

FUTURES BASED PRICING FOR AUSTRALIAN SUGARCANE GROWERS

By

BERNARD MILFORD and WARREN MALES

CANEGROWERS Australia and Queensland Sugar Limited

Bernard_Milford@canegrowers.com.au

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Abstract

AUSTRALIAN cane growers can now access futures based pricing for their sugarcane. Direct access to futures market pricing has long been available to growers of commodities such as grains, cattle, cotton and others. Some sugar processors have had access to these mechanisms but, in situations where cane growing and processing are separate, cane growers have traditionally been unable to hedge the price they receive for their product as unprocessed sugarcane is not deliverable against a futures contract. In Australia, many growers have recently commenced using futures based pricing mechanisms through new cane supply contracts with their sugar mills. Tonnages of sugar are apportioned to growers based on the cane price formula. Pricing contracts are ultimately closed through the pricing platform offered by the raw sugar marketing company. In this paper the range of price mechanisms available to cane growers in Australia are examined and the implications of these for industry sustainability are reviewed. These include a new, more commercial culture, longer-term cane supply contracts, growers' ability to manage pricing decisions in light of their knowledge of growing costs and determine, to some degree, how much of the price risk they wish to manage and how much they wish to place in the hands of others.

Introduction

Contracts describing price, quantity, quality and delivery conditions are a common feature of most, if not all, sales agreements. The international commodity trade in raw sugar is no different. Some agreements include provision for fixed price sales. However, the majority of contracts include provision for futures based pricing.

In these contracts, the price has a futures based element, a component for a physical sale premium or discount and an adjustment for the pol of the sugar¹. Futures based pricing enables the buyers and sellers to independently manage their exposure to the world raw sugar price, using the raw sugar futures contract on the Intercontinental Exchange, known as the ICE #11.

Raw sugar sellers hedge their price exposure by taking short (sold) futures contracts and buyers by taking long (bought) futures contracts. At the time of physical sale, the buyers and sellers agree on a futures contract against which the price for the physical raw sugar will be settled and

¹ The price clause of a raw sugar sales contract would typically be:

'The price in U.S. Dollars per metric tonne net shipping weight in bulk basis 96 degrees shipping polarisation, Cost and Freight free out ex vessel's holds at (Port), (Country), with all costs of discharge for the Buyer's account shall be:

An AA transaction for (No. of pricing lots) lots versus the ICE #11 Futures Contract in the (Month) (Year) position, plus a premium of U.S. Dollars (amount) per metric tonne. The price to be converted to U.S. Dollars per metric tonne by multiplying by a factor of 22.046.'

agree on a mechanism to close their futures positions². In this transaction, the gain or loss made on the futures account when the contract is closed is offset against the sales price. The net price achieved by the buyer and seller is the price at which they hedged the raw sugar. Through this futures market pricing mechanism, the price achieved by the buyer can be very different to the price obtained by the seller.

The use of futures markets to manage price risk is a key feature of farmer activity in the grains, cotton and other agricultural industries. In these industries, farmers harvest a crop that can be delivered in settlement of their relevant futures contracts. In the sugar industry this is not the case. Sugarcane and sugar beet growers produce perishable agricultural products that need further processing into either raw or white sugar before commodity trade can occur. In most instances, the processor pays the farmer for the sugarcane or sugar beet received and arranges the sale of the sugar produced. Many countries regulate their sugar market, including the relationship between sugar prices and farm gate prices, which may reduce the need for farmers to manage their own price risk. However, where farmers are exposed to the world raw sugar price, regulatory structures can reduce farmers' ability to use the futures market to match their price and production risk with their individual risk profile.

In Australia, commercial agreements, not government regulation, determine the relationship between cane growers and the raw sugar mill they supply. Although cane supply agreements vary, in all mill areas the price of sugarcane is a function of the raw sugar price. In recent years, Queensland Sugar Limited (QSL), the company that sells 95% of Australia's raw sugar exports, has entered agreements with its mill supplier customers and developed a pricing platform that enables mill owners and, with new cane supply agreements, their cane suppliers, to independently manage the ICE #11 component of the price they receive for up to three years ahead.

Introduction of a new QSL pricing platform

In Australia, as in most other countries, cane growers sell the cane they produce to a sugar mill. Legal ownership of the cane changes hands from grower to miller at the 'point of delivery', generally a rail siding or road transport loading point close to the farm. From this point, the mill owner is responsible for the cane and owns all products from it.

