE, G. E., Green Point, North Bridgewater: dairying, fruit and cereal-growing on a large scale, and makes a speciality of raising fat lambs in large numbers. CHEEK, J. W., Cambock, Evandale: has given special attention to growing root crops and fattening stock; at present acting as agent for agricultural implements and machinery. BRIGGS, F. W., Mountain View, Scottsdale: started in the virgin forest, grows fruit, has made a speciality of raising grass and other seeds on selection, and combines dairying and stock-feeding. INNES, G., Narracoopa, Franklin, land surveyor: fruitgrower. BLACKWOOD, R., Springbank, Barrington: has given special attention to introducing new farm seeds and implements, now dairying and potato growing. HOPE, JOHN, Kentish, Sheffield: has opened a farm in the virgin forest: now giving special attention to oat and potato growing, feeding fat cattle for Hobart and Launceston markets. PILLINGER, J. R., Melrose, Tunbridge, pastoralist and general farming. COX, JAMES, Clarendon, Evandale, pastoralist: breeds stud merino sheep, fattens stock, and grows cereals and roots largely. WILSON, GEORGE, Belmont, Richmond, Inspector of Stock. WRIGHT, ALFRED, Deepwater, New Town, artificial manure manufacturer: devotes particular attention to permanent pasturage.

It will be seen from the above that the Council is fairly representative of the different branches of Agriculture. Exception was taken at the outset that districts were not represented, but unless the number of members was greatly increased it would not be possible to give each district of the colony direct representation. Wheat-growing, fruit-growing, dairying, &c. is much the same in various districts; therefore so long as these interests be properly represented, it is not necessary to have anything more.

#### APPOINTMENT OF OFFICERS.

The first meeting was held at Hobart, and at that meeting Mr. W. E. Shoobridge was elected President of the Council.

At the same meeting the Council decided to take over from the Government the services of the Rev. E. H. Thompson, who had been appointed Government Entomologist in February, 1892, and prior to that time had acted as Consulting Entomologist to the Government. Until the appointment of a Secretary, Mr. Thompson acted as Secretary *pro tem*.

It was decided to invite applications for the position of Secretary to the Council, and at the second meeting held at Hobart, on the 9th June, 1892, Mr. F. W. J. Moore was appointed, at a salary of £250 for the first year. In January last Mr. Leslie A. Evans was appointed Clerk in the Office.

### BOARDS OF AGRICULTURE.

The establishment of Boards of Agriculture, in accordance with Section 13 of the Act, was proceeded with as soon as the Secretary was appointed, and the work fairly began. At the close of the first official year 28 Boards had become associated with the Council as Branches.

The following is a list of the Branches, giving date of establishment, number of meetings held by each Branch during the year ending April 30, 1892, and number of Meetings at which each member was present:—

- BARRINGTON BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 3):  
Blackwood, R. (Chairman), 3; Watt, Jas. (Secretary), 3; Midcraft, John, 3; Billing, J., 2; Waterhouse, G. M., 3; French, J. H., 3; Moore, E. H., 3; French, C. W., 3; Moore, James, 3; Best, Chas., 3; Cocker, John, 3; Smith, A. G., 3; French, C. A., 3.
- CARNARVON AND OAKWOOD BOARD.**—Date of formation, 24th September, 1892. (Number of Meetings held, 8):  
Mason, T. (Chairman), 4; Spotswood, J. A. (Secretary), 8; Woollnough, Rev. J. B., M.H.A., 5; Mason, T. H., 5; Mason, F., 4; M'Arthur, Jas., 5; Frerk, H., 4; Blackwood, J. T., 2; Blackwood, A. J., 4; Wellard, G. H., 4; Danker, J. D., 3; Rogers, C., 3; Liddall, J., 4; Gathercole, O., 1; Trenham, S. H., 1; Easton, C., 1; Mason, W., 1.
- CRESSY BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 1):  
Hingston, W. (Chairman), 1; Finn, J. (Secretary), 1; Terry, J., 1; Campbell, D., 1; Brumby, P. A., 1; Hingston, H., 1; Brumby, L.; Archer, A.; Brumby, J. N.; Archer, C.; Archer, B.
- DERWENT VALLEY (NEW NORFOLK) BOARD.**—Date of formation, 25th October, 1892. (Number of Meetings held, 4):  
Shoobridge, R. W. (Chairman), 4; Lloyd, E. (Secretary); Wills, R. J. (ex-Secretary), 4; Brown, J. G., 3; Jackson, W., 2; Lloyd, C. G., 3; Roscoe, T., 2; Shoobridge, W. E., 2; W. Rowsell, 2.
- DELRORAINE BOARD.**—Date of formation, 18th April, 1893:  
Cunningham, W. (Chairman); Slater, Chas. (Secretary); Oliver, A.; Roberts, J. T.; Ritchie, J. T.; Burke, W. F.; Slater, H.; King, David; Sims, W.; Keating, T.; Horne, A. K.; Flynn, J.; Woodberry, J.; Gannon, D.; Edgumbe, H. J.; Bonney, W.; Thorp, H.; Woodberry, S.
- EVANDALE BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 3):  
M'Kinnon, D. (Chairman), 2; Cheek, J. W. (Secretary), 3; Cox, J., 2; Smith, J. L., 3; Woollnough, J., 3; Von Stieglitz, J. C., M.H.A., 3; Youl, A., 1; Heyes, C. W., 3; Pearn, J., 3; Atkins, E., 2; Atkins, J. D., 1; Peters, D., 1; Crawford, H., 2; Beveridge, R., 2; Beveridge, G., 2; Hart, W., 1; Hart, T., 1; Edwards, G., 1; Atkinson, Rev. H. R., 1; Hogarth, W. G., 3; Hughes, R., 3; Lindsay, D., 2; Gibson, J. B., 1; Atkins, Jas., 2; Boyes, C., 2; Hawley, S., 2; Atkins, W. E., 2; Johnson, W. G., 1.
- FRANKFORD BOARD.**—Date of formation, 22nd August, 1892. (Number of Meetings held, 10):  
Pritchard, A. (Chairman), 10; Humphreys, A. B. (Secretary), 10; Towers, J. J., 9; Towers, A. E., 9; Robinson, H., 6; Hamilton, W., 7; Mosey, A. C., 7; Royle, H. D., 7; Durand, J. J., 9; Derbyshire, F., 6; Dunn, J., 6; Lock, H., 5; Knight, C. T. (ex-Secretary), 10; Welch, A. B., 7; Mathews, A., 3; Hunt, J. R., 1; Lells, H., 1.
- FLOWERDALE BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 5):  
Dove, P. S. (Chairman), 4; Easton, G. (Secretary), 5; Tyrrell, J. T., 4; Margetts, T. B., 4; Easton, G. H., 4; Cooper, E., 2; Reilly, S. P., 3; Hamilton, W. D., 1; Davis-Griffiths, L. R., 1; Reeve, Walter, 1; Reeve, Edwin, 2; Smith, V., 2; Stuart, W. A., 2; Smith, J. F., 1; Cooper, Ed., 1.
- FRANKLIN BOARD.**—Date of formation, 8th October, 1892. (Number of Meetings held, 1):  
Thomas, W. J. (Chairman), 1; Kellaway, S. J. (Secretary), 1; Kellaway, J. W., 1; Chopping, H., 1; Griggs, G. A., 1; Barnett, Thos., 1; O'Beirne, M., 1; Philp, W., 1; Fitzpatrick, M., 1; Innes, Geo., 1; Norris, J., 1; Norris, Jabez, 1; Kildea, T., 1; Clarke, H. E.; O'Beirne, J.; Clarke, J. C.; Madden, Dr.; Thorp, W.
- GEEVESTON BOARD.**—Date of formation, 18th April, 1893. (Number of Meetings held, 1):  
Hill, R. (Chairman), 1; Bennett, A. E. (Secretary), 1; Hankin, G., 1; Halloran, P., 1; Thiessien, H., 1; Evans, J., 1; Robinson, W., 1; Hopkins, T., 1; Hynds, W., 1; Hill, F. B., 1; Bennett, G.; Geeves, J.; Studley, J.
- GLENORCHY BOARD.**—Date of formation, 25th October, 1892. (Number of Meetings held, 7):  
Echlin, J. F. (Chairman), 6; Murdoch, L. N. (Secretary), 6; Pierce, Geo., 6; Eady, Chas. G., 6; Coverdale, P., 7; Shoobridge, S. E., 3; Fletcher, S. H. W., 1; Pretymann, W. F., 2; Hallam, Thos., 4; Wright, H. S., 4; Butler, F. F., 4; Sawyer, A., 1; Morrisby, T., 1; Johnson, T.
- HUONVILLE BOARD.**—Date of formation, 18th April, 1893. (Number of Meetings held, 1):  
Skinner, J. (Chairman); Francomb, C. G. (Secretary); Linnell, E.; Page, W.; Ball, S.; Newbon, R.; Page, S.; Lucas, W. H.; Talbot, W.; Larsen, J.; Francomb, T.
- KIMBERLEY BOARD.**—Date of formation, 25th October, 1892. (Number of Meetings held, 1):  
Wilson, C. F., 1; Rogers, J., 1; Cox, W., 1; Burr, E.; Caldwell, T. L.
- KENTISH BOARD.**—Date of formation, 25th October, 1892. (Number of Meetings held, 6):  
Luttrell, W. J. (Chairman), 5; Coleman, Chas. (Secretary), 5; Hope, John, 6; Harman, H., 2; Hope, D., 5; Hope, A., 6; Hope, J., 5; Husband, J., 4; Luttrell, R., 2; Harman, J., 4; Harman, John, 3; Bell, Peter, 3; Turnbull, A., 3; Oliver, A., 2; Ochlin, J., 3; Jones, W. R., 4; Mason, J. B., 2; Manly, E., 4; Boutcher, J., 3; Duff, John, 3; Rouse, Robt., 1; Hanlon, H., 4; Banfield, W. H., 2; Dwyer, G., 2; Lord, Geo., 1; M'Farlane, J., 1; Sullivan, Ed., 1.
- KEMPTON BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 4):  
Bisdee, E. O. (Chairman), 4; Wilson, Rev. J. T. (Secretary), 4; Bisdee, W. M., 2; Bisdee, H., 1; Bisdee, J., 2; Johnson, J. (Lonsdale), 1; Gorrings, T., 2; Corney, A., 1; Doctor, Rev. A., 1; Pierce, R. W., 3; Johnson, Jos. (Bagdad), 1; Smith, C., 3; Johnson, J. (Castle Hill), 3; Hadden, J., 1; Flexmore, O., 1; Lumsden, J., 2; Gorrings, A., 1; Corney, P., 1; Palmer, J. W., 1; Foster, W.; Bond, J. C.; Munro, W.; Oldmeadow, H.; Hewett, H. S.

