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OATS

SECTION A

INTRODUCTION

HAY | GRAIN | GRAZING | EXPORTS | HEALTH BENEFITS

SECTION A

Introduction

Oats make up about one per cent of land use in Western Australia's eastern wheatbelt. Most are used as opportunity hay crops or for stockfeed.

There is a lack of agronomic research into growing oats in these lower-rainfall areas—but they offer diversification and profit potential.

New oat agronomy research aims to expand plantings of this crop in the lower rainfall parts of the Western Australian wheatbelt for grain and hay production, and to help manage frost risk and keep weed burdens low.

In lower rainfall areas of the eastern wheatbelt the research focus is on growing higher yielding and better performing oat varieties. [1] Western Australia's oat deliveries into the CBH system could reach 315,000 tonnes in the 2015–16 harvest, with potential for an additional 600,000 to be grown by 2020.

The Department of Agriculture and Food, Western Australia (DAFWA) supports the oat industry through agronomic, disease and pest research and development as well as being a member of the Australian National Oat Breeding Program, which is responsible for breeding and developing new oat varieties with superior quality.

Western Australia (WA) produces up to 500,000 tonnes of oaten grain and about 300,000 tonnes of export-quality hay each year. Significant amounts of hay and oaten grain are also retained on-farm and traded domestically.

Typically 25% of WA's oat crop is retained on-farm as animal feed, with a further 25% being used within the domestic feed trade in compound feed rations for a range of livestock uses. Around 20% of oats are exported as premium feed grain for the high-performance Middle Eastern and Asian racehorse industries.

Oats is a traditionally early-sown winter cereal with many uses. It can be used in rotation for autumn grazing and then can be locked up for grain production, being a 'dual-purpose crop'. It is frequently grown for grain and then stored on-farm for stock feed or for human consumption. It can also be baled for hay, with lucrative export markets available to WA growers.

Oats is adaptable to a wide range of soils and can tolerate some diseases that other cereals cannot.

[1] GRDC (2015) Oat research to lift options for low rainfall areas. Ground Cover Issue 114, Jan–Feb 2015, http://grdc.com.au/Media-Centre/Ground-Cover/Ground-Cover-Issue-114-JanFeb-2015/Oat-research-to-lift-options-for-low-rainfall-areas#sthash.NEFOFBvz.dpuf

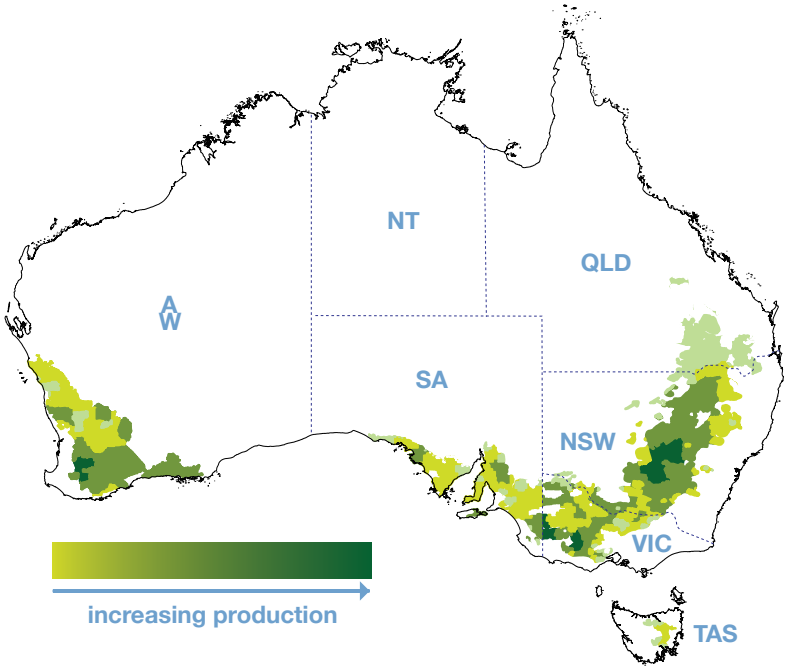

Figure 1: Areas of oat production. (Source: Australian Export Grains Innovation Centre)

More information

http://www.aegic.org.au/media/23324/140214%20Oats%20Note.pdf

A.1 Hay

Oaten hay for the domestic and export livestock markets is worth an additional $100 million per annum.

WA produces excellent-quality oaten hay and this can be attributed to some of the best hay-making conditions in Australia. WA oaten hay is highly regarded for its energy value, fibre content and palatability, which makes it an ideal feed ration for ruminants.

Good colour, a sugary taste and aroma, and fine texture are critical for good animal performance.

In WA, hay is mechanically cut and conditioned, then quickly dried in the field before it is stacked and stored locally in large sheds.

Oaten hay in the south-west of WA is usually cut from October to November to provide new season's hay.

Quality assurance programs are in place within the export hay industry to ensure quality standards are maintained. Hay processing companies in WA also apply a grading system based on nutritional value. This system is based on Australian Fodder Industry Association standards.

WA oaten hay is a preferred source of fodder for dairy cows, due to its high digestibility and palatability. High in water-soluble carbohydrates, at around 25%, it provides dairy cows with an instant source of energy that can be effectively utilised by the rumen microflora for high milk production and sustained live weight gain. [2]

Oaten hay is typically grown in the medium- to high-rainfall areas of the wheatbelt and export hay within a 250 km radius of Perth. The main production areas are around Moora, York, Narrogin and Wagin.

