Other major field crops

Chickpeas

Forecast

The gross value of chickpeas in 2010–11 is forecast to be $79 million, which is 47 per cent larger than DEEDI's final estimate for 2009–10 and 24 per cent higher than the 2008–09 revised ABS estimate.

This increase in the gross value of chickpeas can be attributed to a forecast 42 per cent increase in production to 198 000 tonnes and a slight four per cent increase in price to $400 per tonne.

Discussion

Area sown and production

Relatively low wheat prices of $215 per tonne at chickpea planting time in May 2010 prompted many crop growers to plant increased areas of the more favourably priced chickpeas (priced at $385 per tonne). Also favouring chickpeas was the little rain available for wheat planting in many areas, prompting growers to deep plant chickpeas instead.

Overall, the area of chickpeas planted in 2010–11 is forecast to be 147 000 hectares, which is a 29 per cent increase on the 114 000 hectares planted in 2009–10. Yields in 2010–11 are also expected to increase by 10 per cent on 2009–10 levels. The increase in area sown, combined with an increase in yields, is estimated to increase production to 198 000 in 2010–11, which is up 42 per cent from 139 000 tonnes in 2009–10.

Price

Due to a steady level of combined demand from Australia's main chickpea markets of India, Bangladesh and Pakistan (despite Pakistan's lack of purchasing power as a result of the floods in August 2010), chickpea prices are estimated to have increased slightly in the past year. Since June 2009–10, they have risen by four per cent to arrive at $400 per tonne in the September quarter of 2010–11.

However, this price represents a 16 per cent fall from the $478 per tonne experienced in 2008–09 and a 31 per cent fall from the $578 per tonne paid in 2007–08. This decline in chickpea prices is not reflective of a lack of demand, but rather, indicative of increasing chickpea production in India, Bangladesh and China. As at August 2010, floods in China had not affected world supplies and price.

Peanuts

Forecast

The gross value of peanut production in 2010–11 is forecast to be $20 million, which is the same as DEEDI's final estimate for 2009–10 but 37 per cent lower than the 2008–09 revised ABS estimate.

The unchanged forecast for GVP in 2010–11 can be attributed to a steady level of production (a 10 per cent fall in forecasted yields negated by an 11 per cent increase in area sown) and the expectation of steady prices throughout the forecast period.

Discussion

Area sown and production

A lack of rain over the 2009–10 summer period forced many growers to plant less peanuts and ultimately decreased the total area sown to peanuts to 7500 hectares in 2009–10. Assuming that rainfall in peanut growing areas is not as low in the lead up to the 2010–11 sowing period, it is expected that the area sown will increase by around 10 per cent to 8300 hectares. This is also based on the assumption that the peanut price remains constant throughout 2010–11.

At the beginning of the 2009–10 summer period, irrigation water storages were low, causing some areas of peanuts and cotton not to be planted at all. However, since then, water storages have increased with good rain received in August 2010. This means that price competition between summer crops will be the prime determinant of how many peanuts get sown, as opposed to cotton and soybeans. The high relative price of cotton has induced many crop growers to plant cotton in place of peanuts and other summer crops, although falling soybean prices and the ever-present risks of heatwaves during flowering have increased the relative attractiveness of peanuts compared with soybeans.

A lack of rain during the ripening phase of the 2009–10 season, as well as leaf diseases, caused a decline in yields in last year's crop. To allow for the possibility of similar dry conditions prevailing in peanut growing areas over the 2010–11 summer season, a further decline in yields is expected of around 10 per cent. The decline in yields is estimated to counter the increase in area sown, leaving production unchanged at around 25 000 tonnes.

Competition from imports

Queensland peanuts are increasingly under pressure from Argentine peanut imports. Although all Queensland and Australian peanuts are consumed domestically, with any undersupply of domestic demand met by Argentine peanuts, the world oilseed price has been steadily dropping since 2009–10, dragging the price of peanuts down with it. This has been placing domestic peanut producers under significant pressure, given the high input costs and labour requirements of peanut growing. Cereal growers believe that for peanuts to be worthwhile growing, the price needs to be at least $1000 per tonne. Up until 2007–08, the price premium commanded by Australian grown peanuts was around $400 per tonne. This premium has dropped to $200 per tonne in 2010.

Price

The price of peanuts is expected to be $780 per tonne in 2010–11, unchanged from 2009–10, but 11 per cent below the average price received in the June quarter of 2008–09.

Soybeans

Forecast

The gross value of soybean production in 2010–11 is forecast to be $7.5 million, which is 17 per cent lower than DEEDI's final estimate for 2009–10 and 79 per cent lower than 2008–09 revised ABS estimate.

Analysis

An anticipated 40 per cent reduction in area sown to 7250 hectares is estimated to largely outweigh an expected 75 per cent increase in yields. Consequently, production is estimated to increase by only three per cent to 18 800 tonnes. However, this marginal increase in production is estimated to be outweighed by a 16 per cent decline in the price of soybeans to $400 per tonne, causing GVP in 2010–11 to fall by 17 per cent.

Discussion

Area sown

Total area sown to soybeans is forecast at 7250 hectares in 2010–11, which is a 40 per cent fall from the 12 238 hectares sown in 2009–10. Being a nitrogen-fixing legume, soybeans are increasing in popularity as an agronomically beneficial rotation crop with sugar cane. However, when sugar prices increase relative to those of soybeans, cane growers are more likely to forego a soybean rotation crop in order to fallow for a 2011 sugarcane crop option.

Yields

Soil moisture profiles in soybean areas as at September 2010 were close to capacity. An expected La Niña weather phenomenon for the 2010–11 summer is likely to provide above-average rainfall, which will benefit both dryland and irrigated soybeans. As a result, yields in 2010–11 are forecast to increase by 75 per cent from the poorer yields experienced in the previous season.

Production

The anticipated reduction in area sown of soybeans is estimated to largely negate the forecast increase in yields, generating only a three per cent increase in production to 18 800 tonnes in 2010–11. As was the case with the previous season in the north, it is possible that a large proportion of the soybean crop could be ploughed back in as green manure, rather than harvested. This has the potential to reduce the production estimate, but is dependent on the soybean price during the growing season.

World soybean market and Australia's position

Global soybean production represents over 55 per cent of world annual oilseed production. China is one of the largest importers of soybeans and has a large crushing ability for both human food and meal for the country's livestock and aquaculture industries. The European Union is also a significant buyer, purchasing 45 per cent of available world soybeans.