- LILYDALE BOARD.**—Date of formation, 24th September, 1892. (Number of Meetings held, 6):  
Somerville, W. (Chairman), 6; Marx, J. (Secretary), 6; Sulzberger, J., 6; Orr, W., 5; McLennon, D., 6;  
Doak, W., 3; Phillips, Jas., 6; Bardenhagen, L., 5; McGaughey, J., 4; Wilson, Jas., 3; Turner, N., 4;  
Proctor, T., 5; Power, J., 2; Brown, G., 1; Brewer, Chas., 1; Doak, Jas., 1; Poxon, Jos., 1; Somerville,  
G.; Ewans, R.; Wolfe, J. W.; Grandfield, C., jun.; Phillips, T.; Rees, F. W.
- MERSEY BOARD.**—Date of formation, 31st October, 1893. (Number of Meetings held, 3):  
Young, A. (Chairman), 1; Field, S. S. (Secretary), 2; Horne, R. K. (ex-Secretary), 2; Twibell, R. D., 1;  
Stewart, R. D., 1; Oldaker, F., 2; Hughes, Rev. S. H., 2; Thomas, B. W., 1; Buck, W., 3; Watkinson,  
J., 1; Oldham, R. C., 1; Clements, T., 1; Hays, F. H., 1; Loane, M. E.; Gatenby, A.
- MACQUARIE PLAINS BOARD.**—Date of formation, 24th September, 1892. (Number of Meetings held, 8):  
Downie, J. W. (Chairman), 2; Dean, Ellis (Secretary), 7; Lyne, S. W., 3; Milne, P. C., 2; Johnson, C., 7;  
Rainbird, J. S., 4; Griffith, T. E., 6; Jarvis, W., 2; Gadesden, A. W., 2; Terry, E. W., 1; Marshall,  
T., 5.
- PORT CYGNET BOARD.**—Date of formation, 18th April, 1893. (Number of Meetings held, 1):  
Walshe, W. (Chairman), 1; Browne, W. H. (Secretary), 1; Laffer, J. B., 1; Clark, J. K., 1; Cockerell,  
A. H., 1; Cockerill, H. W.; Lord, J.; Rabbit, M.; Mills, T.; Cawthorn, J. H.; Mason, R.
- RINGAROOMA BOARD.**—Date of formation, 24th September, 1892. (Number of Meetings held, 7):  
Isaac, John (Chairman), 4; Phillips, S. B. (Secretary), 7; Krushka, F., 1; Thompson, R., 6; Peters, T.,  
5; Fry, W. H., 2; Andrews, J., 2; Jones, R. W., 1; Diprose, S. F., 6; Heathorn, J. H., 7; White, Jas.,  
6; Krushka, Chris., 4; Abel, M. J., 3; Phillips, W. H., 2; Andrews, Jas., jun., 1; Harrison, N. M., 1.
- RICHMOND BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 4):  
Simmons, W. C. (Chairman), 4; Dickson, H. C. (Secretary), 4; Ogilvy, A. J., 3; Ogilvy, K. A., 3;  
Johnston, T., jun., 4; Wilson, Geo., 4; Brain, W., 2; Brain, C., 2; Wilson, Geo., jun., 1; Goodwin,  
R., 1; Goodwin, W. C., 1; Jones, Geo., 1; Williams, R. R., 2; Nichols, P. J., 2; Ellis, C.; Murdoch, J.;  
Perkins, T.
- RAILTON BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 2):  
Oliver, S. F. (Chairman), 2; Tucker, E. (Secretary), 2; Midgley, T., 1; Oliver, A. G., 2; Nottage, J. S., 1;  
Mahoney, M., 2; Castles, J., 2; Emery, J., 1; Weeks, H., 1; Symmonds, A., 1; Weeks, T.; Blenkhorn,  
J.; Sheehan, J.; Sheehan, M.; Sheehan, E.; Tunz, W. D.; McMahon, D.
- SORELL BOARD.**—Date of formation, 15th October, 1892. (Number of Meetings held, 4):  
Henwood, W. W. (Chairman), 4; Hean, T. S. (Secretary), 4; Marshall, G., 2; Featherstone, G., 2;  
Cracknell, D., 4; Green, T. F., 2; Pearce, J. L., 2; Denholm, G., 2; Grierson, J., 1; Hildyard, D., 3;  
Davis, G.; Bilton, E. R.; Allanby, L. W.; Webster, A.; Hayton, A.
- ST. MARY'S BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 6):  
Wardlaw, R. (Chairman), 6; Legge, Colonel (Secretary), 6; Anderson, J., 6; Cramp, J. T., 5; Becker, A.,  
4; Becker, J., 4; Markey, J., 5; Morey, J., 5; Hardy, W. Floyd, 2; Hardy, R., 5; Lade, J., 3;  
Lohrey, W., 4; Thorn, F., 4.
- SCOTTSDALE BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 6):  
Tucker, Thos., (Chairman), 6; Winter, Rob., Secretary, 5; Briggs, F. W., 3; Briggs, W., 1; Brunn, F.  
F., 3; Bird, G., 5; Adams, G., 1; Button, Ed., 2; Dyer, W. R., 6; Jones, R., 3; Unwin, S., 1;  
Windsor, J. C., 1; Gofton, J., 1; Heazlewood, C. J., 4; Edwards, W. J., 3; Heazlewood, T. D., 2;  
Wade, J., 2; Richardson, Dr. C. S., 1; Ransom, J., 2; Button, C. S.
- TASMAN'S PENINSULA BOARD.**—Date of formation, 30th September, 1892. (Number of Meetings held, 2):  
McClymont, J. R., M.A., (Chairman), 2; Locke, T. F., (Secretary), 2; Kingston, J., 2; Hanigan, J., 2;  
McClymont, J., 1; Quarrel, H., 1; Kingston, H., 2; O'Toole, P. J., 1; Spotswood, F., 1; Worledge, G., 2;  
Easterbrook, H., 1; Dergess, E. G., 1; Kingston, G., 1; Richardson, E. R., 1.
- ULVERSTONE BOARD.**—Date of formation, 3rd September, 1892. S. W. Millard, (Secretary). 56 Members.  
(Number of Meetings held, 5):  
Only one report has been received.
- WESTBURY BOARD.**—Date of formation, 15th December, 1892. (Number of Meetings held, 3):  
Burke, D., M.H.A., (Chairman), 2; Drew, H. G. J., (Secretary), 1; Edgar, J. C., (ex-Secretary), 3; Hart,  
A., 2; Best, C., 2; Phillips, Stearne, 3; Walker, R., 2; Bendall, S., 2; Field, G., 1; Davern, J., 1;  
Armstrong, T., 1; Beveridge, N., 1; Woolnough, T.; Garrett, J.; Porter, W. G.; Gillam, G.; Sullivan,  
J.; Badcock, S.; Huntington, G.

The Frankford Farmers' Club was the first Board to join, an offer of assistance from that body being received at the first meeting; and all the others began at various periods during the ensuing ten months. Some were Agricultural Associations named in the Schedule of the Council of Agriculture Act, and they became Boards of Agriculture on their own resolution; all others were formed by residents of the Districts in which the Branches have been established who have thought it to their advantage to assist the good work of the Council.

The Council decided not to limit the membership of Boards, but agreed upon a list of duties which each branch is expected to perform. It is gratifying to find that, with scarcely an exception, the Boards have taken up the work most spiritedly, and also that they display an eagerness and a desire to assist in forwarding the interests of agriculture in any and every branch. Many valuable suggestions have been received from them, and whenever questions have been remitted for their consideration they have expressed their opinions freely.

Through these media it will be possible to obtain a better idea of the agriculture of the country, its needs and its advantages, and, at the same time, they should tend to improve the social condition of the farmer, and give him an opportunity to keep more abreast of the time. A few remarks made by the Attorney-General (Hon. N. E. Lewis) at a recent agricultural gathering may be given here to emphasise the foregoing sentence. On the occasion referred to Mr. Lewis said:—"A farmer's life has always seemed to me to be a very isolated one. He rises early in the morning, works hard all day, and has very few opportunities for conversing with his neighbours. At night, if he be not

too tired to move out, his friend's house is so far away that he cannot spend much time with him if he drops in on him for a chat, and so, unlike the city man, he cannot enjoy the advantage of an exchange of opinions with his fellows. It is to that I attribute the great diversity of opinion amongst farmers on any subject affecting them, and, I think, the existence of the Boards of Agriculture throughout the Colony should have the effect of bringing about a healthy attrition of interests which cannot but result in permanent good."

The Boards meet monthly, and, although on some occasions the number of members attending meetings has been small, the meetings have been composed of the right sort of men, energetic and enterprising; and men who want to be up in the race with the farmers of other countries. Were only three men to meet at each place they should, the Council think, be encouraged, for they have a desire to advance agriculture for the benefit of their country, themselves, and their fellows, and the cost of their meetings is but a mere bagatelle. More encouragement might be given them by allowing them the free use of the State Schools for their meetings, and at the same time these buildings would be the more useful to the country, instead of having them shut up from Friday afternoon till Monday morning. Applications for them have been made and refused, but hopes are entertained that they will be granted.

Many very interesting and useful papers have been read at the Board meetings, and by means of these and the discussions they have given rise to, many points of practice have been brought to light. In this way, by what may be termed "comparative agriculture," one farmer can learn from another, and both are enabled to adopt the simplest, cheapest, and best methods of carrying on their work.

