

feed with a more expensive trout feed. Attempts to maintain the captive breeding population of the depleted Margaret River sub-species have been hindered by poor reproductive output.

Information from the various research and extension activities has been compiled into the following status report.

Industry Status Report

Main Features

Production current season (1997/98):

42 tonnes

Number of producers for year 1997/98:

197

Estimated annual value (to producers) for year 1997/98:

\$1,027,000

Production projection next year (1998/99):

40-50 tonnes

Production areas

Licensed purpose-built farms extend from east of Albany to Hutt River north of Geraldton, though the bulk of farms are concentrated in the higher-rainfall south-west coastal area. Legal-sized marron produced in farm dams can be sold through a licensed farmer or processor. Under-size farm marron can be sold by holding an unrestricted licence, which can only be obtained for a substantial area of pond development or on the performance criterion of a higher level of production per unit area.

Annual Production

Production method(s)

Semi-intensive farming in purpose-built earthen ponds; extensive farming in gully dams.

Production

The average industry annual yield of 600 kg/ha compares with 1,500-2,300 kg/ha/year from well constructed and managed semi-intensive ponds. For farm dams, the annual yield is about 100 kg/ha.

Extension and Information Transfer

Considerable effort has been made to ensure that information on aquaculture of marron is readily available to the public. Methods of communication included extension publications, seminars, workshops and field days. During 1998/99, a program of attendance at and detailed documentation of harvests and farming procedures was initiated to help evaluate the commercial applicability of agency extension advice. This will also indicate which site and management variables have the most influence on production.

General Comments

A significant number of new purpose-built marron farms have been developed during 1998/99 and should progressively contribute to expansion in State production. Development of a new farm to full production usually requires around three years. Many of these new farms will utilise the increased processing capacity now available through the Pemberton Aquaculture Producers (operating from a facility at the South West Freshwater Research and Aquaculture Centre). This processing group is now providing a coordinated marketing arrangement for many of the new producers.

Yabby Aquaculture

MANAGEMENT OVERVIEW

Yabby production has continued on an extensive basis by trapping from existing farm dams. Management and licensing arrangements have not changed significantly over the past year. Aquaculture Development Officers stationed in Geraldton, Narrogin and Albany are assisting industry development through the provision of information on production techniques and the results of FRDC-funded research.

In March 1999, the presence of the protozoan *Thelohania* was detected in Western Australian yabbies. Following investigation of the outbreak, it was determined that the disease had become widespread in Western Australia and was likely to have been within the State for a number of years. There is no public health issue associated with the disease, and arrangements for ongoing management are currently being developed.

COMPLIANCE AND COMMUNITY EDUCATION OVERVIEW

South-west freshwater aquaculture fisheries are serviced by Fisheries Officers based in Esperance, Albany, Bunbury, Mandurah, Fremantle and Geraldton to ensure continuation of a high level of awareness of, and compliance with, management rules.

Aquaculture Development Officers stationed at Geraldton, Narrogin and Albany provide extension services to farmers producing yabbies, as well as providing displays and information at country shows and workshops.

Low levels of compliance are directed at this industry group, however compliance officers were involved in disease control and monitoring during the recent *Thelohania* outbreak.

RESEARCH OVERVIEW

A major national research project to develop methods to enhance yabby production has been conducted over the past five years. This research, conducted at the Avondale experimental pond complex and at the joint Fisheries WA/University of Western Australia freshwater crayfish genetics facility, has enabled the development of a variety of methods to significantly enhance the production of marketable quality yabbies from farm dams, including evaluation of an all-male hybrid yabby. During 1998/99, these findings were promoted by research staff and Regional Services Aquaculture Development Officers through field days and seminars held in association with yabby processors and farmers' groups.

Data from this research, conducted in collaboration with industry organisations and individual farms, have provided the basis for the following industry status report.

Industry Status Report

Main Features

Production current season (1997/98):

231 tonnes

Number of producers for year 1997/98:

32 (licensed farmers or processors - most farmers do not require licences)

Estimated annual value (to producers) for year 1997/98:

\$2,252,573

Production projection next year (1998/99):

250-300 tonnes

Production areas

Yabbies are an introduced species and so for translocation reasons, the licensed commercial yabby farming industry is restricted to the drier inland developed agricultural area of the south-west, to the north of Perth and to the east of Albany. Unlicensed agricultural farmers may sell yabbies to licensed farmers/processors or permit licensed harvesters access.

Annual Production

Production method(s)

Harvesting of farm dams by baited traps.

Production

Extensive farming; self-sustaining farm dam populations; annual farm dam yields average 400-500 kg/ha.

Production trends

Increasing, subject to annual rainfall, to 500 tonnes by year 2000/01.

Extension and Information Transfer

Considerable effort has been made to ensure that research and development information for aquaculture of yabbies is readily available to the agricultural sector. In addition to responding to numerous inquiries, methods of communication included extension publications, seminars, workshops and field days.

General Comments

The annual production was approaching 300 tonnes in 1993/94, but then declined in 1994 and 1995 due to poor winter rainfall to refill farm dams. Stocks recovered after the above-average rainfall of 1996. The strategic plan for development aims at increasing farmer participation and increasing the low or inconsistent production of many dams.

Commercial production of 231 tonnes recorded for the last full financial year, 1997/98, represents a substantial increase over the revised figure of 150 tonnes for 1996/97. This increase may be ascribed to a number of factors including improved winter rainfall, increased participation rates, improved management techniques based on Fisheries WA research (monosex growout, higher feed rates, improved feeding regimes and regular trapping), and an improved data returns process.

The discovery of two significant diseases in a variety of farms was a major setback in 1998/99 although these pose no threat to consumers. Concern in some overseas markets over potential damage through burrowing activities of WA yabbies has been shown not to be well founded as a major survey revealed that most burrows were relatively shallow and would not impact on dam walls.