Japan is the major purchaser of premium grade beans which are used for soymilk, flour, tofu and miso. Soybeans used by Japan are large beans which have higher than average protein content. Consequently, Japan is particular about the quality of its soybean imports, but is willing to pay a significant price premium for such beans. It is estimated that when Northern hemisphere suppliers cannot supply Japan with these beans (equivalent to 220 000 tonnes per annum), Australia is suitably positioned to supply this shortfall.

Australian soybean production and prices

When seasonal conditions and the soybean price are favourable (as in 2008–09), annual Australian production is around 100 000 tonnes. Over half of this is allocated to domestic human consumption, with the remainder going to meal feed for livestock. The demand for soy oil in Australia is very limited. While premium organic beans sell for between $800 and $900 per tonne, crushing grade beans sell for $350 to $400 per tonne. Only around 50 per cent of annual production will be marketed as premium organic.

Although certification as organic requires extra time and money from the grower, the consumer is willing to pay a premium for organic beans motivated by both health and environmental concerns. While it is easy for domestic soybean producers to sell beans for meal to Australian feedlots, the price paid by grain millers is usually capped by the imports of relatively cheap meal from regions which specialise in soybean production for feed—namely the US and South America.

Market niche for Australian soybeans

Although Australia is unlikely to become a major producer or consumer of soybeans, it has great potential to fill the niche market for high quality GM-free beans for human consumption. This is a highly differentiated market with growing potential in the South East Asian region. By contrast, the market for stock meal is supplied predominantly by limited GM varieties in high volumes, where Australia does not have a competitive advantage. However, niche markets need to be

secured before grain growers will switch to soy production from other crops such as cotton.

Global prices

Total world oilseed demand is set to increase by five per cent over 2010–11, to 426 million tonnes. This will be driven by an increase in oilseed crushing, mostly in China. World oilseed demand for human consumption is also forecast to increase by five per cent. Consumption of protein meal is also strong in China due to the growth in Chinese poultry and swine sectors. World oilseed stocks are forecast to increase slightly by around three per cent to 77 million tonnes. Combined with world supply outstripping demand, this is forecast to reduce the world oilseed indicator price by 13 per cent to $US352 per tonne. This will likely keep soybean prices received by Queensland soybean producers at dampened levels over 2010–11.

Sunflowers

Forecast

Sunflower seed GVP is forecast to be $20 million in 2010–11, which is 233 per cent higher than DEEDI's final estimate for 2009–10 but 23 per cent lower than the 2008–09 revised ABS estimate.

Analysis

The area sown to sunflower seed in Queensland is forecast to increase by 173 per cent in 2010–11, while crop yields are expected to increase by 32 per cent. As a result, production in 2010–11 is expected to increase to 36 100 tonnes, which is a 260 per cent increase on 2009–10. Despite an estimated seven per cent reduction in price to $556 per tonne, sunflower seed GVP in 2010–11 is estimated to be more than treble the value of GVP in 2009–10.

Discussion

Area sown

The area sown to sunflowers in 2010–11 is forecast at 21 800 hectares, which is a 173 per cent increase on the estimated 8000 hectares sown in 2009–10, but still 18 per cent below the estimated area sown in 2008–09.

Given that soil moisture profiles in many sunflower areas have been boosted by above-average spring rainfall and that a long-range La Niña wet weather has been forecast in September 2010, planting and growing prospects for sunflowers look favourable. The early plant of sunflowers takes place in October, with a later plant during the middle of summer (about mid-January).

Yields

Assuming average rainfall is received over the summer 2010–11 growing period, sunflower yields are forecast to increase by 32 per cent. Despite higher than expected rainfall over the February 2009–10 growing period, which increased crop yields for the 2009–10 crop, conditions on the whole were quite dry, causing lower than average yields for that season.

Production

The forecast 173 per cent increase in area sown combined with an expected 32 per cent increase in yields is estimated to increase production by 261 per cent, to 36 125 tonnes, from an estimate of 10 000 tonnes for the 2009–10 season.

Global oilseed conditions

Domestic sunflower prices are closely linked to international oilseed prices. To assess international prices, it is important to determine world oilseed supply and demand conditions,

which are outlined as follows.

Global oilseed production

World oilseed production is expected to increase in 2010–11 to a record 439 million tonnes, slightly up from the 2009–10 level. Sunflower seed production is set to increase by 11 per cent to 34 million tonnes, with other oilseeds increasing by seven per cent to 96 million tonnes. These increases are expected to outweigh an estimated three per cent fall in soybean production and one per cent fall in canola production.

Global oilseed demand

In 2010–11 global oilseed demand is expected to grow by around five per cent to 436 million tonnes. This has been driven by oilseed crushing, which is forecast to increase to 370 million tonnes. Crushing margins have increased in line with stronger oilseed prices. World crushing has been driven by China, which has seen increased oilseed crushings, by an average of four million tonnes a year over the past decade. New quality standards are currently restricting the Chinese importation of soya oil but are expected to increase Chinese oilseed crushing by seven per cent in 2010–11 to 85 million tonnes.

World vegetable oils for human consumption are forecast to increase by five per cent in 2010–11. This has been driven by increased demand in China and India and demand for biodiesel in response to mandated biodiesel use in Latin America, North America and the European Union.

Consumption of protein meal from soybeans is forecast to increase by eight per cent in China due to growth in the poultry and swine sectors. In the EU and US, weak meal prices and increased livestock demand have contributed to the forecast three per cent increase in consumption.

Global oilseed stocks

For 2010–11 global end-of-season stocks are forecast to be around 77 million tonnes, which is slightly higher than the 75 million tonnes of the previous year. Although supplies of canola, rapeseed and cottonseed are expected to tighten, new soybean stocks from the US are likely to more than offset this.

Global prices

In 2010–11 the world oilseed indicator price is forecast to fall by 13 per from the 2010–11 level, as stated under the forecast for soybeans. This is due to higher carry-over stocks in Latin America and the continued accumulation of world soybean stocks. However, canola prices are forecast to rise slightly, driven by an excess of consumption over production.

Australian oilseed production

Australian oilseed production—consisting mainly of soybeans and canola—is forecast to increase slightly to two million tonnes in 2010–11.