The following is a list of the Papers which have been read and discussed at meetings of the Boards up to 30th April, 1893:—

- "Frankford Board Area," by C. I. Knight, of Frankford.
- "Crops grown in and suitable for Frankford," by J. J. Durand, of Frankford.
- "Methods of Cultivation in Frankford," by A. Pritchard, of Frankford.
- "Rust in Wheat," by Clement Johnson, of Arundel, Macquarie Plains.
- "Apple Culture and Apple Markets," by Rev. J. B. W. Woollnough, M.H.A., of Carnarvon.
- "Improvement of Stock," by J. A. Spotswood, of Oakwood.
- "Climate of Frankford," by A. Pritchard, of Frankford.
- "Soil of Frankford," by James Dunn, of Frankford.
- "Frankford Dairying," by A. B. Welch, of Frankford.
- "Fruit Manipulation," by J. J. Durand, of Frankford.
- "Timber of Frankford District," by A. B. Welch, of Frankford.
- "Dairying and Fruit Drying," by J. Marx, of Underwood.
- "Rust in Wheat," by Ellis Dean, of Maryvale, Macquarie Plains.
- "Fruit Evaporation," by J. F. Echlin, of Glen Lynden, Glenorchy.
- "Spraying Fruit Trees," by Dr. Young, of East Devonport.
- "The Soil and its Improvement," by James Anderson, of St. Mary's.
- "Ensilage," by J. W. Cheek, of Cambock, Evandale.
- "The best means of combating the Rabbit Pest in Tasmania," by Ellis Dean, of Maryvale, Macquarie Plains.
- "The Rabbit Nuisance," by D. Hildyard, of Carlton.
- "Manures," by T. H. Mason, of Carnarvon.
- "Fruit Shipments to London," by G. Innes, of Narracoopa, Franklin.
- "Fruit and Potatoes for England," by W. E. Shoobridge, of Bushy Park, Glenora.
- "Protection against Adulteration of Artificial Manures," by Alfred Wright, of Deepwater, New Town.
- "Hints on Butter Making," by Miss G. H. Mason, of Carnarvon.
- "Land Drainage," by C. Easton, of Taranna.
- "Carriage of Perishable Products," by W. E. Shoobridge, of Bushy Park, Glenora.
- "Suggestions for Neutralising Frosts," by F. W. J. Moore, of Hobart.
- "Crop Returns," by G. Easton, of Flowerdale.
- "Noxious Pests," by B. D. Thomas, of West Devonport.
- "Best Constituents for a Permanent Pasture in the St. Mary's District," by Colonel Legge, R.A., Cullenswood House, Cullenswood.
- "Drying Fruit and Vegetables," by W. E. Shoobridge, of Bushy Park, Glenora.
- "Potted Butter," by Miss G. H. Mason, of Carnarvon.
- "Winter Dairying," by James Anderson, of St. Mary's.
- "A List of Questions for Agriculturists," by W. Orr, of Lilydale.
- "Rust in Wheat," 3 Papers by G. Easton, of Flowerdale.
- "Cool Storage," by W. E. Shoobridge, of Bushy Park, Glenora.
- "The Rabbit Question," by E. O. Bisdee, of Lovely Banks, Melton Mowbray.
- "Ensilage," by J. R. Hunt, of Frankford.
- "Potato Disease," by G. H. Easton, of Frankford.
- "Rotation of Crops," by J. M'Clymont, of Koonya.
- "How a Silo was made and filled," by W. E. Shoobridge, of Bushy Park, Glenora.
- "Fruit," by James Dunn, of Frankford.
- "Codlin Moth," by J. F. Echlin, of Glen Lynden, Glenorchy.

- "Hessian Fly," by F. W. J. Moore, of Hobart.
- "Chicory," by W. E. Shoobridge, of Bushy Park, Glenora.
- "Origin of the Method of Prevention of Frost by Smoke," by G. H. Easton, of Flowerdale.
- "Ensilage," by R. G. Ladbury, of Homewood, Scottsdale.
- "The Codlin Moth," by J. L. Smith, of Cambock, Evandale.
- "The Rabbit Question," by James Cox, Clarendon, Evandale.
- "Poultry Farming," by A. B. Humphreys, of Frankford.
- "Dehorning Cattle," by J. A. Spotswood, of Oakwood.
- "The Insecticide property of Tomato Leaves," by L. Murdoch, of Murrayfield, Glenorchy.
- "Pastures," by T. B. Margetts, of Flowerdale.
- "Potato Disease Prevention," by G. H. Easton, of Flowerdale.
- "The Drainage of Land," by T. F. Locke, of Impression Bay.
- "Plant Growth and Manuring," by C. Johnson, of Arundel, Macquarie Plains.

### THE JOURNAL OF THE COUNCIL.

With the object of preserving these papers and keeping a permanent record of the work, the Council decided to issue a Journal. At first it was thought that a bi-monthly publication consisting of 8 pp. foolscap folio, would be sufficient, but it became necessary to issue it at monthly intervals, and up to date of this report nine numbers have been issued. The size has also been increased to 16 pp. It is already a valuable reference, and should become much more so.

### PRESS ASSISTANCE.

The leading newspapers have assisted most cordially in publishing reports of the meetings of the Council and its Branches, and the Journal as it appears is simply a reprint of the matter which is first sent on to the newspapers from the Council, with additional matter of interest to farmers.

### RAILWAY TRAVELLING.

One of the chief items of the Council's expenditure is that incurred for travelling on the Government Railways, and Members have considered that this charge should be remitted entirely, or reduced by the privilege of travelling at single fare being extended to them. The railways would not lose anything, because if members were not travelling to attend Council meetings they would not travel at all, as it is impossible to transact any private business at the same time. The Council meetings being held at such long intervals necessitates a large amount of time to deal with the accumulation of business, and the meetings are held at a place or places where members have little if any business to do. The railway revenue does not gain anything by the charge, because after all it is the Government paying to the Government, but the small vote provided for the Council is considerably reduced thereby. Officers of the Council have to be paid for in the same way.

### THE ENTOMOLOGIST.

The Council's first work was the continuance of that so well begun by the Rev. E. H. Thompson. The lectures he had given on "Insect Pests of the Farm and Orchard" had been very much appreciated, and his work was facilitated by the arrangement of tours which Mr. Thompson made in various parts of the Colony. In this way he demonstrated to farmers and others in a simple and practical way which were their friends and which their foes amongst insects which in their multitude make such mighty forces; and, besides this, he acted as the herald of the Council. Much of the success attained is due to the way in which it has been made known to the farmers, and the Entomologist and the Press have been the means of showing the farmers how they may benefit themselves by using it. Every thoughtful farmer can assist and advance agriculture if he will but make use of the Council and its officers, all of whom have ever shown a readiness to do their utmost for the general good. Details of the Entomologist's work will be found in his Report, which forms Appendix A., and which, although presenting but a brief summary, represents a large amount of study and active industry.

### MODERN DAIRYING.

Immediately the Council was formed, a movement was made in the direction of improving the dairying industry. The Departments of Agriculture in all the sister Colonies were communicated with in order to ascertain the methods adopted by them for the advancement of this important branch of agriculture, and a most generous response was made by each and all. After most careful consideration it was decided to adopt the Queensland system, and as the Government of that Colony was about to lay up one of its travelling dairies under its policy of retrenchment, opportunity was taken to secure the services of the Manager, Mr. James M'Cormick.

In arranging the outfit for the Travelling Dairy it was considered desirable to send out a plant that would not be costly. Farmers do not want to see such things turned out as they would be for an exhibition. They want something that they can provide themselves with at a moderate cost. And the Council have all along recognised that where the average farmer is not a man of unlimited means

it is always best to show what can be done with a little. In fitting out the dairy it was, however, considered that to "spoil the ship for the sake of a ha'porth of tar" would be folly, and Mr. M'Cormick was asked to fix up a plant as cheaply as he could, but not to impair its efficiency in any way. The result was perfectly satisfactory. For the butter-making plant separators and motive power were required, and would be required by any dairyman; but for the cheese-making plant, Mr. M'Cormick said all that he wanted could be made by any ordinary blacksmith, carpenter, and tinker. Accordingly, the plant was made locally under the manager's supervision, Tasmanian wood being used where wood was required, and it has served to show farmers everywhere it has been how cheaply they may obtain one for themselves.

The dairy has visited several centres, working 10 days at each, and all through the interest taken in it has been very keen. Several of the pupils who never saw cheese made before in their lives, have since made and sold good cheese at as high as 9d. per lb. One old farmer, writing to the office, states that the instruction he received from the dairy is worth several hundred pounds yearly to him. He sold all the cheese he could make at 8d. per lb., and had an order for half a ton from Sydney which he was unable to supply. Another gentleman, who resides on one of the Straits islands, came over to the mainland with his daughter, and both attended one or two courses, the result of which, he states, will be a considerable amount per annum increased revenue to him.

The foregoing are instances of individual advantage,—more might be quoted were it necessary to do so,—but the best work of the Travelling Dairy, and the practical advance in the direction of modern dairying made by the Council, is seen in the formation of co-operative dairy companies, and the establishment of butter and cheese factories. Since the Council came into existence factories have been started at Table Cape, Launceston, and Burnie. A company has been formed at Circular Head with headquarters at Stanley, and another at Sheffield for the Kentishbury District. At Ulverstone and at Latrobe efforts, which were not altogether successful, were made to float companies, but in at least one of these places one will be in operation before the present year is out. The Table Cape Factory has been very successful, and the working of both the others has been profitable during the time they have been in existence. Before the close of the present year it is to be hoped that others will be started, and by the end of 1894 at farthest butter will be exported from this Colony to the Old World in quantities.

It is interesting to note in this connection that the starting of these factories has already made a difference in the local butter supply. Not only has the supply been greater and higher of quality, but city grocers found when the winter began that there was not nearly so much potted butter available as in former years. The reason for this was, that farmers who lived near enough to a factory or creamery to take advantage of it found it paid them much better to take their milk to it than to turn it into butter and salt it at home, and the factory, turning out a large quantity of uniform and good quality, found ready sale for all that could be made.

