

Future opportunities for the Western Australian oat industry

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Key messages

Increasing regional demand for food quality oat grain in response to health awareness and changing diets in Asia and India has offset the declining international demand for feed oats.

In the forage sector, export hay oats have an excellent market fit in feedlot dairy and beef production in expanding north Asian markets, with other markets under development.

An established and responsive oat processing sector with an export focus has enabled the industry to adapt and respond to capture market share as regional demand for food oats increases.

Oat production has transformed from low production input systems to a specialised cropping activity where producers and processors have developed contract marketing arrangements including sharing of seasonal and price risks.

The industry has potential for further measured growth and development over the medium term as local processing industries expand and markets continue to develop. This is significantly underpinned by long term projected growth in the middle class demographic of Asia and India.

Expansion of oat production beyond traditional medium-high rainfall areas is expected to develop as varietal and agronomic systems broaden the adaptive fit of oats in Western Australia.

Potential for further value adding elements to the industry exists, as European and other oat technology providers look to partner to develop springboard strategies into Asia.

Aims

To consider factors in the developing interest and potential for oat production in Western Australia.

Oat grain

Global and WA oat industry context

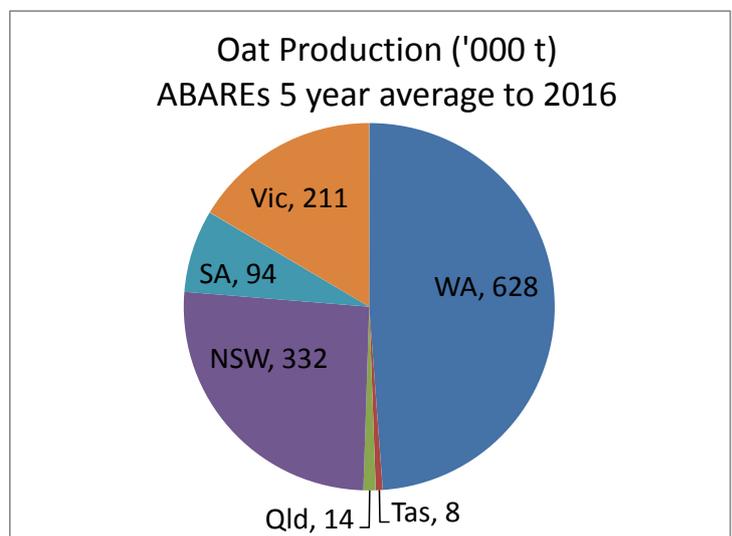
Oat is the fifth largest grain crop in Australia after wheat, barley, canola and sorghum. The value of Australian oat grain production was AUD300M for the year ended June 2015 (Anon, 2016). Australian oat production has averaged 1.3Mt p.a. over the last five years. The largest oat production region is Western Australia, comprising almost 50 per cent of Australian oat grain production over the last five years (Figure 1).

Drivers in market demand

The prominence of new health conscious markets for oats is shaping the industry strongly and has seen the market focus shift from feed to human food uses. Oats contain β -glucan, a form of soluble fibre that helps lower cholesterol re-absorption. As a whole-grain product oats also contain insoluble fibre (bran), antioxidants, proteins, low GI starch, vitamins, sterols and fatty acids that can contribute health benefits.

The emergence of health-conscious middle classes in South East Asia, China and India is driving increased demand. Versatile and functional foods with recognised health benefits are in demand among the expanding Asian middle classes. Oats can be processed into a range of convenient, healthy, flavour-adaptable products that are good to eat and provide health benefits.

Western Australia has an established reputation for production of high quality milling oats, with varieties and production techniques that delivery reliable milling quality characteristics. This capability has provided a strong platform for development of the oat milling industry.



Industry commitment

Confidence in the WA oat industry is being signalled through new investments in oat value added processing. Expansion of Unigrain's oat processing facility in Wagin was announced in July 2015. Pepsico's Quaker expansion of their Forrestfield mill was announced in November 2015. CBH Ltd in conjunction with Blue Lake Milling have also commenced development of a new oat mill as part of the Metro Grain Centre (announced July 2016). These industry investments will more than double WA's on-shore processing capacity as they come fully on stream over the next few years. Virtually all oats processed in WA is exported.

Significant investment in oat processing is also being made in export destinations. PepsiCo Inc, one of the world's leading food and beverage companies, opened its first Quaker Oats plant in China in 2015. Indian processors, sourcing Western Australian milling oats, cite expanded processing capacity to come on-stream in 2016/17. Whilst oats will still be subject to international oat market prices, growing Asian demand and proximity to these export markets is expected to underpin future demand and grain prices for Australian milling oats.

Recognising the opportunity for the industry to respond to increased market emphasis on food quality oats, the Grains Industry Association of WA led an oat variety rationalisation process, completed in 2015, in conjunction with CBH Ltd. Under the rationalisation the OAT2 grade became a second milling-only food grade segregation with the removal of oat varieties not acceptable to millers. This has enabled greater emphasis to be placed on accumulation of food quality oats to meet growing export and local demand (GIWA 2014).

The production and market developments in oats continue to be underpinned by investments in oat research by the Grains Research and Development Corporation and their research partners, including the Rural Industries Research and Development Corporation. These investments have included the National Oat Breeding Program (delivered through the South Australian Research and Development Institute), Oat Agronomy (delivered through the Department of Agriculture and Food, Western Australia) and Increasing Competitiveness of Oats for Export (delivered through the Australian Export Grain Innovation Centre).

