

Overview of Tasmanian agriculture

P.F. Williams

Department of Agriculture, Hobart Tasmania 7001

Introduction

Relative to other States of the Commonwealth, Tasmania has a very diverse form of agriculture and a large proportion of small holdings. This diversity is a result of differences in climate, topography and soil type which occur over relatively short distances. Another unique feature of Tasmania is that it is the most decentralised of all the Australian States with only 40% of the population residing

in the capital city. This can be contrasted with States such as Victoria, South Australia and Western Australia where at least 70% of the population lives in the capital city. Thus, throughout the State the economy of many small towns is dependent upon the prosperity of agriculture.

Climate and soils

The climatic diversity is reflected in the steep rainfall gradient that occurs particularly on the North West Coast and through the Central Midlands, as shown on the accompanying map. Another feature is the unequal distribution, with the West Coast receiving in excess of 1,500mm and the Eastern half of the State receiving only 500mm.

In general, Tasmanian temperatures do not fluctuate greatly. This low fluctuation is due to heat absorption by the seas which produces abnormally mild winters and cool summers for the particular latitude.

However, the Central Midlands does show some continental characteristics. The majority of the agricultural areas have a mean January temperature of 17°C. The mean July temperature is approximately 5°C.

Frosts are possibly more important than mean temperature, and are common over the greater part of the State. During winter frosts are an everyday occurrence in inland areas and at higher altitudes there are no frost-free months. The occurrence of these frosts has a major influence on the distribution of many crops.

Generally Tasmanian soils are moderately to strongly leached. In addition, most are acid in the upper profile. The most common soils are podzolic, an exception being the krasnozems of the North West and North East. The Tasmanian soils are generally high in organic matter which is a reflection on the humid climate and low temperatures. Like other Australian soils, Tasmanian soils by world standards are low in fertility, particularly phosphorus and potassium. The majority of the cropping tends to be restricted to the krasnozem soil type or younger alluvial soils.

Overall then, soils, climate and topography restrict agriculture to approximately one third of the total land area of the State. Of this, approximately 40% is sown pasture, crops utilise and the remainder is of low productivity consisting of extensive grazing land and bush run with native pastures. It is worthy of note that the productivity of the prime agricultural areas is extremely high and the 31/27 of the area devoted to cropping contributes 25% of the gross value of production.



Contribution to the economy

The farm sector is a significant contributor both directly and indirectly to the State's economy. In general terms, the total contribution of agriculture is approximately the same as it was ten years ago although there have been significant rearrangements between industries. Although production levels and values have been maintained in real terms the direct employment has declined by approximately 3,000 jobs or 30% in the last ten years. The major rearrangement between industries has been the decline in the Dairy Industry and an increase in the cropping, particularly vegetables. The pie chart summarises the present situation.

I now intend to consider the major sectors of Tasmanian agriculture, their location within the State and their contribution.

Meat products and wool

As shown in the pie chart of gross value, the animal industries make the largest contribution to agriculture's gross value of production. A more detailed breakdown shows that wool contributes approximately \$60m, beef a further \$60m and sheep meat \$20m. The pig and poultry industry only contribute approximately \$20m between them.