This being so, the development of modern dairying should be the more rapid, because the factories now in work and others that will be started will produce so much more and so much better butter that those who cling to the old system, especially those who do not make a first-class article, will find it difficult to sell what they do make. Consumers will ask for good factory butter, and will take no other, and this demand will so stimulate production that exporting will have to be resorted to for a market for the surplus. Great Britain offers a good market for good butter and good cheese, paying away something like twenty millions of pounds yearly to other countries for it; Tasmanian climate and pastures, accelerated by skilful and combined effort, should hold its own in her markets with the sister colonies, which export large quantities yearly. Representatives of English dairy produce merchants have been making enquiry for Tasmanian butter, and they will be here again for it during the coming spring and summer.

The Council expects the Dairy will be kept working until April, 1894, by which time it should have visited all parts of the Colony. A brief epitome of the work done has been written by the Manager, and appears as Appendix B.

The following is a list of pupils who have received instruction at the hands of the Manager, who, with his trustworthy and capable assistant (Mr. George Phillips), have been most popularly received and appreciated everywhere:—

ST. MARY'S.—Misses M. Targett, G. Oliver, E. Oliver; Messrs. J. Becker, C. Becker, G. Becker, N. Lade, W. Lorhey, G. Oliver, sen., G. Oliver, jun.

LATROBE.—Mrs. Denny (Barrington); Misses Bramich (Barrington), Rundle (Barrington), Rundle, (Launceston); Messrs. Wright (Castra), Briggs (Devonport), Inglis (Latrobe), Boatwright (Latrobe), C. Ball.

BURNIE.—Nominated—Misses Norton-Smith, Gertha Robotham, Ella Robotham, Guy, Somers, Elizabeth Fahey, Belle Pearce; Messrs. A. Joyce, Waters, H. Wiseman. Extra Pupils—Masters Ernest Cox, R. Leonard, F. O'Reilly, T. Borradaile, H. Reid, J. Alexander, L. Jones, Owen Jones; Misses Kane, Borradaile, Steele, Cooper; Messrs. Boatwright, Leonard.

ULVERSTONE.—Nominated—Mesdames Finch, Frampton; Misses Ethel Brown (Penguin), Kane (Penguin), Jessie Williams, M'Keen; Messrs. W. Crawford, F. Heazlewood, F. Williams, Rowe. Extra Pupils—Misses J. Purton, A. Purton, Stones, Appleby, Frampton, Phillips; Messrs. H. Button, C. Fogg, Williams, sen., H. Hazlewood, J. Fogg, Stessiger, A. M. Crawford, Wright, Heathcote; Mrs. Wells.

STANLEY.—Misses Wells, E. Reid, M'Kenzie, Carroll; Mrs. Borradaile; Messrs. Reid, C. J. Dickenson (Duck River), Anthony.

FOREST.—Nominated—Mesdames Boys, Murphy; Misses Annie Murray, Bridget Murray, Clara Wells, Dillon, Blizzard, Ellen House, Lucy King, Bertha King. Extra—Misses Matilda House, Eva Waters, Emma Bellinger, Georgina Medwin, May Medwin, Neena Thorpe, Edith Thorpe, Waters; Messrs. H. Medwin, Murphy; Mrs. Malley.

DUCK RIVER.—Nominated—Misses Nellie Spinks, Eva Marthec, O'Halloran, Ollington, Gale, Gray; Mesdames Lee, Malley; Messrs. Christopher John, John Turner. Extra—Misses Reid, Lydia Gale, O'Connell; Messrs. Wm. Poke, A. Wells, E. Marthec, Reid (Robbins Island); Mrs. Reid (Robbins Island).

MONTAGU.—Nominated—Mr. R. Hill; Misses May Wells, Ada Quilliam, Gertrude Quilliam, Martha Marthec, Martha Williams; Mesdames Green, Williams, Sayward, M'Cabe. Extra—Messrs. Andrew Wilson, Herbert Quilliam, W. Spinks, J. Sayward, Quilliam, Young; Mesdames Horton, Smedley.

BARRINGTON.—Nominated—Misses J. Moore, Cocker, Packet, Best, M. Best, Alice Cocker, Robertson (Frankford); Mesdames Hutton, Smith; Mr. Metcalf. Extra—Misses Bennett, Marshall (Nook), Coventry (Latrobe); Mr. W. Moore.

SHEFFIELD.—Nominated—Misses Jones, Hite, Mason, Hope, Coleman, Oliver, Macfarlane, Jane Richards; Mrs. Manley; Mr. Luttrell. Extra—Miss Wilson; Master Wilson; Mesdames Widnes, H. Hope, Hite, Eastman; Messrs. J. Hope, jun., Manley, Dyer.

LILYDALE.—Nominated—Misses Poxson, Power; Messrs. Offer, Proctor, J. Sulzberger, J. Phillips, J. M'Gaughey, Turner, Bardenhagen; Mr. H. Doak. Extra—Misses Evans, Lyall, Brown, Campbell, Brewer; Messrs. Headlam Brewer, J. Orr, Marx; Mesdames Poxson, Muller.

SCOTSDALE.—Nominated—Mesdames F. W. Briggs, W. Briggs, French, D. M'Lennon; Miss A. James; Messrs. Heazlewood, T. D. Heazlewood, Ladbury, Wade. Extra—Mesdames Campbell, A. Loone, Ranson; Misses Easterbrook, Adams, Salier; Messrs. G. Adams, Hardman.

RINGAROOMA.—Nominated—Messrs. J. Peters, R. Thompson, C. Abel, W. White, A. Diprose, W. A. Phillips, C. Pennefather, H. Heathorn, F. Singline, Wettenhall. Extra—Misses Heathorn, Mabel Heathorn; Mesdames C. Krushka, H. Lade, Diprose.

SPRINGFIELD.—Nominated—Mesdames J. Ranson, R. Ranson, Waller, F. Bowen, Buttrell; Miss A. Ranson; Messrs. J. Ranson, Beattie, A. J. Jessop, Linton. Extra—Messrs. Lowther, R. Ranson; Mrs. Lowther; Misses Targett, James.

### THE FRUIT INDUSTRY.

Recognising the value of the Fruit Industry to the Colony, the Council has from its inception endeavoured to assist its development. Fruitgrowers have done a great deal to make it a success, and, considering the difficulties which have had to be surmounted to bring it to its present stage, they have indeed deserved much greater reward. There are yet many obstacles in the way, and the unfortunate part of the business is that so many growers act in direct opposition to their own interests. The hostile tariffs of the sister Colonies have militated severely against the success of jam-making and fruit-preserving, and the limited population of the Australias, combined with the growth of home production, form a barrier against any successful trade being done in green fruits. It is to the Antipodes we must look for profitable trade in green fruit, and we must also foster the canning and drying of softer fruits if we are to keep up an export trade.

The Council has not been able to do all that it would have liked to do in assisting the export trade with Great Britain, but it has achieved something which, though some may deem it small, is certainly the nucleus of a great advance. It is not the fault of the Council that more tangible and extensive results have not been obtained. Where good fruit is packed, and packed well, it practically goes to its destruction in the cold chambers of the steamships, for although some of it reaches London in very good condition, the bulk of it is damaged by the extreme cold of the refrigerated chambers, much of it being actually frozen when taken out. It is therefore clear that the cold chambers are unsuited to the fruit, and, moreover, they necessarily make the freight high. If the fruit carried safely good samples could pay this freight, but the fact remains that the system of carriage is unsatisfactory, and the expense, heavy at any time, becomes unbearable. It is believed, nay proved, that the fruit does not want to be kept in such a low temperature, and as a consequence the freight charge can be reduced by about one-half. The Council initiated experiments with this object, which proved very successful, and strenuous efforts were made to induce one of the Mail Steamship Companies to give it a trial, but they preferred to act in their own way. Alterations were however made, which partook somewhat of the nature of the Sydney experiments set on foot by the Council, and they have gone to show that the proposals made were in the right direction.

The first movement made was to try and get the Governments of Victoria, New South Wales, and Tasmania to send Home experimental shipments in ventilated holds. Each experiment was to consist of not less than 20,000 cases; the fruit was to be found by the growers, and the freight to be paid by them in the event of the cargoes being landed in good order, but if not, the Governments interested were to pay the freight. In this way it was hoped that the difficulty of safe carriage would be solved. The Tasmanian Government did not favour the proposal further than to promise consideration after the other Governments had been consulted. Victoria was disinclined to act, South Australia was not approached, but the New South Wales Department of Agriculture gave an encouraging response, and took up the idea in another form. When the President of this Council laid our proposals before the Director of Agriculture of that Colony (Mr.



H. C. L. Anderson, M.A.), he at once authorised their Pathologist (Dr. N. A. Cobb, Ph.D.) and their Fruit Expert (Mr. A. H. Benson) to go into the matter thoroughly and to take whatever action might be considered desirable.

The outcome of this was that Messrs. Hudson Brothers, lessees of the Government Meat Markets, Darling Harbour, Sydney, were consulted, and the idea commending itself to them, they agreed to fit up a chamber specially designed to keep fruit at an even temperature. The chamber was fitted, fruit stored in it, and the result was, to use the words of Mr. Benson, "that the question of cool storage was practically solved."

What was actually done at Sydney was to keep a room of 2000 feet space cooled to an even temperature of from 40 to 45 degrees, with fresh air, kept perfectly dry for two months, at a cost of 30s. per week. To put the result of this into easily understandable words, it may be said that instead of taking an insulated chamber not designed for the ventilation required for fruit and, worth £4 per ton for the carriage of meat, ordinary holds worth, in the fruit season, only 25s. per ton can be used, all the apparatus required being a slight insulation of felt against the outside lining, pipes at top and bottom for distribution and collection of air, an exhaust at top for drawing air through the hold, and a box supplied with cold air through which inlet pipes can pass to cool the air and condense the moisture. This does away with the heavy cost of keeping down the temperature of a refrigerated chamber, which requires enormous engine power, and as it would be easy, by means of a moveable partition, to regulate space, it would not be necessary to book more than four weeks before shipment of fruit.

After the success of these experiments had been determined, overtures were made to the Orient S. N. Co. to fit up a hold on similar lines on a guarantee of 3000 cases, the Council endeavouring to have the requisite number collected, growers to take all risk, ship through their own agents, and pay freight in the ordinary way. The Company, however, refused to make the desired alteration, and the experiment could not be made.

