



# DAIRY

## advantage

### ADDRESSING THE NEEDS, CONCERNS & OPPORTUNITIES OF LARGE DAIRY PRODUCERS

## Using 'Put' Options

*Edited from an article by Katie Krupa, Rice Dairy, Chicago, IL*

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There is a growing interest in risk management among dairy producers and buying 'put' options is overwhelmingly the favorite strategy. Producers are attracted to this strategy because it is flexible, but still offers price protection if the market should decline. Along with producers, there is [also] a lot of interest in this hedge strategy from lenders, accountants and other industry professionals. In order to give you some perspective on this hedge strategy, below is some historical information.

Firstly, how do 'put' options work? Producers can purchase a 'put' option at a desired price (strike price) for an upcoming month and, similar to insurance, you pay a premium for a level of protection. For example, in April you could purchase a Class III \$14 'put' option for October, and for that level of protection (\$14) you may have to pay a \$0.40 premium per hundredweight (cwt). Therefore, you pay \$0.40 to protect the Class III price from going *below* \$14. If the Class III price is announced by the USDA at \$12, you would *gain* \$2 per cwt (\$14 - \$12) less the \$0.40 premium.

The really attractive aspect of this strategy is that the producer is not limited on the upside. So if the Class III price should spike to \$22, you will not miss out on that higher price; you have just paid your premium of \$0.40 per cwt.

When you purchase a 'put' option, you can choose your desired price protection. In the previous example we purchased a \$14 'put' for \$0.40, but you could move that \$14 price up or down in 25-cent increments. So you could purchase a \$13.75 put option, \$13.50, \$14.25, etc. Again (and similar to insurance): the higher the level of protection the higher the premium payment. So if you only need a \$13 'put' option, the premium may only be \$0.15,

but if you need a \$15 'put' option the premium may be \$0.85. The premium prices trade on the Chicago Mercantile Exchange and change *every day* with the market. As the market improves, the premiums tend to get cheaper and as the market declines, the premiums tend to get more expensive.

One complaint that I often hear is that the premiums are too expensive, especially for the further-out months. If you want to buy a 'put' option for next month or 12 months into the future, assuming all other variables are equal, the premium for 12 months out will be much higher. That is because the uncertainty of the market between now and then is extremely high. But it is important to remember that the premiums are high because Class III volatility is high and, therefore, the opportunity for a payment exists.

Remember that in less than three years the Class III milk price moved from \$9.31 to \$21.67 – that is a 133 percent change from low to high. To run through an example for you, I went back five years and looked at the premium costs for various 'put' options for six months into the future. So on April 2, 2007 (the first trading day of April), I looked at the cost of a \$13, \$14, and \$15 'put' option for the month of October. On the first trading day of October, I looked at the costs for the same 'put' options for the upcoming April.

Interestingly, for these nine months and these specific strike prices that I highlighted, a payment would have been made for three of these months.

Now, the past does not dictate the future but, knowing how bad 2009 was, I think it is helpful to see how these strategies would have played out in 2009.

Also, it is important to see that even if you paid the higher premium for the \$15 'put' option, for these specific nine months you

would have returned more from the contract than you would have paid in premium cost.

I have done many of these reviews, taking different months each time, and the biggest thing I have noticed is that if you look at a long enough term, there is typically a payment (the price declines). But it is important to remember that if you purchase a 'put' option and pay the premium, you should not want to receive a payment from this strategy.

If you receive a payment, that means the milk price has declined and, if the milk price declines, that ultimately means less money in your milk check and less money for your farm. Like insurance, I pay my premium, but I don't want to use the policy – if I use the policy that means I had a car accident, had a medical problem or, worst of all, I died. If purchasing a 'put' option you should want to *protect* your milk price in case of a milk price crash – you should not be looking to "make money" on the contract. Your goal should always be to protect your farm's profitability and your business.





# Nutritional Strategies to Help Cope with Heat Stress

Edited from an article by *Dr. Tom Bass, DVM, PhD, Renaissance Nutrition, Inc.*

July, August and September are the hottest months of the year in most regions. As summer's heat and humidity grow, so too do the resulting production losses and health risks for dairy cattle - challenges that often persist beyond the return of cooler weather in the fall.

Today's dairy cows begin to experience heat stress at lower temperatures than many people realize. Recently updated guidelines indicate that, for cows making 77+ lb of milk, production and reproductive losses begin at an average daily Temperature Humidity Index (THI) of 68 (73° F at 40% RH, or 68° F at 85% RH). Even in herds averaging less than 70 pounds of milk, remember that the high producing cows will be negatively affected, and so in turn will the bulk tank average.

## FOCUS ON FACILITIES FIRST

- Ensure cows have adequate shade and abundant water provision
- Repeatedly wet cows down and blow air on them with increasing frequency as temperatures rise

- Make the holding pen the top priority for heat abatement practices

## RATION FORMULATION CONSIDERATIONS

- Ensure the ration fed during hot weather is rumen-friendly
- Observe cow eating patterns, which may be altered by hot weather, and increase the risk of slug feeding
- Less cud chewing and more panting can lead to sub-acute rumen acidosis, since less bicarbonate enters the rumen to serve as a buffer
- Heat-stressed cows eat less, so focus on feeding less total and/or fermentable starch and more fermentable fiber; potentially more fat (without adding to the risk of acidosis)
- Brown mid-rib (BMR) forages, and high-fiber/low starch byproducts (such as soyhulls) fit well in hot weather rations
- Feed appropriate protein levels; overfeeding protein relative to the amount of carbohydrates in a ration can increase MUN (milk urea nitrogen) levels
- Elevated MUN levels may contribute to reduced conception rates
- Excess ration protein may unnecessarily increase ration costs

## RATION ADDITIVES

- A variety of research-proven feed additives are available that may help with milk production and/or cow health during hot weather
- Inclusion of live yeast or yeast culture products has improved rumen function, milk production and/or feed efficiency in heat-stressed cows
- Increasing DCAD (dietary cation-anion difference) levels in lactation rations, by inclusion of sodium bicarbonate or potassium carbonate, can help offset the negative impacts of heat stress
- International research has shown chromium helps support higher feed intake and better milk production in hot weather
- Feeding Rumensin® should improve milk production efficiency in heat-stressed cows
- Talk with your Renaissance nutritionist about these additives and which are most likely to be appropriate and/or cost-effective for your herd, since recommendations may vary from herd-to-herd and with changing milk prices

**Today's dairy cows begin to experience heat stress at lower temperatures than many people realize.**



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