The price the mill owner pays for the cane is a function of the price of sugar and the sucrose content of the sugarcane. In Australia, sucrose content is measured as the CCS³. The cane price formula takes the following form:

$$\text{Price cane} = \text{Price sugar} \times \text{fn}(\text{CCS})$$

This formula means that, although the grower is not the owner of the sugar, he or she is still vitally interested in the price outcome achieved from the sale and marketing of the product.

The price of sugar used in this formula was traditionally the average net sales price⁴ realised by QSL from its pooled marketing activities. QSL actively managed the marketing and pricing of the entire crop, including the ICE #11 component based on a risk management strategy determined by the company's board.

Mill owners all received the same price for sugar sold by QSL and this price was, in turn, used to calculate cane values. With sugar price risk managed by QSL, individual producers' production decisions focused on cost minimisation and productivity improvement. Producers did not have a mechanism to effectively tailor management of their exposure to sugar prices to their individual risk profiles and, when the opportunity arose, to lock in long-term prices.

² Often using 'against actuals' (AA) transactions where buyer and seller agree a price at which to close their respective futures positions.

³ Commercial Cane Sugar (CCS); an empirical measure of recoverable sugar in cane.

⁴ Average net price = [Gross sales revenues (ICE #11 + pol premium + physical sales premium) less QSL's costs (marketing, storage and handling)] ÷ tonnes of sugar sold, expressed in AUD/tonne IPS.

In 2005, the marketing of Queensland raw sugar was totally deregulated and all mill owners, with two exceptions, signed voluntary contracts to continue to sell all their export sugar through QSL. Building on past experience, taking advantage of the new raw sugar supply agreements that replaced the regulatory structures and relying on its sound financial structure and strong credit rating, QSL developed a new pricing platform, in conjunction with its supplier customers. Enabling the separation of price risk management from the physical marketing of raw sugar, this platform provides a mechanism that allows mill owners to manage a large part of their ICE #11 price exposure in both the current and future seasons. Most mills have made arrangements for their growers to access these facilities.

In order for mill owners and cane growers to use these pricing mechanisms, several risks have to be managed. The first is contractual; if parties are pricing into the future there must also be agreements for supply of the physical sugar over the same time period. This is achieved by supply contracts that extend at least as far as three years forward. Many cane supply contracts with mills are now 'evergreen', rolling agreements that remain in place for three years or more unless notice is given of their termination.

Production and financial risks must also be managed. If sugar has been priced into the future, that sugar must be physically available and the counterparty financially sound. QSL's agreement with mills requires that, to take account of possible variations in the crop due to adverse weather events or disease, no more than 70% of the current season's sugar be priced using its pricing mechanisms and a declining proportion of future expected crops be hedged. Mills, in turn, restrict growers' access to pricing to no more than 60 to 70% of their crop for the current year and 30 to 50% for future years, with some variations put in place to allow for individual circumstances. The balance of production for the current year is supplied to QSL's Seasonal Pool.

Lastly, exposure risk is to be managed. Raw sugar futures, trading on the InterContinental Exchange, sell in four main contracts; March, May, July and October⁵. The Queensland sugar industry has made a significant investment in bulk raw sugar storage capacity to provide it with the ability to export sugar throughout the year. As shipping proceeds year-round, exposure to the four main ICE contracts can be managed year round.

Normal variability in crop production and sales patterns can lead to variability in the tonnage of sugar that is exposed to different ICE #11 futures contracts. QSL's pricing platform is designed to quarantine its mill supplier customers from changes in this exposure. This is done by guaranteeing participants a fixed exposure pattern of 1:2:2:1 against the July, October, March and May contracts for the sugar they elect to price, a portion of their total production up to certain limits.

The balance of sugar is priced by QSL in the Seasonal Pool. All producers supply some of their sugar to this pool and QSL manages the exposure volatility arising from changes in production and sales patterns in this Seasonal Pool. In this way the pricing platform does not impact on QSL's marketing activities.