Under existing arrangements the Mail Steamship Companies have no interest in making alterations, inasmuch as the space required has to be arranged for some time in advance, and the freight paid irrespective of the way in which fruit is carried. Competition in the over-sea trade may alter this state of things, and the sooner the better. It has been suggested in the Council that an attempt be made to get the shipowners to share the risk by charging a reduced freight and sharing in the profit on fruit sold beyond an amount to be agreed upon. If some arrangement of this kind can be arrived at much good may result, and if the Companies carrying fruit under some such condition reserved the right to carry only good fruit, of suitable variety for the English market, and properly packed, but little fear of success need be entertained. Inspection has been advocated by many, but besides the objections to inspectors, which always comes to the surface, it is difficult to see how the fruit can be inspected satisfactorily.

With a view to going fully into all such points—many other suggestions have been made and considered—the Council has appointed a special Committee to consider and report upon the best means of arranging for a shipment of fruit to London or Liverpool during the season 1894, in a ventilated hold, on lines suggested by the result of the Sydney experiments.

Besides the attention given to the fruit export trade, information has been collected and disseminated in regard to preserving fruit. Inquiry is still being prosecuted, and during the next fruit season it is intended to have an Evaporator at work on similar lines to the Travelling Dairy, and it will be shown at work in the orchards by the Rev. E. H. Thompson. Fruit-drying has already been practised with more or less success, and one gentleman (Mr. W. P. Clennett, of Port Esperance), has turned out prunes which find a most ready sale in Hobart, and have attracted most favourable notice. Large quantities of apples not suited for market, or for which a market cannot be found, might be used for the purpose of making cider, and no doubt there would be a large demand for such a wholesome beverage here and elsewhere. The Council recognises to the fullest extent the importance of stimulating and assisting such industries in every possible way, and hopes are entertained of bringing about a revival of the jam trade. A start has been made in evaporating apples, a good market being opened in New South Wales and Queensland for a large quantity, the superior quality of Tasmanian apples giving them a distinct advantage over American apples.

The Entomologist has done good work amongst orchardists by disseminating information in a most practical form concerning insect pests, and he has also carried out some valuable experiments for combating the ill effects of the "Black Spot." This disease has worked great havoc in some of the Huon orchards, and will prove a difficult enemy to cope with, but the experiments made have had a hopeful result, and served to lead the way for more systematic trials during the present year. This and other matters of a kindred nature are dealt with by the Entomologist himself in Appendix A.

## STOCK DISEASES.

With a view to prevent as far as possible the introduction and spread of diseases and pests affecting the farm &c. as one of the duties imposed upon the Council, the Government were recommended to amend "The Stock Act, 1889." The Council's Resolution forwarded to the Government was as follows:—"That in the opinion of this Council the Stock Act should be so amended as to provide for dealing with all classes of stock for the purpose of investigating causes of and remedies for diseases to which domestic animals may be liable, and for isolation and destruction wherever and whenever absolutely necessary for the good of the Colony as a whole, and that whenever a disease breaks out in any district the Government should at once send a veterinary surgeon to report upon it." This Resolution was sent back by the Honorable the Treasurer with a request that the Council would suggest the lines upon which the Act should be amended. Before doing anything, the whole of the Stock Acts of the Australasian Colonies were procured and a careful digest made of them, in order to frame a skeleton bill that would cover all requirements, and the bill is now under consideration.

A considerable number of cattle have died during the year, and the Council made efforts to ascertain the cause, but were unable to do so, and had to relinquish further investigation through lack of funds. A difference of opinion exists between the Council and the Government on this matter. The Council only did what the Act under which it works prescribes it shall do. Inquiry was made and investigation contemplated with a view to assisting stockowners as a whole and not individuals, and in doing this there was no entrenchment upon the work of any other body or department. No other department has the power to do this, and the Council considered it necessary that something should be done to prevent the loss which was taking place. It was urged that the Council had no right to interfere, and also that the Government could not be expected to send veterinary surgeons to investigate the cause of an animal dying. But the Council had a right and a duty to perform in accordance with the Act, and it was never asked that the cause of one or two animals dying should be ascertained at Government expense. Cattle were dying in numbers in several localities, to all appearances from a similar cause; that cause was not known, nor is it now. If the Council could have ascertained the cause, probably further loss would be prevented, because stockowners could be put upon their guard, and, by the publication of a Bulletin, informed as to what was best to be done. However, from the investigation made, it is fairly certain that there is nothing infectious about the disease, whatever it may be. The deaths were attributed to various wild shrubs and herbs, and whilst it has never been proved that they have caused mortality anywhere, it cannot be definitely asserted that they are not sufficient to cause sickness which may have fatal endings.

## NOXIOUS PESTS.

The best method of dealing with the many pests which agriculturists have to contend with, occupied much of the time of the Council. Information has been obtained from many sources, and several of the Boards have taken the matter up earnestly. A letter from the Honorable the Premier, asking for practical suggestions, was answered by some recommendations which the Council feel sure will, if legislative effect be given thereto, be attended with good results. These suggestions were divided under two heads, one for dealing with pests generally, the other for rabbits; the latter, as will however be seen, being principally confined to an amendment of the Boundary Fences Act.

The following are the recommendations:—

## GENERAL RECOMMENDATIONS FOR DEALING WITH PESTS.

The following Report of the Pests' Committee was adopted:—

The Committee consider that the systems of inspection and punishment hitherto in force have failed to exterminate, failed to diminish, and failed to prevent the spread of pests.

Inspection, the Committee think, involves the expenditure of a large sum of money annually, which is not expended upon the work of extermination, diminution, or prevention. On the contrary, it places the occupier of land in a worse position, as he still has the pest to contend with, and less money to do it with.

Punishment fails because it creates passive resistance, and because the fines inflicted are not used for the purposes of extermination, diminution, or prevention.

The Committee, therefore, make the following recommendations:—

1. That the country be divided into districts to be governed by Councils, which, in addition to other duties devolving upon local governing bodies, shall be charged with that of dealing with pests. (Some general allocation of responsibility, the committee think, may be found in the proposed Local Government Bill.) For convenience, the Committee have styled "governing body" a "municipality."

2. That under Act of Parliament each "municipality" be required to see that residents within its boundaries endeavour to exterminate pests, and that the residents do prevent the spread of pests, each on his own land.

3. That the principal (Pest) Act define that any person shall be held to have endeavoured to exterminate a pest if he can show that he has done so by cutting, grubbing, poisoning, shooting, trapping, stopping burrows, netting, spraying, or in any way calculated to exterminate a pest.

4. That in all cases occupiers or owners shall prevent the spread of pests.

5. That the Crown hold the "municipality" responsible, and the "municipality" hold the occupier or owner of land responsible for preventing the spread of pests.

6. That any policeman, or other person, may notify the "municipality" that "A.B." is not preventing the spread of a pest or pests on his own land.

7. That the "municipality" shall then give "A.B." reasonable notice to prevent the spread of a pest, and on his failure to comply, shall step in and do the work at his ("A.B.'s.") expense.

8. That should the "municipality" fail to do this, then any person in any way likely to be affected by the spread of a pest from "A.B.'s" land shall be entitled to recover damages from the "municipality."

9. That the "municipality" shall keep all roads, streets, reserves, &c., within its boundaries and under its control absolutely free from vegetable pests, and failing to do so shall be liable to be sued by any person having property abutting on or along such road, street, reserve, &c., or who is likely to be injured in any way.

10. That all live fences of any kind shall be kept to a width of not more than 4 ft. at surface of ground.

11. That where pests exist on unoccupied Crown land the "municipality" shall prevent the spread of same at expense of Crown.

12. That where it can be shown that a tenant has the right of five years' occupancy of land, after the extermination of a pest on such land, he shall bear the whole cost of preventing any re-establishment of the pest or spread of same after reappearance, but where his right of occupancy is less, then the owner shall bear a portion of the cost in the following proportion:—Where lease or unexpired portion of same is four years, one-fourth; three years, one-third; two years, one-half; one year, all; and, that in the event of any dispute arising as to the apportionment of cost, the matter be settled by arbitration in the manner provided by the Arbitration Act.

13. That where there are unoccupied private lands on which pests exist the "municipality" shall prevent the spread of a pest and exterminate, and shall recover the expense so incurred by the sale of the land at the expiration of a certain term, provided due notice be given. (A similar power exists in regard to the recovery of rates on unoccupied lands.)

14. That in the case of settled and entailed estates the cost of dealing with matters under this Act be paid by the aforesaid governing bodies, which shall be recouped by an annual charge on the ground on an extinction basis.

In making the above recommendations the Committee hold that it is possible to prevent the spread of any pest, and especially of plant pests, by cutting prior to seeding. Also that prevention always works towards extermination. And, further, that a "municipality," knowing its liability for failing to attend to the spread of pests, will take care that its officers are watchful, and that the man who endeavours to prevent or exterminate can see that his neighbour does not nullify his efforts, and this without proceeding against him in open Court, his remedy being against the governing body of the district. Moreover, any man finding the work of prevention or extermination was being done at his own expense would do it himself because he could do it so much cheaper.

Schedule of Pests.—Animals—Rabbits, hares, native tigers. Birds—Sparrows. Plants—Blackberries, Californian thistle, sweet briar, gorze, May-flowers, Cape weed, Bathurst burr, milk weed, ox-eye daisy, wild convolvulus, horse mint, horehound, charlock, wild turnip. Fungi—Black spot (apples), *Fusicladium*; do. (pears), do.; do. (cherries), *Cylindrisporium*; peach curl leaf, peach yellows, root fungus, *Lycoperdon*. Insects—Codlin moth, light-brown moth, pear slug, mussel scale, American blight, Hessian fly, green beetle, red spider, peach aphis, grass grubs.

"Pest" to mean any pest affecting animals, plants, vegetables, or trees, and which the Governor in Council may from time to time, by Proclamation in the *Gazette*, declare to be a pest within the meaning of the Act.

#### RABBIT RECOMMENDATIONS.

The PRESIDENT brought up the Report of the Rabbit Committee. Information had been obtained from 39 landholders and 7 Boards and meetings. The Committee was not giving its own opinion in the matter.

The Report was as follows:—

Having carefully read and tabulated the replies to queries of Council received from 39 leading landowners and 7 Boards and meetings, we find that—

1. It is evident that wire netting under certain circumstances is considered one of the best methods of combating the pest, as it can then be localised and destroyed by any efficient means.