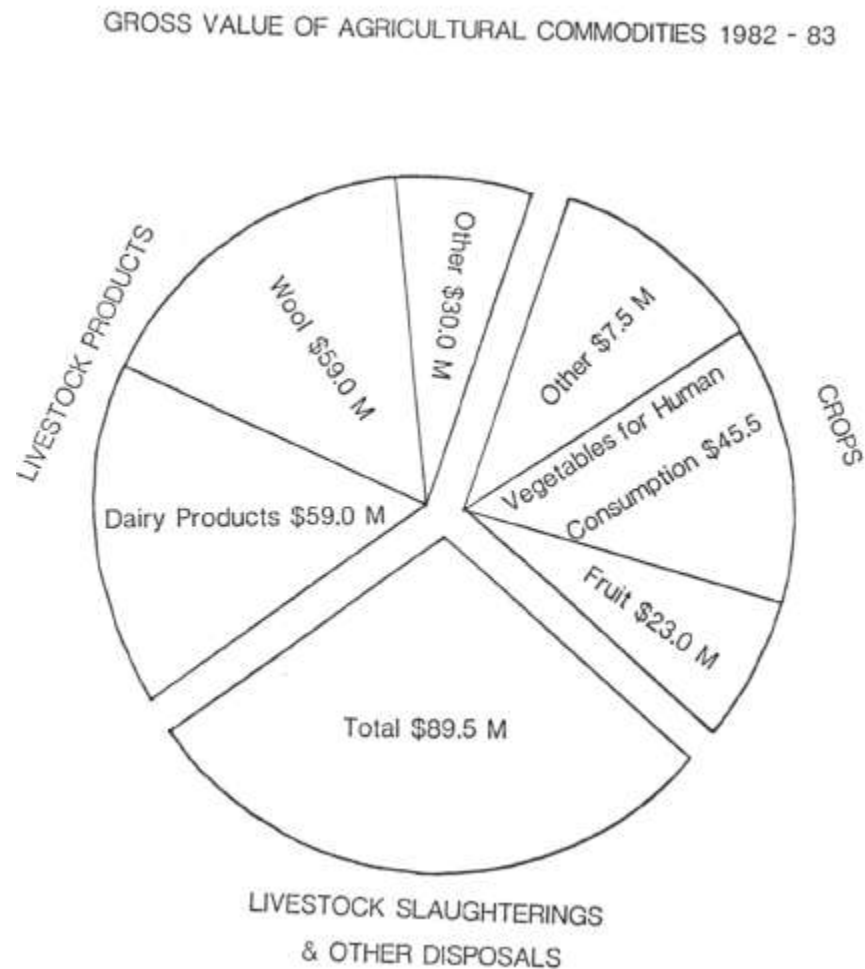
Although these industries are the State's largest, they are unfortunately the least developed in terms of value added, being bulk commodities which are exported with relatively little processing within Tasmania. The export of live animals has steadily increased in recent years and although of benefit to the

agricultural sector, the trend of declining value—added has continued. The location of the meat and wool industries is indicated on the following map.

Dairy industry

Since the early 1970s the number of dairy cattle has declined steadily from 225,000 to 100,000. This decline in numbers has not been matched by a decline in production as, due to the adoption of better management techniques, there have been significant improvements in the production per cow. The strength of the Tasmanian Dairy Industry is the suitability of the climate for dairying which has resulted in Tasmania having a lower cost of production when compared to other States. A weakness of the Tasmanian industry is the small market for whole milk which is the most profitable sector. Only 13% of milk produced is consumed as whole milk compared with 65% in New South Wales. Despite this, the Tasmanian Dairy Industry is making strenuous efforts to divert production from low priced export products into high value cheeses and related products.

A significant benefit to the state of the dairy industry is the employment multiplier effect. The employment multiplier of eight for the dairying manufacturing sector means that for each extra job made necessary by the expansion in that industry another seven positions are created elsewhere in the economy. The location of dairying is shown on the accompanying map.



Source: Australian Bureau of Statistics



Crops

Included under this heading are vegetables, cereals and the specialist crops including poppies.

The vegetable processing industry plays an important role in the Tasmanian rural economy. It also makes a significant contribution to the National Processing industry. Tasmania produces some two-thirds of Australia's frozen potatoes, about 60% of the peas and 30% of the beans grown in Australia for processing. Tasmanian growers also have a major involvement in the production of processed carrots and the brassica crops. The processing industry is largely controlled by two companies, Edgell Division Peterville and McCaines. The processing takes place in four factories, one in the North East and three in the North West.

Fresh market vegetables are also grown, but the difficulties of freighting across Bass Strait restrict the production to onions, potatoes and swedes. Other significant crops covered under this heading are barley, wheat, oats and pasture seed. The cereals provide an interesting study from an historical perspective. The early settlers found that the varieties of wheat brought from England were well suited to Tasmania's climate and wheat production in Tasmania increased rapidly.