Domestic sunflower prices

Due to excess world oilseed stocks forecast for 2010–11, domestic sunflower prices are estimated to have fallen by seven per cent to $556 per tonne in the September 2010 quarter, from $600 per tonne in the previous quarter. The current sunflower price is also 4 per cent below the September 2009 quarter price and 38 per cent below the September 2008 quarter price. Further capping of sunflower prices comes from the expected increase in Australian oilseed production. Although sunflower oil holds a price premium over vegetable oils such as canola, these alternative oils are to a degree substitutable for sunflower once sunflower prices reach a certain point.

Winter cereal grains

Wheat

Forecast

The gross value of production for **wheat** 2010–11 is forecast to be $450 million, which is 70 per cent higher than DEEDI's final estimate for 2009–10 but 16 per cent lower than the 2008–09 revised ABS estimate.

Analysis

Despite a 23 per cent estimated reduction in area sown of wheat in 2010–11, yields are expected to increase by around 68 per cent, generating a 29 per cent increase in production. This increase in production, combined with an estimated 30 per cent increase in price, results in a GVP forecast for Queensland wheat of $450 million in 2010–11, which is a 70 per cent increase from 2009–10.

Discussion

Area sown

Due to lacklustre wheat prices at planting time in April/May 2010, the area sown to wheat in Queensland fell by an estimated 23 per cent in 2010–11 to 845 000 hectares. The average wheat price for Australian Premium White (APW) at planting time in 2010 was $220 per tonne, a considerable decrease on the average price of $286 per tonne received during planting in 2009. A dry start to the 2010 season also hampered planting, particularly in southern Queensland.

Yields

As at the end of July 2010, the median Queensland wheat yield was forecast at 1.73 tonnes per hectare, well above the long-term yield of 1.41 tonnes per hectare. The current Southern Oscillation Index (SOI) phase has interestingly only been repeated in the years 1916 and 1974. As a consequence, the average wheat yield in the September quarter of 2010–11 is forecast to increase by around 68 per cent from the levels of the 2009–10 crop.

Production

The estimated 23 per cent decline in area sown is forecast to be outweighed by the 68 per cent increase in yields, generating a total production estimate for Queensland of 1.55 million tonnes in 2010–11, which is a 29 per cent increase on 2009–10. It is estimated that Australia will produce around 22 million tonnes for 2010–11, with east coast production up 30 per cent on the previous year due to good rainfall. Around 15 million tonnes of the Australian wheat crop are likely to be exported. It is expected that the world wheat stocks-to-use ratio will fall to 21.5 per cent in the 2010–11 season, down from 25.5 per cent in 2009–10, indicating lower levels of carryover stock relative to total demand or use.

Prices

The world wheat indicator price (US Hard Red Winter, FOB Gulf) is forecast to increase by 20 per cent in 2010–11 to average US$250 per tonne. This forecast increase can be attributed to an anticipated decline in world stocks, as consumption is expected to exceed production for the first time since 2007–08.

In August 2010, Australian wheat prices were increasing in line with global wheat prices in response to these global supply concerns. However, in the fourth week of August 2010, APW2 wheat was $274 per tonne, down from the peak of $319 per tonne in the previous week for old track wheat. New crop multi-grade wheat was $287 per tonne, down from $335 per tonne in the previous week.

Although the wheat price is still relatively high by historical standards, the recent price drop comes after Russia announced that, due to hot and dry weather conditions, it would suspend wheat exports until the end of December rather than being indefinitely cancelled as initially thought. The domestic wheat price estimate for the September 2010 quarter is $291 per tonne APW, which represents a 30 per cent increase on the $223 per tonne estimate for the June 2011 quarter.

Barley

Forecast

The gross value of Queensland barley production for 2010–11 is forecast to be $37 million, which is 19 per cent higher than DEEDI's final estimate for 2009–10 but 15 per cent lower than the 2008–09 revised ABS estimate.

Analysis

Despite a 23 per cent reduction in estimated area sown in 2010–11, this decline will be more than compensated by a marked increase of 43 per cent in average yields, leading to a net 10 per cent increase in production to around 143 600 tonnes. This increase in production, combined with an estimated 8 per cent increase in price to $256 per tonne, is expected to generate a 20 per cent increase in barley GVP to $37 million.

Discussion

Area sown

The area sown to barley is estimated to have fallen by around 23 per cent for the 2010–11 crop to around 77 400 hectares. This may have been due to the relatively depressed barley price of $225 per tonne at planting time in April/May 2010. These depressed prices were consistent with a similar downturn in wheat prices during the same period. A further contributing factor was the dry start to the season.

Production

Despite a 23 per cent reduction in area sown, yields are expected to increase by 43 per cent, taking net production to 143 600 in 2010–11, which is a 10 per cent increase on the previous season.

Price

Due to a forecast increase in world coarse grain stocks in 2010–11 and the expectation that global production will exceed global consumption, the coarse grain price is anticipated to fall by around five per cent. Due to the increased availability of relatively cheap feed alternatives on the world market such as wheat and corn, world barley prices are expected to be lower in 2010–11, dragging Australian feed barley prices downward by three per cent. However, Australian barley plantings are expected to decline by nine per cent in 2010–11, possibly due to grower concerns that a similar quality downgrade to the previous season may occur. Barley production is consequently expected to fall by 10 per cent to 7.3 million tonnes, which will provide some buoyancy to domestic barley prices.

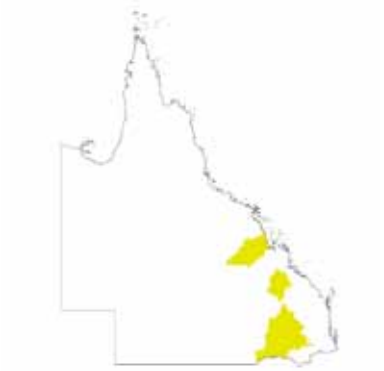
As at the first week of September, export trade in barley was weak, with Saudi and other Ramadan buyers settling on cheap stocks while the Saudi government adjusted its import tariffs. However, Australian buyers are compensating for this export gap with barley increasing in competitiveness in local markets. Overall, the price of barley for the September 2010 quarter is estimated to be $256 per tonne, which is an 8 per cent increase on the $237 per tonne received in the June 2010 quarter.

Summer cereal grains

Grain sorghum

Forecast

The gross value of sorghum production is forecast to be $239 million for 2010–11, which is 54 per cent higher than DEEDI's final estimate for 2009–10 but 33 per cent lower than the 2008–09 revised ABS estimate.



