

Fortnightly Agri Update

20 March 2019



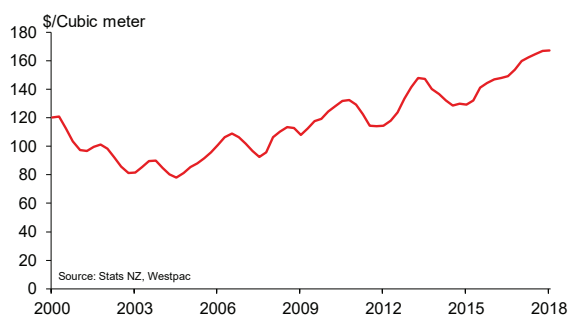
Standing tall

Log prices have been consistently stronger than we expected through 2018, a theme that has continued in the early part of 2019. In this week's Agri Update, we take a look at what has driven this strength, and assess the outlook for log prices from here.¹

If the horticulture sector has been akin to the star All Black winger delighting crowds and receiving plenty of plaudits of late, the strong performance of the forestry sector has perhaps been more akin to a front rower. Equally important but perhaps more likely to fly under the radar.

Export log prices have been very strong over the last year and are now around 25% above their long run average.

Average log export price



GlobalDairyTrade Auction Results, 20 March 2019

	Change since last auction	Price index USD/Tonne
Anhydrous Milk Fat (AMF)	-3.1%	\$5,662
Butter	9.3%	\$5,089
Butter Milk Power (BMP)	-	-
Cheddar	3.9%	\$4,036
Lactose	-1.0%	\$1,000
Rennet Casein	9.7%	\$6,190
Skim Milk Powder (SMP)	-2.4%	\$2,405
Whole Milk Powder (WMP)	4.0%	\$3,317
GDT Price Index	1.9%	1,068

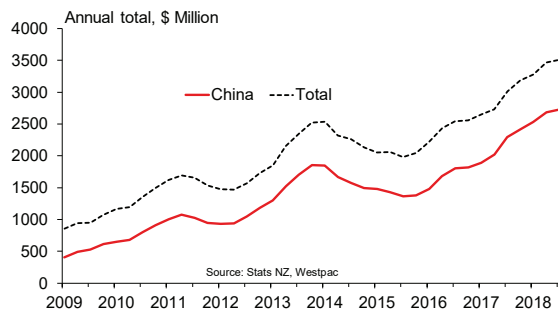
Farmgate milk price forecasts

	2018/19		2019/20
	Westpac	Fonterra	Westpac
Milk Price	\$6.40	\$6.30-\$6.60	\$7.00

¹ Further detail on this sector is available in the forestry and wood processing sector industry Insight from last year, available here <https://www.westpac.co.nz/assets/Business/Economic-Updates/2018/Bulletins-2018/Industry-Insight-Forestry-and-Wood-Products-May-2018.pdf>

The key reason for such strength has been the seemingly insatiable demand from China. New Zealand's log export volumes to China were up 14% in 2018 on a year earlier, with New Zealand exporting around 16 million cubic tonnes of logs to China, around 77% of total New Zealand log exports.

Log exports



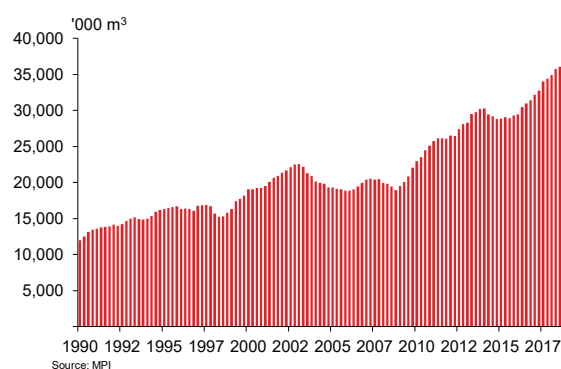
The increasing dominance of China as a destination for New Zealand exports is a common thread across the agricultural sector. Yet even in the company of other commodity exports, logs stand out. Around three quarters of New Zealand's log exports (by value) are destined for China compared to 30% of our dairy exports, 30% of sheep meat exports and 50% of wool exports.