Oaten Hay

Industry context

Export hay must meet a number of key parameters in visual and physical composition, feed analysis levels and product safety. The establishment of export hay quality requirements has enabled the industry to build a strong reputation in traditional and emerging export hay markets. In the past thirty years, oaten hay exports have increased steadily and during the 2016 growing season, approximately one million tonnes is expected to be exported nationally. Western Australian production and exports comprise around 40% of the total exported tonnage in a normal growing year.

Drivers in market demand

Japan is the original and largest market for Australian hay products, receiving about 50 per cent of oaten hay exports. The rapidly growing Chinese market now accounts for 25 per cent of exports, eclipsing South Korea's 17 per cent share. Taiwan, Vietnam, Indonesia and the Middle East make up the remaining 8 per cent. China is expected to continue growing and the expectation is that demand from the Middle East may begin to increase in the next few years.

Industry commitment

Most established exporters are looking at ways to expand or build additional capacity. In 2017 alone, announced expansions and new builds in WA should see capacity increase by up to 20 per cent. Victoria will also see an increase in capacity with two new plants announced at the end of 2016.

Many farmers are now dedicated hay growers with high density balers and large storage sheds on their properties. In addition, innovations in machinery such as fast dry super conditioner mowers and fast stack systems are assisting to minimise risk associated with wet weather. New steam baling systems may also allow for extended baling time during warm weather.

Rural Industries Research and Development Corporation (RIRDC) export industry members have set a growth target of 5% per year, but with local, Chinese and Middle East investment, the actual rate of growth could be much greater. In 2016 the RIRDC, working with industry, established an R&D levy on exported fodder. The levy will help strengthen the Australian export hay industry through future investment in R&D.

On-farm opportunities

Oats improve environmental, agronomic and financial risks in WA farming

The growth in Asian demand for oat grain as food, together with the advent of high yielding milling oat varieties, has enabled growers to substantially change oat production. Oat production has become specialised as large scale oat

producers (1000-3000 ha p.a.) carefully plan oats into their farming system. Variety and agronomic packages specifically target either oat for grain or oaten hay. Paddock preparation includes harvest weed seed management ahead of the oat crop. Forward contracts are applied to a significant proportion of the crop, through closer relationships with oat manufacturers and traders. In this way prices and production requirements are established prior to seeding, giving all participants in the supply chain confidence in the industry. Up to 75 per cent of oat area on individual farms is sown ahead of other crops, often sown dry. Oats, which are inherently less prone to winter waterlogging and spring frosts, adapt well to early sowing which reduces risks of spring drought. The resulting crop produces a canopy highly competitive against weeds. In addition, oaten hay can be a preferred crop for the management of weed challenges. Oats also provide rotational benefits in soil and foliar disease management. Average grain yield in Western Australia is 2.1 t/ha, the highest in Australia, but below oat yield for international benchmarks such as Canada, Chile or the UK.

Growth in international demand for food oats, increased processing and on-shore value adding and increased export demand for food oats is expected to result in steady growth in Western Australian annual production from around 0.7Mt to over 1.0Mt over the next five years. This is likely to be achieved by increased intensity of oat production in current traditional oat growing areas as well as increased area of production in non-traditional oat growing areas of Western Australia. The increased opportunity for oat production in medium-low rainfall areas of WA is being supported through targeted agronomic research and increasing availability of new milling varieties with robust grain size and hectolitre weight characteristics (notably cvs. Bannister and Durack).

Similar trends in food oat demand in other areas of Australia are likely to occur but to a lesser extent, due to the significantly greater emphasis placed on oat production for domestic consumption, rather than export, in other Australian regions.

Future considerations

Challenges

Average oat grain yield in Chile has improved considerably in the last 10 years suggesting that oats have been reprioritised in their farming system. The more stable production environment experienced in Australia since 2011/12 and the presence of some carry forward stocks has helped local marketers to continue to develop market share against competing producers such as Chile.

China's mainstream domestic oat production is hullless oats, less preferred by food manufacturers on quality grounds. However China is ramping up its domestic hay production and this could impact that market in the future.

The USA is the largest shipper of hay (lucerne, timothy and sudan hay) in the world, exporting approximately three times the annual Australian hay volume.

Opportunities

The immediate opportunity is to sustain the value proposition in oat production under modern agronomic practices that target either grain or hay production. Notwithstanding seasonal production spikes as experienced in 2016, the medium term demand situation and industry investment signal positively for both grain and hay sectors of the industry. For both sectors, the long term trend of the emergent middle class throughout Asia should sustain further growth opportunities. A key need will be for WA to work in developing and diversifying these markets as opportunities arise.

Experience in European and US markets also suggest that some market segmentation could develop from use of oats in more value added products. There is potential for this to emerge as European and other oat processing technology providers look to partner to develop springboard strategies into Asia.

Australian farmers produce good quality oaten hay from dryland farms and have an advantage over their US counterparts as most US crops are grown on irrigated land where there are competing interests for the same water. Australian exporters have a solid reputation for supplying good quality, consistently graded, safe feed to their markets and this should bode well for the future expansion of the industry.

The international research community are recognising the constraints that arise from a lack of private investment in oat research and where public funding opportunities sometimes trail rather than lead industry developments. International research partnerships are emerging and it is important for Australia to access and participate in these to bring relevant technology improvements within reach of Australian producers. This is particularly relevant when we recognise that oat is not a crop mandated under the United Nations Food and Agriculture Organisation (FAO) and hence has no UN-led international research focus in the same way as wheat, barley, sorghum, maize, rice and pulses.

Australia will host the International Oat Conference in Perth in 2020 in a partnership between industry and science to showcase the industry and foster international engagement and research collaboration.

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Key words

Oat, rolled oats, export, oaten hay, health, functional food, β -glucan, fibre, milling, processing, agronomy, breeding, industry development, Asian middle class.

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