Analysis

An increase in expected yields, combined with a forecast 37 per cent increase in area sown, will expand total production to 1.058 million tonnes, which is a 38 per cent increase from 2009–10. This increased production, together with a 13 per cent increase in price to $229 per tonne, is estimated to increase GVP by around 55 per cent.

Discussion

Yields

As at the beginning of September, above-average rainfall had been received in southern and central Queensland meaning bumper summer crop areas to be sown and high yields tipped for the 2010–11 season. Assuming that sorghum growing areas experience higher than average spring and summer rainfall, it is forecast that yields will be above average, at around three tonnes per hectare. This is around 4 per cent above the sound yield estimate for the 2009–10 season.

Area sown

Given the high absolute sorghum price and its competitiveness with wheat, some cropping areas are likely to be planted to sorghum instead of being fallowed for wheat in 2010–11. Area sown to sorghum is anticipated to increase by 37 per cent to 365 000 hectares in 2010–11, but this is dependent on adequate rainfall and the price competitiveness of other summer crops such as maize, soybeans, sunflowers and in particular, cotton.

Production

Assuming that more favourable seasonal conditions prevail at planting for 2010–11 and that average yields are achieved, Queensland sorghum production for 2010–11 is expected to increase by around 38 per cent to 1.06 million tonnes.

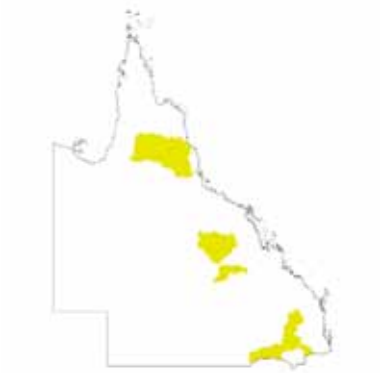
Domestic price

Overall, due to bullish international market forces supporting wheat and coarse grain prices, the price of sorghum is estimated to have increased by around 13 per cent in the September 2010 quarter to $229 per tonne, from the June 2010 quarter level of $202 per tonne.

Maize

Forecast

The gross value of maize production for 2010–11 is forecast to be $53 million, which is 43 per cent higher than DEEDI's final estimate for 2009–10 and 12 per cent below the 2008–09 revised ABS estimate.



Analysis

Maize area sown in Queensland is forecast to increase by 11 per cent in 2010–11, while yields are expected to increase by 17 per cent. As a consequence, production is forecast to increase by 30 per cent to around 190 000 tonnes in 2010–11. A 10 per cent increase in the price of maize to $276 per tonne, combined with the production increase, is estimated to increase maize GVP by a marked 44 per cent.

Discussion

Area sown

Area sown to maize is forecast at 41 000 hectares, which is an 11 per cent increase on area sown in 2009–10. This expected increase is due to improved rainfall conditions in the Queensland maize growing areas compared to the summer of 2009–10. If average rainfall replenishes subsoil moisture throughout spring 2010 more dryland maize is likely to be planted. At beginning of September, spring rainfall in Queensland maize-growing areas was well above average. Further, irrigation water storage levels were up on last summer due to above-average rainfall through the autumn months as well as in June and August 2010, which will boost irrigated maize areas.

Yields

Average yields are expected to be 3.9 tonnes per hectare in 2010–11, which is a 17 per cent increase from 2009–10.

Production

With the increases in both area sown and yields, production for 2010–11 is forecast at 190 000 tonnes, which is a 30 per cent increase on production levels in 2009–10.

Most grain is used domestically, either in the stockfeed industry or as grit-maize for human consumption in snack foods and breakfast cereals. The Queensland crop is made up of around 40 per cent grit-maize. There are small niche export markets supplied by the major production areas and a significant area of maize also goes to whole plant silage for dairy farmers and feedlots. Because of the disorganised maize market, it is difficult to forecast the demand for maize and its direction to end uses.

Price

In the September 2010 quarter, the price of maize was high in absolute terms and estimated to be $276 per tonne. This is 10 per cent above the June 2010 quarter and June 2009 quarter estimates of $250 per tonne. It is, however, 17 per cent below the high price of $334 per tonne experienced in June 2008. Maize prices have been rising throughout 2010, pulled upwards by increasing world coarse grain prices and increasing domestic sorghum prices.

Feature: Prosperous partnerships for stable food quality

A little over two years, and two trips to South Africa, has seen a grain research partnership between Agri-Science Queensland (DEEDI) and South Africa's Stellenbosch University flourish.

DEEDI's Dr Glen Fox, recently back in Australia after his second visit to Stellenbosch University, may be missing the sporting rivalry and culturally rich lifestyle but he has plenty of exciting work ahead of him.

'It all began when I went over to South Africa in 2008 to do my Post-Doctoral research project," said Glen.

'The main focus of my project was improving maize quality. Maize is a staple grain in Africa and used in so many foods. So there is a need to develop maize varieties with improved quality.

'In order to understand the range of quality that already exists in maize, we used a common spectral technology called Near Infrared Spectroscopy (NIRS) to analyse the hardness of maize kernel samples. Hardness is important for the milling process, just as it is in wheat here in Queensland.

'NIRS uses the light spectrum just outside the visible light we see with our eyes. It's the same technology used in your remote control for the TV or garage roller door.'

'We found a considerable variation of quality within and between the individual kernels—instead of the good, consistent quality that the market needs.'

Glen was so impressed with the application of single kernel testing that he quickly developed an application to analyse protein variation in barley when he returned to Toowoomba.

'Unfortunately, we don't have access to the Hyperspectral Imaging technology, but we are already getting some good results using the traditional NIRS system in our lab.'

Glen believes this research will help DEEDI's plant breeders to understand why some types of grains produce such a variation in quality.

'If we can determine why, we might be able to develop new varieties that won't have such a high variation.'

Reducing this variation will allow more crop varieties to be developed to meet more specific market needs—like malting barley—providing uniformity and improved grain quality.

And Glen's research should now proceed at a faster pace after the recent acquisition of a new NIRS instrument through the DEEDI infra-structure program.

'This technology is a little faster than our older instrument and will be a great asset for the lab,' he said.

'However, for high through-put applications we'll need to work with an industry partner to develop a high speed single grain sorter. At the moment, we can only sort around six grains per hour, but there are thousands of grains in each sample.'