Oaten hay crops tend to be grown in the high- to medium-rainfall districts (550 mm–350 mm) and irrigated lucerne hay in the very high rainfall areas (850 mm–550 mm) of the

[2] DAFWA (2015) Hay exports, https://www.agric.wa.gov.au/grains/hay-exports

south-west and supplemented by irrigation. Oaten hay yields in WA can average around 4–6 t/ha . [3]

Oaten hay is being used by wheatbelt growers as a profitable way to help manage herbicide-resistant weeds. It provides an ideal break crop between other cereal crops.

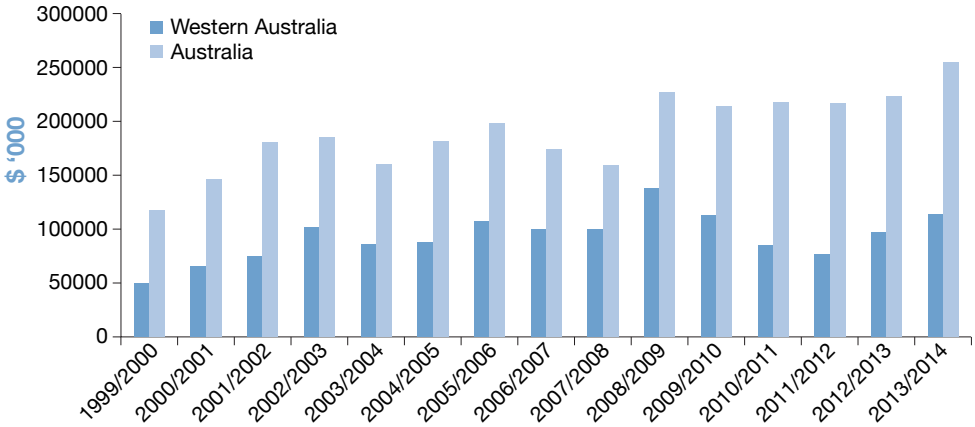

Figure 2: Value of hay exports from Australia and Western Australia. [4]

A.2 Grain

Most milling-quality oats are exported for processing in destination markets but a significant quantity is also processed prior to export, adding significant value to this grain sector. About 50,000 tonnes of milling oats are processed domestically for export (set to increase with additional capacity coming online in 2015–16), with some also used domestically in the breakfast cereal, health bar, bakery and baby food industries. Milling-quality oats attract a premium of between $15 and $30 per tonne. [5]

A.3 Grazing

Oats will produce more forage than other cereals and has a higher winter growth rate than pastures. [6]

This widely adaptable and reliable cereal is the major winter cereal grazing crop. Oats can tolerate a range of cereal diseases such as take-all, crown rot and common root rot. The ease of establishment and early time of sowing are other major benefits. Its adaptability to acid soils, use for hay and silage, use for pasture renovation, suitability for broadleaf weed control by in-crop herbicides and usefulness for grazing-out make oats a versatile crop in farming systems. [7]

A.4 Exports

WA oats have an excellent reputation both nationally and internationally for their high quality and milling capabilities. End users recognise the aesthetic features of the grain (brightness and pulp characteristics) and the high groat levels (soft inner grain remaining when the husk is removed from harvested grain).

[3] DAFWA (2015) Hay exports, https://www.agric.wa.gov.au/grains/hay-exports

[4] DAFWA (2015) Western Australian oat industry, https://www.agric.wa.gov.au/hay-production/western-australian-oat-industry

[5] DAFWA (2015) Western Australian oat industry, https://www.agric.wa.gov.au/hay-production/western-australian-oat-industry

[6] DPI NSW (2008) Early start with oats, *Agriculture Today*, March 2008, http://www.dpi.nsw.gov.au/archive/agriculture-today-stories/ag-today-archives/march-2008/early-start-with-oats

[7] DPI NSW (2015) Winter crop variety growing guide 2015, http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/272945/winter-crop-variety-sowing-guide-2015.pdf

Quality milling oats are exported directly from WA as grain or processed oats. The major markets for milling oats are Mexico, North Asia, South-East Asia and South Africa.

Oaten hay exports to Japan and other Asian markets are expanding, with consistent supply of first-grade hay essential to retain this market share. [8]

WA oaten hay is exported to more than 13 markets, with the largest being Japan, South Korea and Taiwan. [9]

A.5 Health benefits

Oat fibre has been shown to help reduce cholesterol and there is a growing promotion of oats as a health food—a movement that could help diversify market opportunities. For example, oats are being used in new Asian products, including oat noodles, oat milk and oat health-care products. Oat varieties grown in WA are bred specifically for their flavour and aroma when processed, as well as their high milling yield. DAFWA is a member of the National Oat Breeding Program and oversees agronomy and breeding evaluation trials across the WA wheatbelt. [10]

[8] DAFWA (2015) Western Australian oat industry, https://www.agric.wa.gov.au/hay-production/western-australian-oat-industry

[9] DAFWA (2015) Hay exports, https://www.agric.wa.gov.au/grains/hay-exports

[10] DAFWA (2015) Western Australian oat industry, https://www.agric.wa.gov.au/hay-production/western-australian-oat-industry