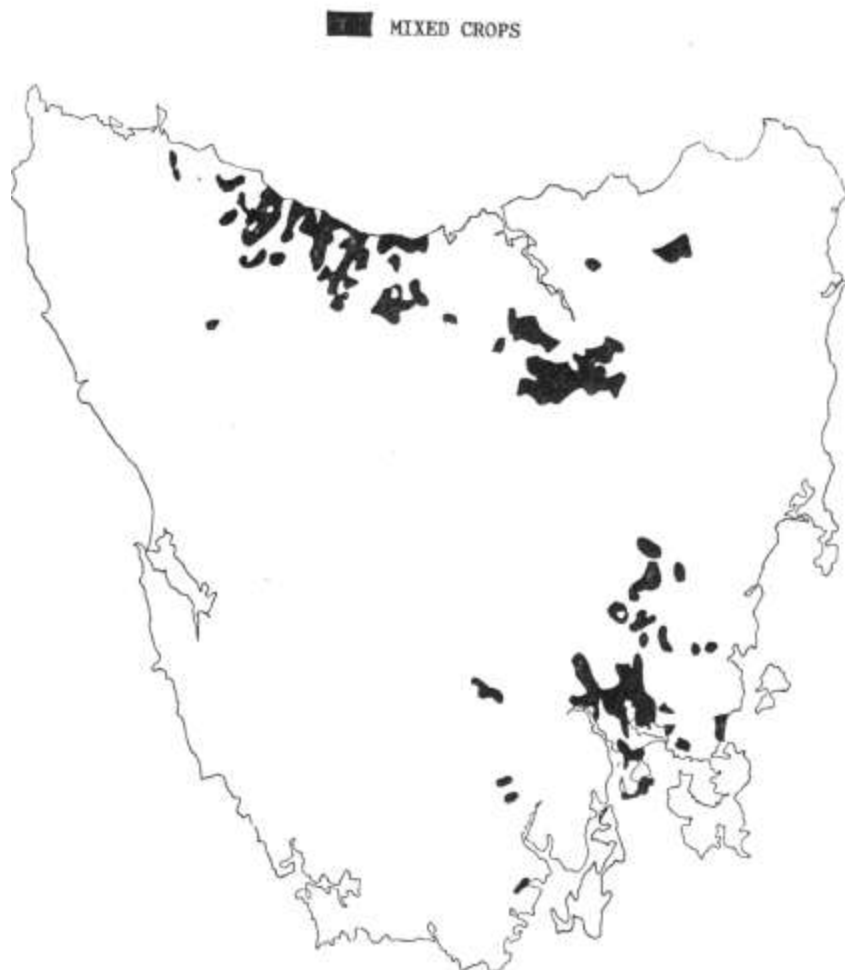
In the 1840s Tasmania was referred to as the "Granary of Australia". In 1842 the wheat area of 35,000 hectares was half the Australian total area. Wheat maintained its importance in Tasmania throughout the 1800s and the peak production year was in 1898. However, with the opening up of large areas of readily cropped land in other States and a general decline in fertility due to 50-100 years of cropping with little added fertiliser, Tasmanian production declined.

The present situation is that Tasmania has the potential to produce much greater quantities of cereals, yet despite this all the flour consumed in the State is made from imported wheat, and a major proportion of the feed wheat for the pig and poultry industry is also imported.

Presently, the Department of Agriculture and the University are co-operating in encouraging an increase in the production of cereals by a high input/high output strategy. Considerable success is being achieved with yields in excess of ten tonnes per hectare being attained by good commercial growers.

The location of vegetable growing is shown on the map of mixed crops, as the areas along the North West Coast and the isolated area in the North East.





Fruit and ornamental crops

The total value of the fruit and ornamental crops is approximately half that of vegetables. The area devoted to apples has declined dramatically in the last ten years to one-third of what it was. Fruit growing is located in restricted areas in the State, generally coastal areas with podzolic and some alluvial soils.

The traditional markets for Tasmanian apples have declined and the majority of fruit is now sold interstate rather than overseas. This change has been assisted by the introduction of controlled-atmosphere storage. The percentage of the Tasmanian crop sold overseas and interstate is shown below.

| Year | Destination | |
|------|-------------|------------|
| | Overseas | Interstate |
| 1970 | 60% | 10% |
| 1982 | 197. | 45% |

Another industry included under this heading is the production of nursery plants. This industry has grown steadily in recent years and has the potential for much greater growth particularly utilising native plants. The accompanying map indicates the location of pome and stone fruit orchards.

Contrasts in Tasmanian agriculture

In summary I would like to draw attention to what I perceive are two contrasts in Tasmanian agriculture.

Tasmanian farmers use the most modern equipment and latest technology yet the products are exported from the State in much the same form as 150 years ago, the only exception being vegetable processing. The consequences of this situation are relatively low levels of employment in processing of agricultural products and the acceptance of the "going price" for that commodity.

The second contrast is that Tasmania's agriculture pays a high price for all its inputs because of the high level of tariff protection

given to the manufacturing sector, yet receives for its products export prices which are often artificially depressed because of subsidised agricultural production in overseas countries. Although all Australian farmers contend with the problem, it is particularly serious in Tasmania because of the small amount of manufacturing industries. When last calculated the cross subsidy effect was twice as high per capita in Tasmania as in New South Wales.