Fisheries

In 2010–2011, the GVP of Queensland's fisheries is forecast at $447 million, which is three per cent lower than DEEDI's final estimate for 2009–10 but 25 per cent higher than the ABS final estimate for 2008–09. This includes a forecast of $269 million (combining Queensland and Commonwealth managed fisheries in Queensland waters) for total commercial fishing (a five per cent decrease from 2009–10) and $105 million for aquaculture (a three per cent increase from 2009–10). Recreational fishing is also included in this year's forecast with an estimated commercial value equivalent of $73 million, which is the same as DEEDI's final estimate for 2009–10.

Likely impacts (overall)

The Australian dollar appears to be moving towards parity with the US dollar. At this level it will probably reduce the incentive to export product from Queensland, especially prawns. At the same time, this scenario will also probably reduce the price for imported product that comes into Australia. The effect will be twofold: the potential increase in quantity of imported product, as well as more Australian product coming into the domestic market because it is not profitable to export overseas. The net effect will cause prices to hold at present levels or even decline for the majority of species.

Imported products will affect different harvest sectors in different ways, depending on the volume of imports for competing or substitute species. In the case of fish flesh and prawn market, imports will continue to set the base price that is offered to fishers.

Fuel prices are likely to reduce in relative terms as the Australian dollar moves towards parity with the US dollar, which may allow a small reduction in the price of fuel to the industry.

An extensive program of removing fishing symbols from commercial fishing operations (which provide the right to use commercial fishing gear to harvest 'fish' for sale)—based on their limited or nil use—has been undertaken. Most recently, about 200 fishing symbols allowing potting for crabs have been removed from the fishery. This reduces the potential effort that can be applied to the crab fishery.

In addition, a competitive quota for all shark harvested on the east coast of Queensland has been introduced. As part of this arrangement, fishing symbols have been allocated to selected shark fishers. There may be a carryover effect onto the harvest of complementary species that are harvested at the same time such as grey mackerel.

Overall, confidence in the commercial harvest sector continues to wane primarily due to the steady reduction in prices being offered for the product harvested and an increase in operating costs to operate in the fisheries.

The wild-caught sector of Queensland fisheries includes:

- commercial (Queensland-managed and managed by other agencies in Queensland waters)
- recreational fishing and its subset of charter fishing.

Commercial fishing

The GVP of the Queensland-based commercial sector in 2010–11 is forecast to be around $269 million, which is about the same as in the 2009–10 year. Declining terms of trade for fishing businesses, difficult and complex access arrangements in a range of fisheries and a strong Australian dollar that reduces both import prices of seafood and fuel prices, appear to make life difficult for many sectors in the commercial fishing industry.

Queensland-managed fisheries are forecast to have a GVP of about $215 million in 2010–11, which is slightly lower than in 2008–09. The GVP of Commonwealth-managed fisheries in Queensland waters are forecast at $54 million.

The total value of the commercial fishing value chain (including input suppliers, processors, wholesale and retail marketing) is estimated to be around $460 million. The strong Australian dollar creates opportunities for overseas competitors to expand into overseas markets supplied by Australian producers—such as the live fish and spanner crab markets and frozen prawn markets—while at the same time import, at very competitive prices, finfish, prawns and other 'fish' products into Australia. This competition reduces prices offered to domestic fishers and forces processors to present the Australian product in a convenient form for the consumer in order to compete with overseas product.

Crustaceans

Prawn and bugs

GVP from prawn and Moreton Bay bugs from Queensland Waters in 2010–11 is forecast to be about $107 million, assuming that prices being offered to fishers remain about the same. Prices being offered for the various prawn species have not changed in the last few years and for some species prices have declined slightly. A good prawn harvest in the Gulf of Carpentaria, as well as the base price provided by prawn imports into Australia and lower returns for exports due to the higher Australian dollar, have limited the potential for an increase in prawn prices being offered to fishers.

Compared to 2007–08 and earlier years, prawns harvested in Queensland waters from the Northern Prawn fishery in the Gulf of Carpentaria appear to have declined, although the total prawn landings remains at about the same level. Should there be a reallocation of harvest of prawns to Queensland waters back to the earlier levels, it is expected that the GVP for prawns and bugs harvested from Queensland waters would increase between $16 million and $20 million from 2008–09 forwards.

The Queensland-managed trawl fishery stretches from Cape York to the New South Wales border. Prawns make up about 80 per cent of the total trawl harvest by weight and GVP.

Prawn harvest continues to trend slightly upward, primarily driven by increased harvest of ocean king prawns. In addition, there have been two good years for banana prawn harvest (which varies considerably through the years).

The prawn harvest is estimated at 6300 tonnes in 2010–11 with a GVP of about $76 million. The otter trawl sector harvests about 6200 tonnes and the beam trawlers harvest about 400 tonnes. Moreton Bay bug harvest, as incidental catch to both the prawn and the scallop targeted catch, is expected to be about 500 tonnes with a GVP of about $11 million.

It is estimated that prawn harvest will stabilise between 5500 tonnes and 7000 tonnes over the next few years. Boat numbers appear to have stabilised at about 330 active otter trawlers and 80 beam trawlers. Mean days fished per boat appears to have increased to 115 days, while the mean daily prawn catch rate appears to be increasing. King prawn currently provides about 50 per cent of the otter trawl prawn harvest with tiger prawn providing about 15 per cent of the total prawn harvest.

Crabs

GVP for the crab harvest is expected to be about $26 million in 2010–11 as crab prices appear unlikely to increase by significant levels and harvest is expected to decline slightly over time, with a reduction in the number of fishing operations involved in these fisheries.

GVP of the commercial harvest of mud crab and blue swimmer crab in 2010–11 is expected to decline due to a reduction in blue swimmer crab harvest. This is mainly due to a decline in the number of boats and days fishing for blue swimmer crabs (the price from the previous year is expected to be maintained). Effort in the mud crab sector has declined at a lesser rate.

The spanner crab fishery is a quota-managed fishery. It is expected to fill about 1200 tonnes of the quota in 2010–11, which is slightly less than the previous year. The current GVP for this sector is about $5 million. Most of Queensland's spanner crabs are exported. This fishery produces within the available quota, driven by export prices. The appreciation of the Australian dollar is expected to have only a marginal impact on the price being offered to fishers.

Tropical rock lobster (TRL)

This dive fishery operates mainly on the eastern side of Cape York and does not include the Torres Strait. It typically produces between 200 tonnes and 250 tonnes of TRL with a GVP of about $8 million.