The 1:2:2:1 pricing ratio means that pricing participants must have a minimum of six lots to trade. As the lot size on the ICE #11 contract is 50 short tons raw value, the minimum parcel that can be dealt with is 300 tonnes of sugar, equivalent to around 3000 tonnes of growers' cane. As noted, mills impose limits on the pricing activities of their supplying cane growers, requiring that they contract no more than 60 to 70% of their crop for the current year and 30 to 50% for future years. This means that that, typically, a grower needs to produce over 10 000 tonnes of cane to participate on their own account, well above average production of 8184 tonnes of cane (Hooper, 2008). Mills have used the mechanisms available through the QSL pricing package to provide growers with a means of accessing the futures price risk management mechanisms.

⁵ A January contract is also traded, but is not used extensively by the trade.

The QSL pricing platform offers a number of close out mechanisms to its mill supplier customers. Mills can price directly or through a bank that offers 'over the counter' products (OTCs) to provide access to the futures market and to credit. Where pricing is done directly participants face the possibility of margin calls (initial and variation); the requirement that money be lodged with the market operator to cover potential losses through price movements. In a period of rising prices, these can represent demands for considerable funds. In general, the pricing mechanisms offered to growers do not expose them to the requirement to fund margin calls. The margins are met by either the marketing company (QSL) or by banks who provide OTC pricing instruments and who, for a fee, assume the risk of margin calls.

In each case, mills close their futures position using the QSL pricing platform. Mill owners have likewise made available to growers a range of futures price risk management mechanisms. These can be generally classified as target price pools, call pools and grower managed pools.

Target price pools are the most popular. They allow growers to amalgamate their positions to bring trades up to minimum tonnages. Typically, mills offer growers the opportunity to price at a range of price targets set at increments of around USD 15 per tonne of sugar, expressed in AUD terms.

Growers nominate a quantity of sugar that they wish to commit at each level and, if there is sufficient sugar to meet the minimum tonnages set, the pricing order is placed. When and if the sugar price reaches this target, the contracts are priced and the sugar is hedged. Target pricing allows amalgamation of commitments so that problems with minimum tonnages can be overcome.

A '**Call Pool**' is another mechanism some mills offer. Growers nominate a tonnage of sugar that corresponds to a multiple of the minimum number of contracts available for each contract month. They then undertake to notify the mill to price each of these contracts at a time of their choosing over the period within which these contracts are open. This allows the growers great flexibility in managing their price risks in relation to the market. This type of arrangement is subject to the minimum cane tonnages discussed above and therefore is available only to growers producing large quantities of cane.

Alternative Pools are offered by some mills. These provide growers with the opportunity to join a collective pool with a different pricing philosophy to that of the QSL Seasonal Pool. In some mill areas, growers have an opportunity to access QSL's Aggressive Pool. Some groups have engaged independent brokers to undertake pricing on growers' behalf, based on agreed pricing rules.

In other mill areas, representatives of growers set transparent targets relating to tonnage and price for a growers' collective pool. A pool manager undertakes pricing when these targets are achieved. In these cases, target pricing is backed up by index pricing (pricing the same amount of sugar at regular intervals) over a defined period.

In Australia, payment for cane occurs progressively throughout the year, with up to 60% of the estimated final pay being made during the crushing season and the rest progressively over the following six months. Typically grower payment adjustments that result from pricing activity are included in the final 'wash up' payment made for that season.

Implications of the new arrangements

The new contracts were developed through commercial negotiation; normal commercial considerations provided the impetus. There was no external (government or regulatory) intervention.

The replacement of regulations with commercial contracts for the supply and delivery of raw sugar have enabled the development of QSL's new pricing platform and new contracts between cane growers and mill owners for the supply of cane have improved commercial structures along the supply chain. A new, more commercial culture is emerging as producers exercise greater management of their profitability by taking greater control of both their revenue and cost flows.

Longer-term cane supply contracts have been developed. In the previous regulated environment, cane supply arrangements could change annually. As noted above, growers now contract to supply over periods from three to five years; many of these are 'evergreen', rolling contracts that require three year's notice for their termination. As well as enabling forward pricing, the agreements put a contractual underpinning to district production, enabling both parties to plan ahead, knowing that cane is contracted for supply and the mill contracted to crush into the future. This provides an important basis for planning and development of infrastructure within a region. It has also allowed growers better access to finance; banks are more willing to lend for expansion if it can be demonstrated that a proportion of the farmer's returns can be assured.