There are a number of factors that have combined to support log prices. Over the last decade, the decline of Russian log exports to China has been a key driver. Softwood log exports from Russia to China peaked around 2007 when Russia supplied around 90% of Chinese imports. However, Russia subsequently introduced a log export tax in an effort to support its wood processing sector. Fast forward to 2017 and New Zealand was the largest source of imported logs for the Chinese wood processing industry.

More recently, environmental protection measures within China have been introduced aimed at reducing the felling of native forests.

Strong prices, combined with increased availability of wood for harvest has led to a sharp lift in volume of New Zealand log exports. Roundwood removals (which give an estimate of total wood production) were up 10% in 2017 and a further 6% in 2018.

Roundwood removals



In addition to high prices, Government policies aimed at encouraging tree planting are also boosting sentiment in the sector. The "Billion Trees" programme is one example,

with the Government introducing incentives aimed to assist its strategy to plant one billion trees between 2018 and 2027. In addition, some of the investments made by the Provincial Growth Fund have also targeted the sector. Offshore investors also face a lower hurdle for investing in forests and forest rights than other types of investment. Although purchases still require Overseas Investment Office approval, the streamlined approvals process means investors are not required to assess the benefits their investment will bring relative to a New Zealand investor. This may help support greater offshore interest in the forestry sector compared to other parts of the agricultural sector.

However, the sector is not without its challenges. Like the horticulture industry, labour shortages continue to plague firms, as do challenges securing truck drivers in order to transport logs from the forest to the wharf. Increases in shipping costs can also squeeze margins as they make a relatively high proportion of producer's costs as logs are large relatively low value items. On this front, log exporters may be wary of the impact of IMO 2020, new shipping regulations which come into effect on January 1 2020. These will limit the amount of pollution ships emit by either installing new system to remove sulphur from emissions or switching to alternative low sulphur fuels, potentially pushing up shipping costs.

So where to from here? We think the outlook continues to point to the risk of a softening in log prices from current levels. The outlook for global growth has moderated. In China, the slower pace of growth observed in the latter part of last year is expected to be maintained in 2019.

While NZ logs are often used for boxing concrete in China, some also make it into manufactured products. Further escalation of the China-US trade war remains a key risk. It could lead to reduced demand for Chinese manufactured wood products, this could impact demand for logs. Furthermore, over a longer horizon, the high prices being achieved by New Zealand exporters are likely to encourage competition from exporters in other parts of the world including South America.

Domestically, the outlook is also for softer log demand in the coming years. We expect residential construction activity to slow beyond 2019 as slower population growth reduces the need to build more houses, post-quake reconstruction activity in Canterbury continues to wind down and house prices fall modestly. This would be a big change for the sector which has been growing strongly in recent years. In addition, construction activity in Australia is falling sharply as house prices in Sydney and Melbourne continue to fall.

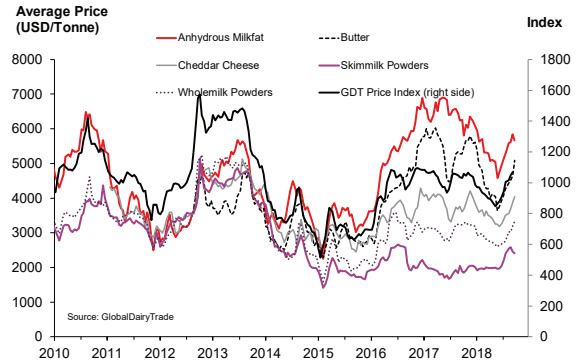
Anne Boniface
Senior Economist

Beyond the farm gate

Dairy

	Current price level compared to 10 year average	Next 6 months
Trend	Above average	↘