The appreciation of the Australian dollar will have a small effect on this type of fishery and its GVP in 2010–11 is expected to remain at about the same level.

Molluscs

Even with some changes in the management of the scallop fishery, it is anticipated that GVP will be about $11 million in 2010–11. Harvest is expected to be about 700 tonnes of scallop meat. Some management changes introduced into this sector are currently being reviewed.

As with the other sectors, scallop imports into Australia are holding down the price being offered to fishers. The high Australian dollar has also affected the level of scallop export prices.

Finfish

Line-caught

There are three parts to the line fishery managed by Queensland:

- Gulf of Carpentaria
- Great Barrier Reef Marine Park area (reef line fishery)
- southern area (rocky reef fishery).

The line fisheries of Queensland have an estimated GVP for 2010–11 of about $48 million with a harvest of about 3000 tonnes. The reef line fishery provided about 90 per cent of the GVP and 75 per cent of the harvest weight. Compared to the other sectors, the reef line harvest is expected to increase from its present level to about 3300 tonnes of harvest, with an estimated GVP of about $45 million, dominated by the export of live Coral trout.

The coral trout quota is expected to be filled in 2010–11. Most of Queensland's coral trout harvest is exported, with live fish trade the main focus. Compared with other reef species, coral trout are a very high value fish (especially live fish), with fishers being paid seven to nine times the price of other species harvested. The current level of the Australian dollar relative to other currencies is likely to decrease the price offered to fishers.

Catches of other reef species, such as Spanish mackerel, red-throat emperor and fish grouped in the 'other reef species' category, are more seriously affected by economic and other factors currently operating in the reef line sector. These species are almost completely targeted for the domestic market.

Given the prices currently being offered, the likelihood of filling these quotas in 2010–11 is low. Typically, the level of harvest is about one-third of the available quota. Fishers report that fish are available for harvest whenever prices improve.

Net-caught species

In 2010–11, production from the Queensland net fishery is expected to be about 6100 tonnes with a forecast GVP of $32 million. As well as the price effect on the level of harvest from the net fishery, especially from the east coast, there will be a decline in harvest with the introduction of a competitive shark quota of 600 tonnes. This will reduce production by about 400 tonnes each year as well as having an effect on the harvest of species such as grey mackerel which are often harvested at the same time as shark. The follow-on effects into netting operations are difficult to define at this stage. The number of boats remained about the same and mean daily harvest rate appeared relatively stable.

As most of Queensland's net-caught product is destined for the local and wider Australian market, imports of finfish limit the price offered to fishers for locally caught fish.

Mullet harvest continues to decline. The primary cause is that the price being offered for the winter fish with their roe has collapsed—other countries now supply the markets at a lower price.

As stated previously, the reduction in harvest of net-caught species cannot be interpreted as a decline in fish stocks. Recent studies indicate that, from a biological perspective, most of the species harvested by net fishers are in robust health and are being harvested at a sustainable level.

Recreational fishing

Recreational fishing and the associated leisure activities forms an important part of the psyche of the Queensland community. A major study of this recreational and lifestyle activity has just commenced.

There are two parts to this study:

- a telephone survey of approximately 12 000 people to estimate the proportion of the community that undertake fishing as part of their recreational activity
- select participants who take part in a diary program where they report on their fishing activity and catch by species and general location fished.

The information collected will update the estimates made from surveys undertaken some years ago.

Aquaculture

Forecast

The gross value of the Queensland aquaculture industry is forecast to be $105 million in 2010–11, which is three per cent higher than DEEDI's final estimate for 2009–10 and 24 per cent higher than the 2008–09 revised ABS estimate.

Discussion

Prawn farming is the largest sector of the aquaculture industry and is expected to stabilise and consolidate on the very significant gains made in the previous season. Prawn farming production is predicted to remain at 5000 tonnes, with a farm-gate value of $71 million. Barramundi is the second largest sector and is expected to increase production by 15 per cent. This translates into a farm-gate value of $25 million, which is a seven per cent increase from 2009–10. Freshwater fish (silver perch, Murray cod and jade perch) are estimated to increase in value by 3.5 per cent in 2010–11, while redclaw, oysters and the hatchery sectors are expected to remain at similar levels to 2009–10.

Feature: Strategy seeks balance between development and environment

A new plan for marine plants in Cairns will strike the right balance between development and the protection of marine plant habitats.

Fisheries Queensland and Cairns Regional Council have worked closely over the past three years to develop the Marine Plant Management Strategy for Cairns, which will give council the capacity to remove vegetation from flood-prone areas while still protecting important marine habitats.

Speaking at the launch, Cairns Regional Council Mayor, Val Schier, said the strategy would help the state government and Council to better manage marine plant communities such as mangroves in waterways around Cairns.

'This comprehensive strategy is the first to be completed in Queensland with more to come on stream in Townsville and Brisbane,' Mayor Schier said.

'It replaces the previous process where Council applied to Fisheries Queensland for individual approvals to remove marine plants and allow dredging of watercourses.

'Council has negotiated with Fisheries Queensland an approach that maps out exactly which mangrove communities will be affected by maintenance works and which areas where no work will be undertaken.

'This approach will see the restoration of degraded marine plant communities to achieve long-term protection of fish habitats.

'At the same time, the strategy will meet community requirements for access and recreational use and ensure fish habitat resources under Council's responsibility are managed in an ecologically sustainable manner.'

Fisheries Queensland managing director Jim Groves said local governments often found themselves walking a tightrope in balancing development and the protection of the environment.

'Cairns Regional Council should be applauded for developing this document as a way to achieve this balance,' Mr Groves said.

'The management strategy provides for mangrove protection and restoration.

'At the same time it will give council the ability to target the removal of marine plants when required for flood mitigation purposes.

'Marine habitats such as mangroves and saltmarshes are nursery grounds for many species of reef and freshwater fish.

'The management and protection of fish habitats is important not just for the environment, but for our commercial and recreational fisheries.

'Disturbances of the habitat areas can disrupt the entire food chain and lead to a long-term decline in fish production and the general health of the environment.'

Fisheries Queensland senior fisheries scientist Louise Johns said councils were under pressure from growing populations and the needs of the community to seek balanced development.

'For example, some areas in Cairns are vulnerable to flooding and some clearing is important to protect homes during the wet season,' Ms Johns said.