2. That while poisoning is by many considered a useful way of destroying rabbits on a large scale, yet it should not be compulsory, and cannot be simultaneous.

3. The adjoining owners should, under due arbitration, be compelled to join, when required, in defined proportions in making or erecting rabbit-proof fences, and that cost of erection might be shared by long-lease tenants and mortgagees.

4. That power should be given to proper authorities, after due notice, to enter upon infected land, and take proper steps to destroy the rabbits at owner's or occupier's cost.

5. That opinions are greatly divided as to whether local or central authority is best for carrying out any system of rabbit destruction.

6. Opinions were also divided as to purchase of skins by Government.

7. It was generally held that Government should assist in the purchase of netting.

The following Resolutions were adopted by the Council:—

1. That the Boundary Fences Act should be so amended as to permit duly appointed arbitrators to order, in their discretion, that boundary fences be made or erected rabbit-proof, in such a way as they may direct, and shall further have power to apportion the cost of such fence as between the respective owners, or as between private owners and the Government, and shall specially order how or by what means such fence shall be erected, and should it appear to arbitrators that the necessity for a rabbit proof fence has arisen through neglect of tenant, then they shall have power to determine the lease in 12 months.

2. That when after due notice, given twice at an interval of not less than 21 days, the occupier of any land neglect to take efficient steps to destroy rabbits, the proper authority shall have power to enter forthwith by whomsoever it shall specially appoint on such lands to destroy such rabbits, using means deemed most advisable, the cost of so doing to be recoverable on Justice's order; that except as hereinbefore provided, it shall not be competent for any authority to order the laying of poison.

3. That in all cases where outlay is ordered under the Boundary Fences Act (amended as proposed) to further the destruction of rabbits, it shall be competent for any owner affected by such outlay to apply to the authorities to award that the immediate outlay of his proportion of the amount shall be paid by the Government, to be recouped by annual payments, which shall be charged immediately following the Real Estate Duty on such land.

4. That wire netting be procured by the Government, to order, and supplied on terms as above; also phosphorous.

5. That any form of Government purchase of skins has a tendency detrimental to the ultimate clearing of rabbits.

6. That the Report and Resolutions as a whole be adopted.

## BULLETINS.

The Council has had prepared, and has issued, three bulletins, and, besides this, undertook the distribution of the Handbook on Insect Pests prepared by the Rev. E. H. Thompson, authority for which was given prior to the establishment of the Council. That useful book was very largely applied for, and was sent to many others who did not apply. The plan adopted for distribution was to obtain from the Secretaries of Agricultural and Horticultural Societies full lists of their members, and the first publications were sent to them, it being considered that all who took a real interest in agricultural progress would be members of such Societies. The Bulletins issued directly by the Council dealt with Modern Dairying, Rust in Wheat, and Permanent Pasturage. One on Black Spot will shortly be issued.

## WHEAT-GROWING.

A couple of months before the Council came into existence, the third Conference on Rust in Wheat was held at Adelaide. It was the first of the three Intercolonial Conferences at which this Colony has been represented, the Rev. E. H. Thompson being the Tasmanian delegate. Since he has been connected with the Council he has represented it on the Nomenclature Committee appointed by that Conference, and brought back from Sydney the 60 varieties of wheats, which the Committee have styled "true wheats," the names of which are to be definitely settled upon. When this is done a distinct advance will be made, and it is one that merits the support of every farmer. As matters stand at present, there are hundreds of names given to wheats, many being known by a score or more different names. If, however, the 60 varieties selected from upwards of 400 by the Nomenclature Committee at Sydney, in March last as the best are named and recommended there should be much less confusion.

So far the Council is not in a position to record much in this matter of experimenting with wheat, beyond the stimulating fact that the farmers throughout the Colony have displayed a hearty willingness to assist. In Mr. Frank Maddox, of Eastfield, Newnham, the Council has discovered a most enthusiastic, careful, and skilled wheat-grower, and he readily agreed to carry out systematic experiments for the benefit of the Colony. The Council hoped to assist Mr. Maddox by finding him seed and manures, and fencing off the experiment paddock, but were unable to do so through lack of funds. Mr. Maddox, however, with a patriotism that is most praiseworthy, has done this himself, and at an initial cost of something like £60, has planned out, cultivated, and planted 198 plots of wheats. Of these, 60 are planted with the "true wheats" sent out by the Nomenclature Committee, and there are also a number of Swedish wheats imported by the Queensland Department of Agriculture, and forwarded here for trial.

The wheats sent out from the Council's Office last year were cheerfully taken in hand by many farmers, but it was very late before they were despatched; they were only received from Victoria in June, and as there was no convenience for dealing with them, it was the end of that month before they were sent out. A few reports have been received, but in nearly all cases they remark that the season was too far advanced when they were planted. This year, however, some 250 lots have been distributed through the Boards in good time, and the result of the growth in so many different parts of the Colony of the same wheats will be very useful and interesting. The names of the wheats distributed are as follows:—Blount's Lamtrigg, Steinwedel, Leake's, Talavera, Queensland Defiance, Medeah, Farmer's Friend, Smith's Nonpareil, Town and Country, Allora Spring, Ward's Prolific, Queensland Belatourka, Egyptian Mummy, White Hogan, Summer Club, Blount's Fyfe, Broderick's, Quartz, Bega, Australian Glory, Fluor Spar, Improved Fyfe, Manitoba, Red Californian, Victorian Defiance, Rattling Tom, Fillbag, Squareheaded Sicilian, Ward's Prolific (Marshall's White), Anglo-Australian, Jacinth, 58A, Tourmaline, Sicilian Baart, Jorden's Niagara, Cooke's, Saskatchewan Fyfe, Ladoga, King's Jubilee. Swedish wheats—Urtoba, Squarehead, Bestehorns, Count Waldersdorff, Kaiser, Dwarf, Trump, Beseler's Brown Club Head, Ultuna (red bearded), Schilf. Japanese wheats—Shirogara (white), Akagara (red).

## AN AGRICULTURAL MUSEUM.

Had there been sufficient room available in connection with the Council's Office, a start would have been made with the arrangement of an Agricultural Museum, which would be of great advantage to farmers. Some time must elapse before a good collection can be got together, but the sooner a beginning is made the better.

Farmers frequently make inquiries about plants, seeds, &c., and it is not always easy to obtain answers for them, but, if each plant could be kept on view in various forms, there is scarcely a farmer who would not look into the room when in town, and gain a practical knowledge of it. Efforts would be made to get a true plant, and others that were confounded with it would be shown alongside of it. The advantage of this would be great in itself, but, if with this full information concerning its habits of growth, yielding qualities, &c. were given, each visit to the place would result in permanent good. Many farmers living in districts closely allied to each other grow the same variety of wheat or oats or some other plant, but know it by different names. How much better would it be to have the true variety at the one centre, where all could see it.

Offers of machinery have been made for permanent exhibits, but they could not be accepted, owing to want of space. In this direction there would be much permanent good result, because many a man wanting a particular machine knows not which to buy, and cannot tell which is best unless he can see several makes together. If they could be seen at the Council's Offices farmers could see them, and after deciding upon the one best suited, go and do their business with the agents. The machinery would help to make the Museum attractive, and the only cost to the Government would be that of providing space for the exhibits, the manufacturers or their agents defraying all cost of removal to and fro.

Besides the items mentioned, all kinds of animal disease, pests, and the natural enemies of pests could be displayed, and the Museum made one of the best factors in the education of farmers and those who intend to be farmers.

### AGRICULTURAL EDUCATION.

The idea of affording technical instruction in agriculture received very careful attention, and a scheme was drawn up and recommended to the Government, but nothing more was heard of it. This scheme provides for teaching the scientific side of the work to the sons of farmers and others learning to be farmers at a moderate cost, and will, the Council hope, be carried into effect.

A proposal made by Mr. H. S. Steer, B.A., Principal of Horton College, for establishing an Agricultural School in connection with that institution received consideration, but want of funds prohibited the Council from doing anything in the matter.

### EXPERIMENTS.

Besides the experiments with wheats before alluded to, arrangements are being made for experimenting with a mixture of grasses for permanent pasture and also with potatoes. The grasses will be handed over to the Boards for experiment, and Mr. Lord, of Sheffield, has consented to conduct experiments with potatoes on lines to be suggested by the Council.

### LICENSING STALLIONS AND BULLS.

In October last a Resolution of the Council to recommend the Government to impose a licence fee of £10 per annum on all stallions placed at the service of the public was submitted to the various Branches then established for an expression of opinion thereon. Several of the Boards on their own Resolutions also dealt with licensing bulls. The result was as follows:—

#### HORSES.

- Lilydale*.—Negatived, 6 to 4.
- Macquarie Plains*.—£10 carried.
- Sorell*.—£5.
- Richmond*.—£5 on stallions over 2 years old.
- Flomerdale*.—Stallions placed at the service of the public to be examined by a veterinary surgeon, and not allowed to travel unless certified sound; also, blood stallions to be limited to 50 mares, and draught stallions to 30 mares.
- Glenorchy*.—£10 affirmed by 7 to 1.
- Sheffield*.—£10 affirmed by 18 to 9.
- Ringarooma*.—£10 affirmed.
- St. Mary's*.—Examination by a veterinary surgeon recommended, a fee of £3 to be paid by owner to cover cost of same.
- Evandale*.—£10 on stallions over 2 years old, but not to be levied until 1894, so as to give owners a chance of getting rid of the inferior animals.
- Barrington*.—£10 on stallions over 2 years old.
- Railton*.—£10 affirmed.
- Scottsdale*.—Affirmed, £10 on blood and £7 10s. on draught stallions.

#### BULLS.

The following Boards debated proposals to tax bulls, with the results given:—

- Richmond*.—10s. on bulls over 2 years old.
- Carnarvon and Oakwood*.—10s. per year on all bulls.
- Frankford*.—That all bulls be taxed.
- Sorell*.—£1 1s. on bulls over 6 months old.
- Barrington*.—Negatived a proposal that all bulls be taxed, by 8 to 4.
- New Norfolk*.—Resolved, that a tax of from 2 to 5 guineas be levied on all bulls over 5 years old.
- Geeveston*.—Affirmed a tax on bulls over 12 months old.