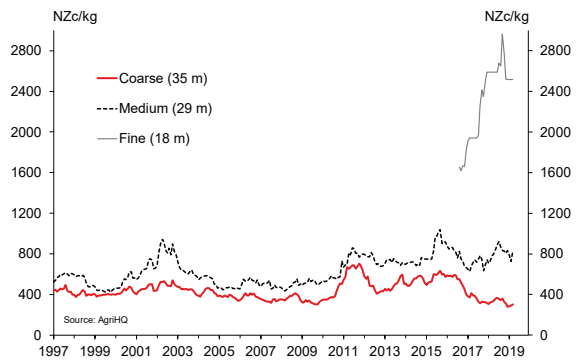
Dairy prices continued to track higher in last night's GlobalDairyTrade auction. In aggregate prices rose 1.9% which included a 9.3% lift in butter prices. Whole milk powder prices were up a healthy 4%, though this wasn't quite as strong as futures markets had been signalling. Last night's lift in prices was probably supported by the sharp downward revision to Fonterra's milk collections forecast this season. Fonterra is now only expecting its milk collections to be up 0.3% this season (a much weaker forecast than the 2% growth that it was expecting just a few weeks ago). Given the strength in milk production up until January, this implies Fonterra is expecting very weak milk collections over the remainder of the season. We're not quite so pessimistic but it will be interesting to see what DCANZ data for nationwide milk collections shows for February.



Wool

	Current price level compared to 10 year average	Next 6 months
Trend	Low	→

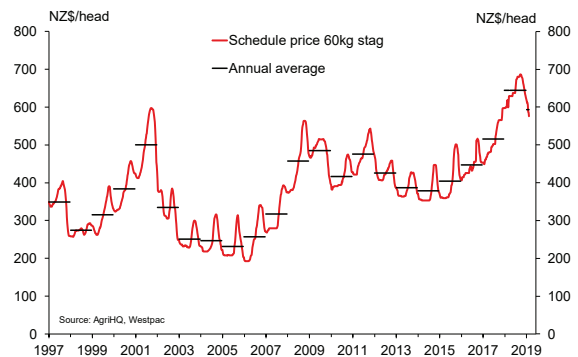
China suspended wool exports from South Africa in February, due to an outbreak of foot and mouth disease. While South Africa is a much smaller wool producer than Australia or New Zealand, the ban could support Chinese demand for wool from New Zealand. This is not the first time the gate has been shut on South African wool exports, there was another Foot and mouth outbreak in 2000 and in 2011 Rift Valley Fever impacted trade. We did see a lift in wool prices during these periods.



Venison

	Current price level compared to 10 year average	Next 6 months
Trend	High	↘

High venison and velvet prices have encouraged deer farmers to increase herd sizes. Hind numbers in the year to June were up 5% on a year ago, at 413,400. The Deer Industry Association of NZ suggests a similar rise could occur in 2019. In addition, there has been an improvement in productivity in the industry in recent years with a lift in reproduction rates. The modest lift in production is unlikely to weigh too heavily on prices. While prices are down from recent highs, the outlook for the sector remains broadly positive. Venison is viewed as a relatively healthy meat, low in fat and high in protein and diversification away from Europe (where growth remains sluggish) and toward the US (where household incomes are growing more strongly) is a positive development for the sector.



Note: Trend arrows indicate direction of change in world prices.

Contact the Westpac economics team

Dominick Stephens, Chief Economist +64 9 336 5671

Michael Gordon, Senior Economist +64 9 336 5670

Satish Ranchhod, Senior Economist +64 9 336 5668

Anne Boniface, Senior Economist +64 9 336 5669

Paul Clark, Industry Economist +64 9 336 5656

Any questions email: economics@westpac.co.nz

Past performance is not a reliable indicator of future performance. The forecasts given in this document are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

Disclaimer

Things you should know

Westpac Institutional Bank is a division of Westpac Banking Corporation ABN 33 007 457 141 ("Westpac").