'The Cairns Regional Council Marine Plant Management Strategy will help council and Fisheries Queensland to best meet the needs of both the community and the environment.'

Forestry

Forecast

The GVP of the forest growing sector of the Queensland forest industry in 2010–11 is forecast at $187 million, which is nine per cent higher than DEEDI's final estimate of $171 million for 2009–10 and 15 per cent greater than the 2008–09 revised ABS estimate.

DEEDI also estimates that the first-stage processing sector of the Queensland forest industry will contribute $386 million to the Queensland economy in 2010–11. This means that when, combined, the forest growing and first-stage processing sectors of the Queensland forest industry are forecast to directly contribute $572 million of economy activity to Queensland in 2010–11.

Analysis and discussion

The modest forecast growth for activity in the Queensland forest industry in 2010–11 is underpinned by a recovery in the market conditions for timber products in 2009–10 following the substantial downturn experienced as a result of the global financial crisis. Industry sources suggest that with about 70 per cent of Queensland's timber being utilised by housing and construction activity, the demand for timber products is largely correlated with activity in the housing sector.

The latest leading dwelling (housing) finance approval data[7] provides evidence that the Queensland dwelling construction sector is recovering and that this improvement is expected to translate into growth in forest industry activity over the medium-term. Information produced by the Housing Industry Association (HIA) indicates that total investment in housing (new housing and renovations) in Queensland fell by two per cent in 2009–10. However this result is an improvement on the previous year where investment in housing is estimated to have fallen by nine per cent in 2008–09. Looking ahead, HIA forecasts a recovery in total housing investment in Queensland in 2010–11 with predicted growth of eight per cent. In terms of new housing construction, HIA reports that commencements for Queensland will continue to grow over the current financial year, but at a relatively slower rate than the previous year. Commencements were estimated to have risen by an impressive 12 per cent in 2009–10, albeit from a low base, and are forecast to increase by four per cent in 2010–11. Industry sources also suggest that housing renovation activity is expected to continue to grow in the current year.

OESR estimates in annual terms that total dwelling approvals in Queensland in July 2010 was 4.2 per cent higher than the July 2009 trend estimate, although trended down in the last half of the period. In particular the falling monthly trend dwelling approvals for the five months to July 2010 clearly reflect the unwinding of the first home buyer's assistance that has supported demand for housing over the last few years. Headwinds for the housing construction sector include labour market uncertainty and possible weakening demand for residential housing in Queensland as a result of the deterioration in relative housing affordability. Industry commentators report that the reduction in housing affordability is largely due to increases in land prices, reduced access to credit and recent increasing interest rates.

7 More recent dwelling approvals data, released too late to be factored into the forestry GVP calculations, indicate a downturn in Queensland's housing sector. These figures will be incorporated in the next update of *Prospects*.

However solid population growth, pent-up demand arising from the recent downturn, and also stimulus from new public housing construction arising from the Australian Government's Social Housing Initiative to build 20 000 new dwellings across Australia by the end of 2010, are expected to sustain demand for new dwellings. On balance, the OESR expects house construction activity in Queensland to remain relatively subdued in the first half of 2010–11 with a full and sustained recovery not expected until 2011–12. These indicators point to moderately positive market conditions for timber products over the balance of the current financial year and expectations of relatively stronger demand growth in the next financial year.

In terms of the supply of timber products sourced from native forests, the Department of Environment and Resource Management's (DERM) Forest Products Group has the responsibility for the commercial management of state-owned native forest resources and therefore is a significant supplier of native hardwood and cypress log timber to the Queensland forest industry. DERM report that they sold 232 800 cubic metres of log timber in 2009–10, a 2.5 per cent decline on the result in the previous year. Sales of native forest log timber are again expected to total about 230 000 cubic metres in 2010–11. Logs from plantations in Queensland account for around 75 per cent of the domestically produced log timber used each year by Queensland's forest industry. The bulk of Queensland's timber plantation estate was established by the Queensland Government over the last 80 years (about 204 000 hectares). This estate was sold to the private sector at the end of 2009–10 as part of the Renewing Queensland Plan.

Managed Investment Scheme (MIS) projects developed by the private sector have also established large areas of new 'greenfield' plantations in Queensland over the last decade, primarily for fibre production although there are some solid wood plantations being established in north Queensland. The MIS investment model was supported by Australian Government policy as a vehicle to generate new investment in plantation projects and assist in overcoming traditional market reluctance to invest in plantations due to their illiquid nature, relatively high risk profile and long investment timeframes. An estimated 50 000 hectares of new forestry plantations have been established in a number of 'nodes' in south, central and north Queensland by a small number of companies using the MIS model. Unfortunately about 20 000 hectares plantations established for fibre production in central Queensland were written off in 2009–10 due to fungal attack, highlighting the sometimes risky nature of plantation investments.

Moreover investment in the MIS sector has recently substantially declined with the Australian Agribusiness Group reporting that insignificant funds were raised for MIS agribusiness projects in Queensland in 2009–10. This follows a number of years where in excess of $100 million was invested in new plantation projects in Queensland. The financial collapse of a number of high profile companies offering a range of MIS agribusiness investments over the last year has substantially undermined confidence in the MIS system to the extent that market confidence may not recover. Therefore the MIS system will not produce further significant growth in the Queensland plantation estate for the foreseeable future.

Supply constraints will continue to limit the ability of the Queensland forest industry to respond to further demand growth as the majority of available log timber from native forests managed by DERM and Queensland's mature timber plantation estate is committed under current sales agreements. This will require additional imports of log timber or timber products, or alternatively substituting timber products with alternative steel, aluminium or concrete products.

In the longer term investment in greenfield hardwood plantations for sawlog production by both the Queensland Government and private investors over the last decade will increase the volume of locally-produced timber available in the market. Furthermore, Forestry Plantations Queensland Pty Ltd (FPQPL) will establish the final tranche of the Queensland Government's commitment to establish a new 20 000 hectare solid wood hardwood plantation estate in southern Queensland over the next 15 years. However further investment in plantations, particularly solid wood plantations, is needed to meet forecast demand growth for log timber in Queensland.

The Queensland Government is working to support new investment in private plantation projects in Queensland and has recently finalised the Queensland Timber Plantation Strategy (QTPS) in consultation with industry and other stakeholders. The QTPS was released in mid-2010 and will support new investment in the sector through a program of actions in the key areas of land-use planning, legislation and policy, investment and targeted industry development support and community education. Further information about the QTPS can be found at www.deedi.qld.gov.au (search QTPS).

