

Understanding the Alberta Milk Quota Exchange

1. What is the Alberta Milk Quota Exchange?

Alberta Milk facilitates a quota exchange each month to provide Alberta's dairy producers with the opportunity to buy or sell Total Production Quota (TPQ). The Quota Exchange is a single-round, double auction in which buyers place "bids" in competition with other buyers and sellers place "offers" in competition with other sellers.

2. Why does Alberta Milk facilitate a Quota Exchange?

Alberta Milk facilitates a quota exchange based on support provided by the organization's members. The purpose of facilitating a quota exchange is to give all producers throughout the province equal opportunity to bid on TPQ that is for sale and give equal opportunity to offer TPQ to buyers, to minimize transaction costs, equalize pricing information and allow producers to customize the size of their bids or offers.

3. How does the Alberta Milk Quota Exchange work?

As of August 1, 2010 exchange, Alberta Milk is facilitating a modified exchange methodology. Although it retains many of the elements of the previous quota exchange, there are important differences. This new methodology will be monitored very closely to ensure it is working as intended and a formal review will be completed within its first year of operation. The purpose of this document is to give producers who plan to use the quota exchange enough information to understand how the exchange works so they have greater confidence in their bids or offers.

3.1 General Procedure

- i. Producers wishing to buy or sell TPQ will need to complete and sign the Quota Exchange application form and submit it to Alberta Milk prior to the application deadline. The deadline is 4:30pm on a specified date, typically two weeks before the transfer date. Refer to the Alberta Milk website for the exact deadlines each month. Producers are encouraged to submit their applications well in advance of the deadline to ensure that their application is received in time.
- ii. After the deadline has passed, the applications submitted to buy or sell TPQ will be processed. Bids to buy and offers to sell are organized according to price. Bids to buy are filled starting with the highest-price bids and offers to sell are filled starting with the lowest-price offers. The total volume of quota demanded by buyers will accumulate as price decreases and total successful volume by sellers will accumulate as price increases. The clearing point is discovered where buyers and sellers' cumulative volumes meet. Basically, the last unit of quota traded through the exchange in a given month will be the last bid to buy that is still priced higher than the last offer to sell. This is the clearing point because the remaining unfilled bids to buy are priced at levels that are below the remaining unfilled offers to sell. Therefore, offers to sell TPQ at a price above the clearing point will be unsuccessful. Likewise, bids to buy TPQ below the clearing point will also be unsuccessful.
- iii. All successful bids and offers will be filled 100% except the last bid or last offer which will be pro-rated to match total volumes. At the clearing point, if the cumulative volume offered for sale is greater than the cumulative volume from buyers, only the last successful offer to sell will be pro-rated to balance volumes. Likewise, if the cumulative volume from buyers exceeds the cumulative volume from sellers at the clearing point, only the last successful bid to buy will be pro-rated to balance volumes. Two bids that have the same price cannot be prioritized, so if two buyers each provide a bid at the same price and it turns out that they represent the last successful bid needing to be pro-rated, both bids would be pro-rated accordingly. This is also the case on the seller's side.

- iv. Once the exchange is cleared, all participants will be notified whether or not their bids or offers were successful. Successful buyers and sellers will also be notified as to the amount owing or the amount they will be receiving. The actual transfer of TPQ does not take effect until the first day of the following month.

3.2 Rules of the Exchange

i. Providing Bids or Offers

- a. Only individuals who are licensed dairy producers operating in Alberta (or have a provisional license) are permitted to provide “bids” or “offers” in the Alberta Milk quota exchange.
- b. A producer is permitted to buy TPQ or sell TPQ in a given exchange but a producer is not permitted to both buy AND sell in the same exchange.

Volume

- c. Producers can provide any number of bids to buy or offers to sell TPQ up to a maximum of six (6) per exchange.
- d. Producers can request to buy or sell any amount of TPQ to the hundredths decimal place with the following limitations: the minimum size per bid is 0.10 kg/day and the maximum size per bid is 5.00 kg/day. As an example, a single bid or offer could be as precise as 2.79 kg/day but a single bid or offer of 0.09 kg/day (or less) is below the minimum size and a single bid or offer of 5.01 kg/day or more exceeds the maximum size. A maximum of six bids and a maximum of 5.00 kg/day per bid means that a producer can buy up to 30.00 kg/day per exchange. A producer who wishes to buy more than 30.00 kg/day through the exchange will need to provide bids in more than one quota exchange.
- e. A seller who is exiting the industry and wants to sell more than 30.00 kg/day would be permitted to sell more than 5.00 kg/day per bid. In this case, a seller must provide six offers with the total selling volume divided equally amongst the six offers.