A most valuable communication was read from Mr. J. W. Norton Smith on this subject. Mr. Norton Smith, as Manager of the V.D.L. Company's estates, is exceedingly well qualified to speak on such matters, his Company having in days long since past imported horses, cattle, and sheep to Tasmania that have made names for themselves wherever they or their descendants have gone. In almost all the best flocks and herds in the colonies of animals of their class strains of

their blood can be traced, and doubtless were such a tax as suggested imposed the Company might do something of the same kind again. Certain it is that so long as the breeding of mongrel stock is allowed to go on unhindered, neither the V.D.L. Company nor individual stockowners will incur the expense and risk of importing good animals.

#### INTRODUCTION OF PESTS.

The Council has considered the question of dealing with the introduction of injurious insects and fungoid pests, which can at present go on without any check. Like all other matters of a similar nature, it is difficult to make any method effectual, and at the same time guard against vexatious details. Very many of these pests may be brought in on very small and very delicate plants, which on being submitted to any disinfecting influence would succumb. To make a regulation thoroughly effectual, every plant brought into the Colony by passengers who might receive a small pot plant as a gift from a friend elsewhere would have to undergo quarantine, and the greatest care would have to be taken to prevent the fatal injury of the plant. This would mean that skilled inspectors would be required at the various ports of landing, because the ordinary fruit inspector would not, and cannot be expected, to know the strength of delicate ornamental shrubs. But, on the other hand, it must not be forgotten that a lady cannot bring in her pet lap-dog without it undergoes a lengthy period of quarantine, and if the vexation can be borne for a dog, surely it can for a small plant.

The matter has received the most careful consideration, and various solutions have been prepared into which trees and plants might be dipped. These have been tested by experts, and as soon as the final decisions are arrived at a recommendation will be made.

#### PROSPECTIVE COLONISTS.

Inquiries have been made by residents of India, Texas, and Minnesota, U.S.A., concerning the facilities offered for settlement in this Colony, and for information regarding the soil and its capabilities, &c. The fullest information available has been supplied, the Survey and Lands and Statistical Departments having most cordially assisted in this matter.

#### ACKNOWLEDGMENTS.

The Council has to acknowledge the very great assistance received from Baron Sir Ferdinand von Mueller, K.C.M.G., &c., Government Botanist, Victoria; Mr. Peter M'Lean, Under Secretary for Agriculture, Queensland, who during a visit here imparted most valuable advice in regard to the working of the Department; Dr. N. A. Cobb, Ph.D, Vegetable Pathologist, and Mr. A. H. Benson, Fruit Expert, N.S.W. Department of Agriculture; Mr. A. N. Pearson, Agricultural Chemist, and Mr. D. M'Alpine, Vegetable Pathologist, Victorian Department of Agriculture; Mr. Alex. Bruce, Chief Inspector of Stock, N.S.W.; the Secretaries for Agriculture in all the Australasian Colonies; Mr. W. Farrer, Queanbeyan, N.S.W.; Professor Sanborn, Utah Experimental Station, U.S.A.; Professors Wickson and Hilgard, Californian Agricultural College, Berkley, Cal., U.S.A.; Mr. M. Murphy, F.L.S., Canterbury, N.Z.; Mr. Leonard Rodway, L.D.S., Hobart; Mr. A. Park, M.R.C.V.S., Hobart; Mr. W. F. Ward, Government Analyst, Hobart,—all of whom have at all times responded most readily when they have been asked for information on any matter submitted to them.

#### LIBRARY.

The need of a reference library is very much felt. At present, beyond a few Bulletins forwarded by other Departments, the Council has nothing to refer to, and they cannot be made use of as much as desirable through lack of accommodation.

#### CORRESPONDENCE.

Upwards of 1000 letters have been written and despatched from the Office during the year with which this Report deals, irrespective of circulars and a few telegrams. Considering that the year's work alluded to is practically only 10 months, the Secretary only being appointed within five days of the middle of June, and no office or office convenience being available until July 3, this shows how much the Department has been made use of. As it becomes better known its influence for good will be extended, and those for whose benefit it was created will derive much greater advantage from it.

#### FINANCE.

In submitting a financial statement for the year, the Council would respectfully ask that the money voted by Parliament for the Council be placed to its credit at a bank. All accounts would then be submitted to the Finance Committee for approval, and on the approval of that Committee be passed and paid. The Council would always know its financial position better, and having complete control of its vote would be able to finance with it so as to provide for experiments or investigations considered desirable. The accounts would be open to the Audit Department as well, so that there would be a double system of audit always.

In asking this concession nothing more is sought than the extension of the practice followed in regard to Road Trusts, Town Boards, Municipalities, &c., and as several of the Members of the Council are also members of one or more of these bodies, they feel it would be the more advantageous if the same system were followed in regard to this body.

The following is a statement of the Finances of the Council for the year beginning May 1st, 1892, and ending April 30th, 1893:—

## RECEIPTS.

	£	s.	d.
1892. Legislative provision, "Agricultural Education" .....	1000	0	0
Excess vote under Governor in Council's authority.....	285	0	0
*Dairy Plant, charged to a Suspense Account .....	166	0	0
*Office furniture, apparatus, &c.....	49	12	4
1893. Legislative provision, "Council of Agriculture".....	1550	0	0
	<u>£3050</u>	<u>12</u>	<u>4</u>

## EXPENDITURE.

	£	s.	d.
Salaries, Secretary and Entomologist .....	497	18	4
Travelling Expenses, Members and Officers .....	251	14	3
Railway Fares, Members and Officers, exclusive of Dairy .....	192	3	1
Dairy Expenditure, Salaries, Railway Charges.....	417	4	4
Amount paid for Dairy Plant .....	166	0	0
Amount paid for Furniture, Apparatus, &c.....	49	12	4
Miscellaneous—Printing, Advertising, Freights, Manures, Oils, Seeds, Chemicals, Stationery, Rent, &c.....	252	15	10
Amount expended out of vote for "Agricultural Education" before Council appointed.....	264	12	3
By Balance .....	958	11	11
	<u>£3050</u>	<u>12</u>	<u>4</u>

Respectfully submitted,

W. E. SHOOBRIDGE, *President.*

J. W. CHEEK.

J. R. PILLINGER.

FRED. W. BRIGGS.

JAMES COX.

ALFRED WRIGHT.

JOHN HOPE.

GEO. E. PIESSE.

GEORGE INNES.

F. W. J. MOORE, *Secretary.*

*The Hon. the Treasurer.*

\* NOTE.—In the foregoing accounts the amounts paid for the Dairy Plant and for Office Furniture, &c. have been treated as *Assets* as well as *Liabilities*, inasmuch as they are still of even value to the Council, and would, if sold, reimburse the Government almost, if not quite, to the full extent of their original cost, the dairy plant especially having been supplied at much less than its ordinary market value.

## ANNUAL REPORT.—INTRODUCTORY ADDRESS BY THE PRESIDENT.

*To Members of the Council of Agriculture.*

GENTLEMEN,

AFTER a year's work, it is pleasant to find we have given satisfaction to so many people, and that we have had so much success.

It is evident our work was needed, or we could not have secured the co-operation of so many farmers, because it must be confessed that as a rule farmers are not disposed to unite for mutual help.

No occupation promotes an independent character like farming, especially when men go into the forest and hew out homes for themselves. They get their returns directly from nature, and rely on their own labour and skill to secure the means whereby they live, and as long as they are able to do this in moderate comfort they do not trouble themselves how others are living; but when they find that for some reason or other their labour is ill rewarded, and the necessities of life are pressing them hard, slowly they are forced into considering their position in regard to other members of society. As the food producers, farmers soon find they hold a most important place, but their reward is by no means equal to their services.

Dwellers in cities depend more on others, and with the appliances of quick transit and ready communication naturally combine more easily, and having to deal with the products of a great many farmers in concentrated form, readily control exchange, of course, to their own advantage.

Again, through having to compete in the markets of the world, farmers have to meet the worst paid labour and most favourable conditions for production to be found anywhere, and so, when the price of labour is raised and of products lowered, when crops are destroyed by pests, and rents and taxes and interest increased, there comes a time when farmers are forced to look for assistance outside their farms, and naturally will gladly avail themselves of the help promised by such an agency as this Council, because we are able to give a voice to their necessities, and show them the reason and nature of their difficulties, and put them in the way of removing them; for there is not the slightest doubt that farmers are able to hold a better position if they but knew how to use the means to secure it—to slightly alter the words of an old poet, "O thrice happy husbandmen, if they did but know their own strength": the ability and strength are there, it needs but a united and intelligent effort to apply it.

Setting this before us as the reason of our existence, it is easy to see the cause of our success, and the lines on which we must work to continue it.

Through our Branches, which are the backbone of our system, we must reach every farmer and bring them together for mutual help; through our journal we must enable them to communicate their ideas and receive the information we collect from everywhere; through our experts, give them practical instruction in the most improved methods and appliances of production, and the means of combating pests; through each member of this Council an intelligent sympathy and ready help; and lastly, through our Secretary, keep the whole in order, and maintain a constant intercourse with the heads of Government, and so enable them to give legislative effect to the requirements of farmers.

W. E. SHOOBRIDGE, *President.*

21st June, 1893.

## APPENDIX A.

## THE ENTOMOLOGIST'S REPORT.

*Franklin, 2nd June, 1893.**The Secretary Council of Agriculture.*

SIR,

I HAVE the honor to report the result of the last year's work up to the end of May, 1893.