Future development

It was against this background of declining employment in rural industries, 30% in the last ten years, and declining prices in export markets that the State Government established a Task Force to report on the problem.



The report of this Task Force was released in late 1983 and it recommended that attention should be concentrated on high-priced, high-technology and high-value-to-volume products.

Another recommendation was that the Island State image should be used to market our agricultural products. To achieve this it is necessary to further process products to enable identification by consumers.

The Task Force also identified a number of potential development opportunities, which are shown in the following tables.

Note, however, that although some new industries will represent a challenge to agriculturalists, a ten per cent improvement in traditional areas would generate substantially greater benefits than any one of the identified potential new industries. There is no reason why improvement of 'traditional industries and the development of new ones should not both be pursued.

In concluding my overview of Tasmanian agriculture, I believe it is appropriate to suggest that at conferences such as this researchers seize the opportunity to take a broader view of their work and consider the wider picture. It is only by doing so that the benefits of research will be realised by the community that is ultimately paying for much of the research.

Meat and wool industries

| PRODUCT | MARKET | ESTIMATED GROSS ANNUAL VALUE | ESTIMATED EMPLOYMENT |
|----------------------------|------------|---------------------------------|-------------------------|
| WOOL + SHEEP MEAT | OVERSEAS | \$12M | 950-1150 |
| CARPET WOOL | INTERSTATE | \$0.5M | |
| | LOCAL | | |
| MOHAIR | LOCAL | \$6M | |
| CASHMERE | OVERSEAS | \$0.5M | 20-30 |
| FAT INDUSTRY | LOCAL | \$3M | |
| FUR FARMING | OVERSEAS | \$3M | |
| | LOCAL | | 180-220 |
| | INTERSTATE | | |
| POULTRY PRODUCTS | LOCAL | \$0.5M | 25-35 |
| SPECIALITY PACKED MEATS | INTERSTATE | \$5M | 500-600 |
| VENISON MEAT | LOCAL | \$4.5M | |
| | INTERSTATE | | |
| | OVERSEAS | | |
| GOAT MEAT | OVERSEAS | \$0.5M | |
| RABBIT MEAT | LOCAL | \$1M | |
| | INTERSTATE | | |

Dairy industry

| PRODUCT | MARKET | ESTIMATED GROSS ANNUAL VALUE | ESTIMATED EMPLOYMENT |
|--|------------|---------------------------------|-------------------------|
| FARM CHEESE | LOCAL | \$1M | 175-225 |
| | INTERSTATE | | |
| SPECIALTY CHEESES | LOCAL | \$2M | |
| | INTERSTATE | | |
| MILK-BASED EUROPEAN STYLE DESSERTS | LOCAL | \$0.25M | |
| NEW MILK CONCENTRATE | LOCAL | \$0.25M | |
| | INTERSTATE | | |

Vegetables and field crops

| PRODUCT | MARKET | ESTIMATED GROSS ANNUAL VALUE | ESTIMATED EMPLOYMENT |
|-------------------------------------|------------------------|---------------------------------|-------------------------|
| FRESH VEGETABLES | OVERSEAS INTERSTATE | \$4M | 500-600 |
| POTATOES (OTHER THAN PROCESSING) | OVERSEAS INTERSTATE | \$1.5M | |
| VEGETABLES FOR PROCESSING | INTERSTATE | \$1M | |
| PLANT SEEDS | OVERSEAS LOCAL | \$1M | |
| CEREAL | LOCAL | \$4M | |
| ESSENTIAL OILS | INTERSTATE OVERSEAS | \$2.5M | 60 |

Fruit

| PRODUCT | MARKET | ESTIMATED GROSS | ESTIMATED EMPLOYMENT |
|---------------------------|------------------------|-----------------|-------------------------|
| APPLES AND PEARS | INTERSTATE | \$0.5M | 750-850 |
| | OVERSEAS | \$2.5M | |
| FRESH STONE | LOCAL | \$1M | 400-600 |
| GRAPES | LOCAL INTERSTATE | \$5M | |
| FRESH BERRIES | INTERSTATE OVERSEAS | \$0.5M | 20-30 |
| NURSERY PLANTS | INTERSTATE OVERSEAS | \$7.5M | |
| DRIED FLOWERS | INTERSTATE OVERSEAS | \$1M | |
| CUT FLOWERS | OVERSEAS | \$1.5M | 20-30 |
| PROCESSING BERRY FRUIT | INTERSTATE | \$0.5M | |