A note about forest industry data sources

Prior to September 2007 *Prospects* used the reported turnover of Australian and New Zealand Standard Industrial Classification (ANZSIC) Group 231 (Log sawmilling and timber dressing) as defined and measured by ABS in their survey of manufacturing, as an indicator of the gross value of forest industry activity in Queensland. However, while these data do separately report the forest growing sector, they exclude some elements of the first-stage processing sector and they also contain some elements of double-counting.

Prospects now uses data produced by ABARE in its biannual Australian wood and forest products statistics publication about the value of log production (gross value of logs delivered to the sawmill door or wharf gate) as an estimate of the gross value of the forest growing sector in Queensland. This, together with estimates of the 'value-added' to intermediate inputs) of ANZSIC Group 231 and ANZSIC Code 2321 (*Plywood and veneer manufacturing*), provides an overall estimate of Queensland forest industry activity.

Special feature: Queensland's food supply chain

Introduction

Queensland's food supply chain extends from primary production of agricultural products to food services that are delivered to final consumers. When comparing and discussing the size and value of industries or sectors of the economy, it is important to use an appropriate and consistent value and methodology for a discussion that has a specific target audience.

Definitions: *value-added* versus *gross value of production*

Gross value added is the value of output at basic prices (i.e. without commodity taxes or subsidies) minus the value of production inputs. This measure is used to describe economic contribution by an industry or sector.

Gross value of agricultural commodities is calculated by multiplying the output for each primary industry activity by the average wholesale market price paid to producers. This measure describes the production output of a firm, industry or sector.

Use of measures

When comparing the size of two or more industries or sectors, it is essential to use consistent measures and approaches, so that 'apples can be compared with apples'.

A large part of the broader community are not familiar with, or cannot relate to, the economic concept of value-added, but do understand the concept of gross value of production. Primary producers interpret *gross value of production* in practical terms (which is *quantity x price*) but do not necessarily relate to the more theoretical concept of *value-added* as they generally do not consider their business activities from that perspective.

For example:

a grain farmer who grows 1000 tonnes of sorghum at $200 per tonne would say, 'I produced $200 000 of sorghum'. The farmer would not say 'I generated $120 000 of sorghum value-added after taking out the cost of fertiliser, fuel, etc. used'.

The same applies when reporting the total amount of sorghum produced in Queensland in any given year. Farmers, agricultural producers and industry groups tend to use the measure of *gross value of production*, but not *gross value-added*.

Limitations

It is incorrect to use *gross value of production* in calculating a percentage contribution to economic activity such gross state product (GSP) that are based on *value-added*.

It is also incorrect to add the gross values of sectors together in an attempt to build a complete picture of the Queensland economy. There is a tendency to do this, as it appears the simplest way of using available measures. When *gross values of production* are added together and expressed as a share of GSP, it will grossly overstate the contribution of the food supply chain to the Queensland economy.

Approach in *Prospects*

In future, the entire food supply chain will be shown in *Prospects* in addition to performance measures of individual industries and commodities. Two measures and estimates will be reported:

- a value-added estimate or the economic contribution
- the value of the food supply chain.

The two estimates would meet the requirements of the industry groups and readership of *Prospects* and at the same time ensure that a value-added measure is correctly identified for official purposes without overestimation. Table 6 shows the proposed presentation of the food supply chain in *Prospects*.

Table 6 Food supply chain, 2008–09[1]

Primary production and processing			Secondary food processing	Wholesale and retail	Food services
Inputs: fuels, fertilisers, storage etc.	Agricultural gross value: Meat and livestock, grains and crops, fruits, vegetables, horticulture, poultry, dairy, fisheries	First-stage processing: meat, seafood, milk & cream, fruit and vegetable, grain mill and sugar	Beverage processing and other food manufacturing	Supermarkets, fruit shops etc.	Restaurants, cafes and catering services
Approach 1—Value added of the food supply chain (2008–09) $13.7 billion					
NA	Agriculture and fishing $4.2 billion	First-stage processing $2.7 billion	Secondary food $1.8 billion	Wholesale and retail $3.9 billion	Food services $1.2 billion
Approach 2—Gross value of the food supply chain (2008–09) $18.7 billion [2]					
Intermediate inputs costs $5.1 billion	Value-added agriculture and fishing $4.2 billion	First-stage processing (value-added) $2.7 billion	Secondary food (value-added) $1.8 billion	Wholesale and retail (value-added) $3.9 billion	Food services (value-added) $1.2 billion
= Gross value agriculture and fishing in Prospects $9.2 billion					
Employed persons—food supply chain (2008–09) 266 850					
Direct services agriculture and fishing 5250	Agriculture and fishing 72 500	First-stage processing 20 650	Secondary food 18 100	Wholesale and retail 96 750	Food services 53 600

(1) Components may not sum to totals due to rounding.

(2) The gross value of the food supply chain does not represent the economic contribution of the food supply chain to the Queensland economy and should not be compared with the value added of other industries as it includes the value of inputs used in production.

Notes

- Gross value of commodities produced is a measure of economic output.
- Estimates of the gross values of Queensland agricultural production are calculated and published at the state level by the Australian Bureau of Statistics (ABS). Presently, ABS publishes estimates for most agricultural commodities twice a year.
- A preliminary estimate for a particular financial year is published approximately four months after the end of that year. The second (final estimate) is published approximately 12 months after the preliminary estimate.
- Estimates of the gross value of Queensland's fishery production are available from DEEDI.
- All estimates provided in this publication are in nominal dollar values unless otherwise stated.

Definitions

Crops
Field and horticulture crops.

Fisheries
Trawl- and non-trawl fishing; and aquaculture.

Forestry
Log sawmilling and timber dressing.

Gross value of commodities produced
Value of recorded production at wholesale prices realised in the market place (for example, cattle sold for slaughter and sugarcane at the mill).

Value-added production
'Value-added' is simply measured as the value of the output produced minus the costs of the intermediate inputs.

Livestock disposals
Cattle, sheep, pigs, poultry, kangaroos and other live animals sold for slaughter, plus live exports minus live imports.

Livestock products
Eggs, milk, wool and honey.

Market place
Generally, the metropolitan market in each state and territory. Where commodities are consumed locally, or where they become raw material for a secondary industry, these points are presumed to be the market places. Commodities exported overseas are generally valued at free-on-board prices.