Disclaimer

This material contains general commentary, and market colour. The material does not constitute investment advice. Certain types of transactions, including those involving futures, options and high yield securities give rise to substantial risk and are not suitable for all investors. We recommend that you seek your own independent legal or financial advice before proceeding with any investment decision. This information has been prepared without taking account of your objectives, financial situation or needs. This material may contain material provided by third parties. While such material is published with the necessary permission none of Westpac or its related entities accepts any responsibility for the accuracy or completeness of any such material. Although we have made every effort to ensure the information is free from error, none of Westpac or its related entities warrants the accuracy, adequacy or completeness of the information, or otherwise endorses it in any way. Except where contrary to law, Westpac and its related entities intend by this notice to exclude liability for the information. The information is subject to change without notice and none of Westpac or its related entities is under any obligation to update the information or correct any inaccuracy which may become apparent at a later date. The information contained in this material does not constitute an offer, a solicitation of an offer, or an inducement to subscribe for, purchase or sell any financial instrument or to enter a legally binding contract. Past performance is not a reliable indicator of future performance. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

Country disclosures

Australia: Westpac holds an Australian Financial Services Licence (No. 233714). This material is provided to you solely for your own use and in your capacity as a wholesale client of Westpac.

New Zealand: In New Zealand, Westpac Institutional Bank refers to the brand under which products and services are provided by either Westpac or Westpac New Zealand Limited ("WNZL"). Any

product or service made available by WNZL does not represent an offer from Westpac or any of its subsidiaries (other than WNZL). Neither Westpac nor its other subsidiaries guarantee or otherwise support the performance of WNZL in respect of any such product. The current disclosure statements for the New Zealand branch of Westpac and WNZL can be obtained at the internet address www.westpac.co.nz. For further information please refer to the Product Disclosure Statement (available from your Relationship Manager) for any product for which a Product Disclosure Statement is required, or applicable customer agreement. Download the Westpac NZ QFE Group Financial Advisers Act 2008 Disclosure Statement at www.westpac.co.nz.

China, Hong Kong, Singapore and India: This material has been prepared and issued for distribution in Singapore to institutional investors, accredited investors and expert investors (as defined in the applicable Singapore laws and regulations) only. Recipients in Singapore of this material should contact Westpac Singapore Branch in respect of any matters arising from, or in connection with, this material. Westpac Singapore Branch holds a wholesale banking licence and is subject to supervision by the Monetary Authority of Singapore. Westpac Hong Kong Branch holds a banking licence and is subject to supervision by the Hong Kong Monetary Authority. Westpac Hong Kong branch also holds a license issued by the Hong Kong Securities and Futures Commission (SFC) for Type 1 and Type 4 regulated activities. This material is intended only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance. Westpac Shanghai and Beijing Branches hold banking licenses and are subject to supervision by the China Banking Regulatory Commission (CBRC). Westpac Mumbai Branch holds a banking license from Reserve Bank of India (RBI) and subject to regulation and supervision by the RBI.

UK: The contents of this communication, which have been prepared by and are the sole responsibility of Westpac Banking Corporation London and Westpac Europe Limited. Westpac (a) has its principal place of business in the United Kingdom at Camomile Court, 23 Camomile Street, London EC3A 7LL, and is registered at Cardiff in the UK (as Branch No. BR00106), and (b) authorised and regulated by the Australian Prudential Regulation Authority in Australia. Westpac is authorised in the United Kingdom by the Prudential Regulation Authority. Westpac is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential

Disclaimer continued

Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. Westpac Europe Limited is a company registered in England (number 05660023) and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

This communication is being made only to and is directed at (a) persons who have professional experience in matters relating to investments who fall within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (b) high net worth entities, and other persons to whom it may otherwise lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). Any person who is not a relevant person should not act or rely on this communication or any of its contents. The investments to which this communication relates are only available to and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such investments will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely upon this communication or any of its contents. In the same way, the information contained in this communication is intended for "eligible counterparties" and "professional clients" as defined by the rules of the Financial Conduct Authority and is not intended for "retail clients". With this in mind, Westpac expressly prohibits you from passing on the information in this communication to any third party. In particular this communication and, in each case, any copies thereof may not be taken, transmitted or distributed, directly or indirectly into any restricted jurisdiction. This communication is made in compliance with the Market Abuse Regulation (Regulation(EU) 596/2014).