Price

- f. Providing multiple bids or offers requires participants to provide separate prices. If a producer chooses to submit more than one bid or offer, each bid or offer must be provided at different price levels so his bids or offers can be prioritized. Producers are permitted to separate their bid or offer prices by any amount, but a minimum of \$10 per kg/day is required. As an example, if a buyer wants to place two bids and sets his lower-priced bid at \$34,000 per kg/day, his higher-priced bid would need to be at least \$34,010 in order to satisfy the \$10 minimum price separation.
- g. The Alberta Milk Quota Exchange applies a Pay-According-to-Bid/Receive-According-to-Offer payment methodology. This means, once the exchange is cleared, buyers with successful bids will owe payment that is up to what they have indicated they are willing to pay on the application form for those successful bids. Likewise, sellers with successful offers will receive payment that is at least what they indicated they were willing to receive for their successful offers.
- h. The difference between the money collected from buyers and the money paid to sellers will be paid back out to the successful buyers and sellers as a “refund” per kg/day bought or sold. This refund of surplus dollars will be calculated prior to collecting from buyers and paying to sellers and will be included in the total that a buyer is obligated to pay and the total that a seller will receive. Note: the refund amount is determined by the placement and volume of all of the successful bids and offers. This means the refund cannot be known with certainty in advance of running the quota exchange and it means that the refund will vary from month to month.

ii. Prohibition of Collusion

Collusion inside the quota exchange is prohibited. Collusion is committed when participants in the exchange purposely align their bids or offers with other participants’ bids or offers in order to affect the

clearing point or increase the likelihood of being successful. Collusion is prohibited because it contradicts the purpose of the exchange (giving all producers equal opportunity to bid for TPQ or offer TPQ) and it undermines the quality of the exchange's outcome. Producers are discouraged from working together in this fashion as their actions harm their fellow producers who chose to provide their bids and offers without turning to collusion.

To ensure you are not violating this rule when you provide your bids or offers, simply choose your bids or offers independently of the volumes and prices of the other bids or offers on the exchange.

iii. Declaration Signature

Participants are required to sign the quota exchange application on the line provided at the bottom of the page. The signature is the participant's declaration that they have read and understand the Rules of the Exchange (Section 3.2 of this document) and that they have not engaged in collusion.

4. How should I place my bids or offers?

It is important to recognize that each participant's best bidding strategy, whether you are a buyer or a seller, is to bid very close to your true value. That is, it is the best strategy for a buyer to place bids close to what they are willing to pay for quota and for a seller to provide offers close to what they are satisfied to receive for the quota. These are your best bidding strategies because the exchange is a single-round auction which means that participants only get one chance to provide their bids or offers before the auction closes. It is important to recognize that a buyer (who is competing with other buyers) will increase the risk of their bids being unsuccessful as they bid further and further below what they are actually willing to pay. The same applies for a seller (who is competing with other sellers) as they will increase the risk of their offers being unsuccessful if their prices are significantly above what they are satisfied to receive. Now, because of the Pay-according-to-bid/Receive-according-to-offer payment methodology, buyers should also be cautious to not bid significantly above what they are willing to pay because, if their over-priced bids are successful, they would be obligated to pay accordingly (which, in this case, would be more than what they were truly willing to pay). For the same reason, sellers should be cautious to not offer quota significantly below what they would be satisfied to receive. Again, a participant's best strategy is therefore to place their bids or offers very closely to their true value.

It is also important to recognize the impact of refunding the surplus money from the exchange back to successful participants. As outlined in section (h) of Rules of the Exchange, a surplus of money is created due to the difference between what successful buyers are willing to pay and what successful sellers are willing to receive. This refund will be paid back to the successful buyers and sellers as an amount per kg/day bought or sold. As an example, if an exchange is run and \$100,000 is left over after 100 kg/day are successfully transferred, each buyer would see \$500 per kg/day subtracted from the amount they were willing to pay and each seller would see \$500 per kg/day added to the amount they were willing to receive. Again, the refund can only be determined after running the quota exchange, so no one can know with certainty what the refund will be in advance and the refund will vary from month to month.