The two subjects which occupied the principal part of my time were the "Black Spot" (*Fusicladium dendriticum*), and the Rust in Wheat. The first of these diseases was the direct cause of my appointment, and has received the most attention. An exhaustive series of experiments (see Report dated 22nd May, 1893,) was undertaken to investigate the duration of the vitality of the spores of the fungus, the susceptibility of different varieties of fruit, and the relative effect of different spraying compounds. At the same time practical experiments were also undertaken to test the value of different spraying compounds. With the consent of the owners several orchards in different parts of the colony were sprayed under my personal supervision, with the result that four sprays proved satisfactory in subduing the ravages of the fungus. As the question of the cost of spraying is really at the bottom of the whole matter, my efforts have been directed to secure the best and cheapest solution, and this, I think, has been found in the Bordeaux mixture. The whole subject is surrounded by very many technical difficulties, and I must here acknowledge the very valuable assistance I have received from Dr. H. M. Madden, of Edgehill, Franklin, to whom I submitted some of the somewhat complicated chemical questions involved, and who, I venture to hope, has suggested a means by which, instead of the repeated applications which add so much to the cost of spraying, one, or at the most two sprayings will be sufficient for the whole season. Dr. Madden has practically proved by actual experiments the possibility of "fixing" the sprays on the trees and foliage in such a way that they will be so imprisoned as not to be washed off easily, but will only be slowly and gradually acted upon by the action of the atmosphere and dews. If this is accomplished, then the whole question of spraying with a maximum of results at a minimum of cost is solved. This season it is proposed to spray on a larger scale, and this point as well as many others will be thoroughly tested from a practical and commercial point of view.

The rust in wheat question, as all farmers know to their cost, is a most important one, and I am pleased to be able to report that as a result of the thorough and persistent efforts of the Intercolonial Conferences, the subject is within a measurable distance of being finally settled. It has resolved itself into a very narrow



compass. Farmers who desire to escape the losses, amounting to thousands of pounds every year (in 1889 to £30,000 in this Colony), will have to adopt rust-resistant varieties of wheat, and go in for earlier sowing, whenever possible, as well as thinner sowing, &c. I am glad to say that, thanks to the enthusiasm and warm public spirit shown by Mr. Frank Maddox, of Eastfield, Newnham, East Tamar, Tasmania, we will be able to display a series of experimental plots of wheat, which, I feel sure will, in point of carefulness and thoroughness, compare favourably with anything of the kind which has been done elsewhere. Mr. Maddox has devoted 7 acres of his farm to this important work, and this year (1893) there are no less than 198 plots, varying from 8 rods downwards, and sown with many of the rarer and newer varieties of wheat. Some portion of the ground has been set on one side to test the relative value of various manures, and all through the plots have been most carefully laid out, while at the same time due provision has been made for further experiments next year, by leaving alternate plots which this season are under green fallow. As I personally assisted Mr. Maddox in sowing these wheats, I can testify to the thoroughness of his plans, and I have to thank him for much kindness and assistance. In the same way, it is only fitting that I should call attention to the unvarying readiness of all the Members of the Intercolonial Wheat Conference, and especially to Mr. Wm. Farrer, of Queanbeyan, New South Wales, to whom this Colony is indebted for many very valuable samples of seed wheats, many of them new cross-breeds which he considers to be suited to this Colony.

Amongst other matters which have engaged my attention has been the potato disease, which appeared in several parts of the Colony. I am thankful to be able to report that it is not the dreaded *Phytophthora infestans* which does so much injury to the crops in the old country, but is, I am convinced, due in many cases to the over-cropping and planting the same seed year after year in the same ground—in other words, the seed is run out. A change of seed is a matter of the first importance.

While last year I replied to 1428 letters of inquiry on all subjects, my correspondence during the past five months of this year has been as follows:—

I have received and replied to 105 letters on entomological matters, 37 on pathological subjects, and I have identified and described 301 insects, and have named 30 odd kinds of apples. One fungus which has appeared on the N. W. Coast on grasses; &c., threatens to do much injury, and I am now investigating it. Up to the end of last year I delivered 79 lectures on Insect Pests, Bee Culture, Horticulture, and Rust in Wheat. Since the beginning of this year the plan of my work was arranged differently, and in place of constantly moving about, it was decided that I should spend a longer time in each place, and as far as possible ascertain the peculiar needs of the locality and attend to them on the spot. I meet the farmers and others, and am able to personally reply to any questions they may desire to put to me, supplementing my visit by lecturing in the evenings. Altogether 56 places have been visited in the Colony, and many hundreds of queries have been replied to. It is gratifying to find that much interest is taken in my work, and in proof of this, when I was present at some of the Northern Shows last April, I was surrounded by visitors during the whole time, supplying and seeking information.

The subjects which are now engaging my attention are, among others:—The "Black Spot" and other fruit fungi; Rust in wheat and cereal fungoid attacks; the destruction of various insect pests attacking fruit trees; the improvement of the varieties of fruit grown in Tasmania; the adoption of a systematic and universal nomenclature of our fruit in place of the present confusion; and many other minor matters of entomological and pathological interest.

I have, &c.

The Secretary, Council of Agriculture.

EDWD. H. THOMPSON.

## APPENDIX B.

### THE TRAVELLING DAIRY.

SIR,

As the operations of the Dairy in the northern portion of the Colony are now approaching conclusion, I beg respectfully to submit a *resumé* of the work done since October last.

#### ST. MARY'S.

Commencing work at St. Mary's on 7th October, in the presence of many experienced and well-informed dairymen, and under a fire of adverse and uncomplimentary criticism from self-styled dairy experts, the task of teaching was rendered somewhat difficult, as the prejudices of many years' standing existing in the minds of these gentlemen were almost insurmountable. It is, however, gratifying to learn that some of the best dairymen in the Colony who carry on their occupation in this district have since been liberal-minded enough to admit that the system of dairying advocated by myself is superior in many respects to that hitherto carried on in Tasmania.

#### LATROBE.

In the middle of October the plant was removed to Latrobe, and in this centre very considerable interest was taken in the work by farmers from the surrounding districts, some of the pupils instructed here having since entered into correspondence with me, one gentleman being now extensively engaged in the manufacture of cheese, a considerable quantity of which he exports to the other Colonies.

#### BURNIE.

At Burnie, where work was commenced early in November, the interest taken in the operations were of the highest possible character, the farmers coming into the town at great personal inconvenience to witness the processes of cheese and butter-making. Thanks to the energy of Messrs. Norton-Smith and Jones, who were untiring in their endeavours to render my visit a success, the farmers of the district have formed themselves into a co-operative company and have started a butter and cheese factory at Coo-ee Creek, near

Burnie, where machinery for treating 3000 gallons of milk daily has been erected. The appointments of this factory (which I have had the pleasure of inspecting) leave nothing to be desired, and the co-operative companies now in course of formation would do well to work upon the lines adopted by the energetic directors of the Emu Bay Butter Factory.

#### ULVERSTONE.

The result of my operations at Burnie was doubtless the reason the stay of the Dairy at Ulverstone (the next place visited) was attended with such marked success, a number of farmers sending their wives and daughters to be instructed. An opportunity was afforded the farmers of the Leven District of hearing an address on "Agriculture," delivered by Mr. Peter McLean, Under Secretary for Agriculture in Queensland, which was pronounced by the audience to have been the most practical lecture they ever had the pleasure of listening to. A meeting was also convened for the purpose of starting a co-operative butter and cheese factory in the District, and I believe the interest taken in the movement by Dr. McCall, M.H.A., and Messrs. Collett and Crawford will be the cause of the company being in active operation this year.

#### CIRCULAR HEAD.

Early in December the Dairy commenced operations at Stanley, and during its stay in the Circular Head District four places were visited in turn. The greatest enthusiasm was manifested in the work by the farmers from Stanley to Montagu and the result of the visit is now taking practical shape, a factory, which bids fair to become one of the largest of its kind in Australia, being now in course of erection. The residents of Circular Head have opportunities afforded them by nature of developing the dairying industry which are not enjoyed by those living in many other districts in the Colony, and I feel sanguine as to the results of their enterprise in this direction.

#### BARRINGTON AND SHEFFIELD.

The districts of Barrington and Sheffield were visited in February last, and here again a fine field for dairying on an extensive scale presents itself; the opportunity afforded them by a visit of the Travelling Dairy being availed of by the farmers, who have now successfully floated a butter and cheese factory at Sheffield.

#### NORTH-EASTERN DISTRICTS.

My operations at Lilydale, Scottsdale, Ringarooma, and Springfield (where the Dairy is at present located) have been the means of proving conclusively to the farmers that these respective districts fully bear out the high reputation they always have held as dairying centres. What is required of the farmers in the north-eastern portion of the Colony is greater determination to pull together, and not to allow any petty jealousies to interfere with the development of an industry which must eventually become one of the mainstays of the Colony. If no steps are taken to establish a central co-operative factory at Scottsdale the advantages offered to farmers by the Tasmanian Dairy Association should be accepted unreservedly. No practical good will result from the District being divided in opinion as to the desirableness of erecting small factories, and each one entering into competition for the milk supply. One central factory on a large scale would be of more benefit to the community than half a dozen small ones.

#### INQUIRIES.

Independent of the practical instruction given in each district, a vast amount of information has been disseminated by correspondence with people residing in districts which the dairy has not visited. Since last October upwards of 300 letters requesting information on butter and cheese-making have been answered by myself.

The applications for permission to become pupils have been very numerous. 219 persons (male and female) have been instructed since the Dairy started, and it is very satisfactory to learn that many of their number have been materially benefited by the instruction they have received.

#### MILK SUPPLIED.

The total milk supply to date amounts to 7341 $\frac{3}{4}$  gallons; the largest quantity (725 $\frac{1}{2}$  gallons) having been supplied at Sheffield, while Burnie ranks second with 689 $\frac{1}{2}$  gallons.

#### RESULTS.

The analysis of the butter return shows that more butter was made from a given quantity of milk at Springfield, the average at that place being 1 lb. of butter from 15 $\frac{1}{2}$  pints of milk, Sheffield coming next with 1 lb. from rather more than 16 pints.

#### ADVICE TO FACTORY PROMOTERS.

A word of advice to the factories about to be started will perhaps be not altogether out of place here, as to the importance of employing none but thoroughly competent managers. Through incompetency many disastrous failures have occurred in the other colonies, and I trust the directors of factories will see the expediency of thoroughly satisfying themselves as to their manager's ability before engaging him.

#### VALEDICTORY.

During my eight months' travel in the colony I have met with nothing but kindness and consideration at the hands of the farmers generally; and I feel certain that the spirit which has animated them in receiving the Dairy so heartily will be more than recompensed by the success which must attend their efforts in the near future.

JAMES M'CORMICK, *Manager.*

*To the Secretary, Department of Agriculture, Hobart.*