Investment Recommendations Disclosure

The material may contain investment recommendations, including information recommending an investment strategy. Reasonable steps have been taken to ensure that the material is presented in a clear, accurate and objective manner. Investment Recommendations for Financial Instruments covered by MAR are made in compliance with Article 20 MAR. Westpac does not apply MAR Investment Recommendation requirements to Spot Foreign Exchange which is out of scope for MAR.

Unless otherwise indicated, there are no planned updates to this Investment Recommendation at the time of publication. Westpac has no obligation to update, modify or amend this Investment Recommendation or to notify the recipients of this Investment Recommendation should any information, including opinion, forecast or estimate set out in this Investment Recommendation change or subsequently become inaccurate.

Westpac will from time to time dispose of and acquire financial instruments of companies covered in this Investment Recommendation as principal and act as a market maker or liquidity provider in such financial instruments.

Westpac does not have any proprietary positions in equity shares of issuers that are the subject of an investment recommendation.

Westpac may have provided investment banking services to the issuer in the course of the past 12 months.

Westpac does not permit any issuer to see or comment on any investment recommendation prior to its completion and distribution.

Individuals who produce investment recommendations are not permitted to undertake any transactions in any financial instruments or derivatives in relation to the issuers covered by the investment recommendations they produce.

Westpac has implemented policies and procedures, which are designed to ensure conflicts of interests are managed consistently and appropriately, and to treat clients fairly.

The following arrangements have been adopted for the avoidance and prevention of conflicts in interests associated with the provision of investment recommendations.

- (i) Chinese Wall/Cell arrangements;
- (ii) physical separation of various Business/Support Units;
- (iii) and well defined wall/cell crossing procedures;
- (iv) a "need to know" policy;
- (v) documented and well defined procedures for dealing with conflicts of interest;
- (vi) steps by Compliance to ensure that the Chinese Wall/Cell arrangements remain effective and that such arrangements are adequately monitored.

U.S.: Westpac operates in the United States of America as a federally licensed branch, regulated by the Office of the Comptroller of the Currency. Westpac is also registered with the US Commodity Futures Trading Commission ("CFTC") as a Swap Dealer, but is neither registered as, or affiliated with, a Futures Commission Merchant registered with the US CFTC. Westpac Capital Markets, LLC ("WCM"), a wholly-owned subsidiary of Westpac, is a broker-dealer registered under the U.S. Securities Exchange Act of 1934 ("the Exchange Act") and member of the Financial Industry Regulatory Authority ("FINRA"). This communication is provided for distribution to U.S. institutional investors in reliance on the exemption from registration provided by Rule 15a-6 under the Exchange Act and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors in the United States. WCM is the U.S. distributor of this communication and accepts responsibility for the contents of this communication. All disclaimers set out with respect to Westpac apply equally to WCM. If you would like to speak to someone regarding any security mentioned herein, please contact WCM on +1 212 389 1269. All disclaimers set out with respect to Westpac apply equally to WCM.

Investing in any non-U.S. securities or related financial instruments mentioned in this communication may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the SEC in the United States. Information on such non-U.S. securities or related financial instruments may be limited. Non-U.S. companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect in the United States. The value of any investment or income from any securities or related derivative instruments denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related derivative instruments.

The author of this communication is employed by Westpac and is not registered or qualified as a research analyst, representative, or associated person under the rules of FINRA, any other U.S. self-regulatory organisation, or the laws, rules or regulations of any State. Unless otherwise specifically stated, the views expressed herein are solely those of the author and may differ from the information, views or analysis expressed by Westpac and/or its affiliates.