While this refund adds a small element of uncertainty, taking advantage of the multiple bidding option and spreading out your bids or offers at different prices should be used to mitigate both the uncertainty of the clearing point and the refund.

5. Why do we have multiple bidding?

Multiple bidding has been incorporated into the quota exchange because it provides several benefits.

First and foremost, it allows participants to manage the uncertainty of the clearing point. This is because multiple bidding effectively allows a participant to bid or offer differing volumes depending what the clearing point is. If you have ever said to yourself, "Had I known the clearing point was going to be X, I would have bid for a different volume", effectively, the option to provide multiple bids now allows you to do this.

Additionally, in the previous quota exchange where only one bid or one offer could be placed, there was significant pressure on producers to apply bidding strategies that were different than their true value because of high price uncertainty. Missing the clearing point on their one bid or offer, even by a small amount, meant a producer would be completely unsuccessful for 100 per cent of their bid or offer. With multiple bidding, there is less pressure for producers to bid above their true value because they are less likely to be “all-in” or “all-out”. It is possible that a producer will be successful on some of his bids or offers and unsuccessful on others but, for most producers, being “partially” successful should be preferable to being “all-out”.

If a producer does prefer to be “all-in” or “all-out” rather than being “partially” successful, it is advised that they provide their multiple bids or offers within a very small range of prices. Because of the \$10 minimum price separation, it is possible that all six bids or offers can be within a \$60 range and the probability of being “all-in” or “all-out” is much greater. If a producer prefers not to be “all-in” or “all-out”, it is advised that they provide their multiple bids or offers within a wider range of prices.

Multiple bidding has also been incorporated into the quota exchange to overcome some the challenges created due to low monthly trading volume and few participants. The transfer of TPQ constitutes a very small central exchange and the effects of high price volatility have been evident. Under the new exchange methodology, if we have ten sellers in a given month and they all provide six offers, we have just increased the number of offers from ten to sixty. Breaking up larger bids or offers into several smaller bids or offers also reduces the impact on the clearing point that a single large participant can have and the difference in accumulated buying volumes and accumulated selling volumes at the clearing point is significantly reduced.

6. How do I fill in the application form? Give me an example.

On the following page, a sample of a completed bid to buy application has been included. The offer to sell form would be completed in the same way.

In this example, the buyer has decided that he is interested in provided five bids of various volumes and prices. He starts by filling in “August 2010” as the date of the transfer. Of course, the deadline for submitting in time for this year’s August exchange is July 19, 2010, so hopefully this producer will be submitting his application in time so it will be received prior to the deadline.

The next section requires the producer to provide the volumes and prices of his bids. In this example, the buyer provides five bids. He is willing to buy 1.60 kg/day of quota at a price of \$35,040 per kg, 1.95 kg/day at \$35,020 per kg, 2.40 kg/day at \$34,900 per kg, 3.75 kg/day at \$34,850 per kg and 1.00 kg/day at \$34,300 per kg. Depending on what the clearing point turns out to be, this producer could be successful on all of his bids, some of his bids or none of his bids. As you can see by the calculations he has completed on the application, if he is successful on all of his bids, he has agreed to buy a total of 10.70 kg/day and pay a total of \$373,100.50 for the quota. Under no circumstances would this producer end up having to buy more than 10.70 kg/day in this exchange or pay more than \$373,100.50. If the clearing price turns out to be \$34,400, his four highest bids will be successful but his fifth bid is too low. Without his fifth bid, he would still receive 9.70 kg/day for which he has agreed to pay a total of \$338,900.50. If the clearing price turns out to be \$35,000 this month, this buyer’s two highest bids will be successful but his other three bids are too low. Without these three lowest bids, he would still receive 3.55 kg/day for which he has agreed to pay a total of \$124,353.

After completing this bidding section, the producer would fill in his identification and contact information on the lines provided. Notice that including an email address or a cell phone number are optional fields.

Finally, the producer would read the Declaration section and provide his signature, signifying that he has read and understands the rules of the quota exchange and that he has not engaged in collusion.