A further positive outcome of the availability of futures pricing for growers is the fundamental benefit of being able to manage their pricing decisions in light of their knowledge of growing costs. When prices are high, an understanding of the market fundamentals and drivers of future price movements will assist a grower in determining a suitable time to price their product. In times of intermediate prices, a grower's understanding of his or her costs will inform profitable pricing decisions. Even if it were felt that the market may move higher, some might choose to cover a proportion of production at prices seen as remunerative, in case price movements were not as expected. In a low price environment, the use of the pricing mechanisms may help manage expected income levels, which may help capture profitable opportunities and ameliorate any losses.

Bringing an understanding of price drivers and possible future price movements to growers can be challenging, but represents an opportunity for service providers. In the previous regulated environment, pricing and marketing was carried out by a single statutory body; producers received a pool price and had little influence on price outcomes achieved. The new structures mean that producers are no longer interested bystanders, but active participants able to manage the majority of their price outcome. Producers are compelled to take direct interest in market drivers.

All price environments involve risk. The point of departure is how those risks are managed. In the previous environment, Queensland producers relied on QSL's price risk management services and received a pooled price outcome. The new structures enable individuals to make their own pricing decisions. In doing so, they have an opportunity to balance their own attitude towards risk and assessment of market conditions with their cost structures to secure bottom line value.

Individual decision making brings with it potential for reward and the potential for loss. Individual growers can now determine, to some degree, how much of the price risk they wish to manage and how much they wish to place in the hands of others. QSL's pool management options will continue to be a significant part of growers' choice into the future. Because the volatility of production and sales patterns needs to be managed, all QSL suppliers will continue to have exposure to QSL's Seasonal Pool.

Alternative crops have made inroads into traditional cane lands in some regions. Several mill owners are using the QSL pricing platform to provide pricing options to entice growers back into the industry. Figure 1 is an example of a newspaper advertisement in an area that is using futures pricing as an incentive to encourage increased planting of sugarcane. The ability to lock in a proportion of the crop's value even prior to planting is seen by many as giving sugarcane growing a competitive advantage over alternative crops.

Data on uptake of grower pricing is not comprehensive. This, in itself, is a reflection of the fact that these arrangements are made between growers and mills directly and do not need outside interference to coordinate or codify. Privacy and commercial confidentiality limit the public availability of data. However, it is clear that grower uptake of the new schemes has been enthusiastic. Over 95% of growers have access to some pricing mechanism. Collective pools price all grower sugar in three mill areas and some sugar in three others. Target pool pricing is the most popular mechanism for pricing in those mill areas where it is available, with around 80% of growers participating. There are variations in uptake of pricing in these areas, reflecting a typical spread of

innovators, early adopters, early majority and so on. In one area, 80% of growers are reported as having taken a position in pricing; other areas report up to 60% of growers pricing typically 40% to 50% of their expected crop for the next season.



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Sugar prices for the 2009 crop are forecast by QSL to be in the range of \$410 to \$480/t. This equates to gross cane prices of approximately \$36 to \$42 per tonne. These current prices are significantly better than what has been available for many years.

Bundaberg Sugar in conjunction with Bundaberg CANEGROWERS recently introduced long term sugar pricing which enables growers to take advantage of price spikes as they occur, and to “lock in” these sugar prices out to 2012.

This facility has been taken up by many growers with excellent prices being secured. Futures prices of up to \$490/t have been achieved for some growers for the 2010 season!

Long term pricing is also available to growers who want to enter, or re-enter the industry or increase their area under cane. This provides the ability to lock in prices for up to 60% of, the as yet, unplanted cane.

Should you wish to use the long term pricing to underpin your increased area under cane, you should discuss your particular situation with Bundaberg Sugar as each request will need to be assessed on a case by case basis.

If you are interested in discussing your farming and pricing options further, please do not hesitate to contact

Allan Pitt at Bundaberg Sugar on 4150 8923 Mobile 0428 798 227
Dale Holliss at Bundaberg CANEGROWERS on 4151 2555. ■

Fig. 1—Advertisement from CANEGROWERS Bundaberg newsletter (Anon., 2009).

Conclusion

The availability of futures pricing in the Australian sugar industry has coincided with strengthening prices on the futures market. In a sense, the introduction of grower pricing options could have not have come at a better time.

Many growers have, at the time of writing, secured at least a part of their returns for the 2010, 2011 and 2012 seasons.

The solid price foundation provides a stable base for these producers’ operations for at least this time period. The replacement of regulated structures with commercial agreements along the supply chain has enabled the development of these price mechanisms. The benefits of the new commercial structures are significant.