Once the application has been completed, he has the option to submit the application through the mail or by fax. Alberta Milk’s fax number is (780) 455-2196.

Representing Alberta's dairy producers

1303 - 91 Street SW, Edmonton, Alberta T6X 1H1
 toll-free 1.877.361.1231 p. 780.453.5942 f. 780.455.2196



Quota Exchange – Bid(s) to Buy Total Production Quota

The information required on this application/form will be used by Alberta Milk for the purposes of regulating production and marketing of milk pursuant to the *Alberta Milk Plan Regulation*, the *Alberta Milk Marketing Regulation*, and other regulations made under the *Marketing of Agricultural Products Act* concerning Alberta Milk and its activities.

Note: The minimum volume per bid is 0.10 kg/day and the maximum volume per bid is 5.00 kg/day. Up to a maximum of six bids per farm can be provided each month with a price separation between bids of at least \$10.00 per kg/day. All bids to buy must be received by Alberta Milk prior to 4:30 pm of the quota exchange deadline – please refer to the Alberta Milk website for specific deadlines each month. Once completed, this form can be faxed to 780-455-2196.

Bid(s) to Buy TPQ:

Transfer effective on the 1st day of August 2010
month year

	Bid Volumes (kg/day)			Bid Prices (\$ per kg/day)				Total \$ per Bid
Bid 1	1	60	x	\$ 35	040	.	00	= \$56,064
Bid 2	1	95	x	\$ 35	020	.	00	= \$68,289
Bid 3	2	40	x	\$ 34	900	.	00	= \$83,760
Bid 4	3	75	x	\$ 34	850	.	00	= \$130,687.50
Bid 5	1	00	x	\$ 34	300	.	00	= \$34,300
Bid 6			x			.	00	=

Total Volume 10 . 70

Grand Total \$ \$373,100.50

Name (As registered with Alberta Milk) Farmer Brown Dairy
 Mailing Address RR 1 Phone (403)123-4567
 Town or City Mytown, AB Postal Code T1U 2V3 Fax (403)123-3210
 Email * _____ Cell * _____
 Canadian Dairy Commission No. 456789

* Indicates a voluntary field

Declaration:

- I have read and understand the rules of the quota exchange (Section 3.2 of the document "Understanding the Quota Exchange").
- The bid(s) above have been chosen independently of all other bids and offers made by other quota exchange participants.
- The bid(s) above have been provided without also entering into an agreement outside of the quota exchange for the purpose of impacting the outcome of the quota exchange.
- The bid(s) above have been provided without also entering into an agreement outside of the quota exchange for the purpose of increasing the likelihood that my bid(s) will be successful.

Signature 

Signature _____

7. The Quota Exchange Checklist

To help make sure you have filled in the application correctly, please ensure you have completed this list:

Bid(s) to Buy Total Production Quota Application

- I have entered the month and year of the transfer date on the application form.
- Each of my bid(s) are between 0.10 kg/day and 5.00 kg/day.
- Each of my bid price(s) are separated by at least \$10 per kg/day.
- I have calculated my "Total \$ per Bid", my "Total Volume" and my "Grand Total \$" in order to understand the total volume of quota I may receive and the total amount of money I may be obligated to pay.
- I have filled in all of the relevant producer identification and contact information.
- I have read the Declaration and signed my name to the application.
- I have submitted my application to Alberta Milk prior to the quota exchange deadline.

OR

Offer(s) to Sell Total Production Quota Application

- I have entered the month and year of the transfer date on the application form.
- Each of my offer(s) are between 0.10 kg/day and 5.00 kg/day OR if I want to sell more than 30.00 kg/day in this month's quota exchange, I have divided the total volume I wish to sell into six offers of equal volume.
- Each of my offer price(s) are separated by at least \$10 per kg/day.
- I have calculated my "Total \$ per Offer", my "Total Volume" and my "Grand Total \$" in order to understand the total volume of quota I may sell and the total amount of money I may receive.
- I have filled in all of the relevant producer identification and contact information.
- I have read the Declaration and signed my name to the application.
- I have submitted my application to Alberta Milk prior to the quota exchange deadline.

If you have any questions about quota exchange, please do not hesitate to contact the Alberta Milk office at (780) 453-5942 or toll-free at 1-877-361-1231.