These include a new, more commercial culture, longer-term cane supply contracts, growers’ ability to manage pricing decisions in light of their knowledge of growing costs and to determine, to some degree, how much of the price risk they wish to manage and how much they wish to place in the hands of others. That the changes have occurred in a strong price environment is an added bonus.

REFERENCES

- Anon.** (2009). CANEGROWERS Bundaberg newsletter. CANEGROWERS Bundaberg, July 2009.
- Hooper, S.** (2008). Financial performance of Australian sugar cane producers 2005–06 to 2007–08. Research Report 08.8 September 2008. ABARE, Canberra. 37 p.
 Available at: http://abare.gov.au/publications_html/crops/crops_08/Sugarcane08.pdf

**PREVISIONS DE PRIX POUR LES PLANTEURS
DE CANNE A SUCRE AUSTRALIENS**

Par

BERNARD MILFORD et WARREN MALES

CANEGROWERS Australia and Queensland Sugar Ltd
Bernard_Milford@canegrowers.com.au

MOTS-CLÉS: Prévisions, Prix, Planteurs, Restructuration.

Résumé

LES PLANTEURS de canne à sucre australiens peuvent désormais prévoir les prix qu'ils pourraient obtenir pour leur canne à sucre. Un accès direct à l'évaluation du marché à long terme est depuis longtemps disponible pour les producteurs de matières premières telles que les grains, la viande bovine, le coton et autres. Certains producteurs de sucre ont eu accès à ces mécanismes, mais, dans les situations où la production de canne et l'usinage sont séparés, les planteurs de canne n'ont jamais pu vendre en avance leur production car leur produit non transformé ne peut être considéré pour un futur contrat. Récemment, en Australie, de nombreux planteurs ont commencé avec l'aide des mécanismes de tarification à s'engager dans des nouveaux contrats de fourniture de canne à sucre avec leurs usines. Les tonnages de sucre sont répartis parmi les planteurs selon la formule établie du prix de la canne à sucre. Les contrats de tarification sont finalisés par l'intermédiaire de la société de marketing qui vend le sucre roux. Dans cette présentation sont examinés les différents mécanismes de prix disponibles aux planteurs de canne en Australie, et les implications de celles-ci pour la durabilité de l'industrie sont discutées. Cela inclut une nouvelle approche commerciale avec des contrats de fourniture de cannes à plus long terme, la capacité des planteurs à gérer les décisions tarifaires en connaissance des coûts, et à déterminer, dans une certaine mesure, combien de risque de prix qu'ils souhaitent gérer et combien ils souhaitent placer entre les mains des autres.

ESTABLECIMIENTO DE PRECIOS BASADOS EN FUTUROS PARA LOS PRODUCTORES DE CAÑA AUSTRALIANOS

Por

BERNARD MILFORD y WARREN MALES

CANEGROWERS Australia and Queensland Sugar Limited

Bernard_Milford@canegrowers.com.au

**PALABRAS CLAVE: Futuros, Precios,
Productores, Reestructura.**

Resumen

LOS PRODUCTORES de caña australianos pueden establecer ahora los precios de su azúcar basados en futuros. El acceso directo al mercado de precios de futuros ha estado disponible para los productores de materias primas como granos, ganado, algodón y otros. Algunos productores de azúcar habían tenido acceso a estos mecanismos, pero en situaciones donde la producción de caña y el procesamiento de la misma están separados, los productores, tradicionalmente, no tenían acceso a proteger el precio que recibían por su producto debido a que la caña sin procesar no se distribuye en contratos de futuros. En Australia, muchos productores han comenzado a usar mecanismos de precios basados en futuros a través de nuevos contratos para proveer caña en las fábricas. Las toneladas de azúcar son distribuidas proporcionalmente a los proveedores basados en la fórmula del precio de la caña. Los contratos de precios son cerrados a través de la plataforma de precios ofrecida por la compañía de mercadeo de azúcar crudo. En este trabajo se revisa el rango de mecanismos de precios disponible para los productores de caña de Australia y se revisan las implicaciones de éste en la sostenibilidad de la industria. Estas incluyen, una cultura nueva, más comercial, contratos con los proveedores a plazos más largos, habilidad de los productores para conducir sus decisiones de precios a la luz de su conocimiento de los costos de producción y determinar, hasta cierto grado, cuanto riesgo ellos desean manejar en el precio y cuánto desean poner en las manos de los otros.