

Plan Your Production to Year-end

A previous article in this series (7M1) included a worksheet for projecting production relative to your current MSQ position. The objective was to determine whether your projected production of MSQ would be above the 90% maintenance requirement, in the sleeve (over 96% but not over 100%) or over quota (above 100% of your MSQ).

The worksheet below approaches production planning from a different perspective. It will help you calculate the amount of milk your current quota position (fluid and MSQ balance) will allow you to ship each day to the end of the dairy year (July 31).

Once you have done this calculation, you can compare allowable with projected production. If it looks like your shipments will fall short, you may want to verify that your MSQ shipments will exceed the 90% maintenance requirement using the worksheet in article 7M1.

If your projected production will put you over quota at year end, you may want to consider :

- doing nothing, accepting the low return on over quota production and hoping you will receive a refund on some part of your excess production;
- culling some cows. This is often a good time to upgrade your herd by culling poor producers, problem breeders or structural wrecks.
- reducing production per cow. This is easy to do by adjusting your feeding program, but don't expect production to rebound to previous levels immediately after adjusting back.
- buying more quota. If you plan to maintain your current herd size and level of production this may be the best long-term option.

Let's assume you want to consider buying quota to cover your excess production. Should you buy fluid or MSQ? How much will you need? What will it cost?

CALCULATION OF ALLOWABLE PRODUCTION TO YEAR END					
		EXAMPLE	YOUR FIGURES		
FROM LAST MILK STATEMENT :					
DATE ON STATEMENT		MAR 31	_____		
A	FLUID QUOTA	2705	_____	litres/day	
B	EFFECTIVE MSQ (100%)	28131	_____	kg	
C	MSQ SHIPPED	18667	_____	kg	
D	MSQ BALANCE	B - C	9464	_____	kg
PROJECTIONS TO YEAR END :					
E	CLASS I UTILIZATION OF FLUID	75	_____	%	
F	AVERAGE FAT TEST	3.5	_____	kg/hL	
CALCULATION OF ALLOWABLE SHIPMENTS :					
G	CLASS I SHIPMENTS	$A \times (E \div 100) \times 1.063$	2157	_____	litres/day
H	MSQ BALANCE IN LITRES	$(D \div F) \times 100$	270400	_____	litres
I	DAYS FROM STATEMENT DATE TO JULY 31	122	_____	days	
J	MSQ SHIPMENTS	$H \div I$	2216	_____	litres/day
K	TOTAL SHIPMENTS	$G + J$	4373	_____	litres/day
	PER PICKUP	$K \times 2$	8746	_____	litres/2 days
CALCULATION OF ALLOWABLE PRODUCTION PER COW :					
L	NUMBER OF COWS	150	_____	cows	
M	PRODUCTION PER COW	$K \div L$	29.2	_____	litres/day

Buying quota

The worksheet below will help you calculate the amount and cost of the fluid or MSQ you will have to acquire to avoid shipping over quota. The example assumes a projected average production of 420 litres/day more than your current quota position will allow.

Notice the difference in total cost between fluid and unused MSQ in the example. Both purchases will allow the shipment of the excess 420 litres/day for the remainder of this year. But buying the fluid quota will allow you to ship 420 litres/day for 365 days next

year, while the MSQ purchase will only allow you to ship that amount for 122 days.

The bottom section of this worksheet will help you determine the value of MSQ relative to the current price of fluid quota. The price of MSQ used in the example (\$35/kg) is far out of line with its value (\$24.13/kg) relative to the price of fluid (\$320/litre).

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CALCULATION OF QUOTA REQUIREMENTS AND COST

YOUR
EXAMPLE FIGURES

CALCULATION OF EXCESS DAILY PRODUCTION :

A	NUMBER OF COWS	150	_____	cows	
B	PROJECTED AVERAGE PRODUCTION PER COW	32	_____	litres/day	
C	CURRENT QUOTA ALLOWABLE PRODUCTION	29.2	_____	litres/day	
D	EXCESS PRODUCTION	$A \times (B - C)$	420	_____	litres/day

CALCULATION OF ADDITIONAL FLUID QUOTA REQUIREMENT AND COST :

E	PROJECTED CLASS I UTILIZATION OF FLUID	75	_____	%	
F	FLUID QUOTA REQUIRED	$D \div [(E \div 100) \times 1.063]$	527	_____	litres/day
G	FLUID QUOTA PRICE	320	_____	\$/litre	
	TOTAL COST OF FLUID QUOTA	$F \times G$	168,640	_____	\$

CALCULATION OF ADDITIONAL MSQ REQUIREMENT AND COST :

H	DAYS FROM STATEMENT DATE TO JULY 31	122	_____	days	
I	PROJECTED AVERAGE FAT TEST	3.5	_____	kg/hL	
J	MSQ REQUIRED	$[(D \times H) \div 100] \times I$	1793	_____	kg
K	UNUSED MSQ PRICE	35	_____	\$/kg	
	TOTAL COST OF UNUSED MSQ	$J \times K$	62,755	_____	\$

VALUE OF UNUSED MSQ RELATIVE TO THE PRICE OF FLUID QUOTA :

L	FLUID BASE PRICE FROM MILK STATEMENT	53.80	_____	\$/hL	
M	NON-FLUID BASE PRICE	46.60	_____	\$/hL	
N	FEDERAL SUBSIDY (1994-95: 1.508; 1995-96: 1.282)	1.508	_____	\$/kg	
O	FAT DIFFERENTIAL	0.53	_____	\$/ (0.1 kg/hL)	
P	FLUID PAYMENT PRICE	$L + \{[(I - 3.6) \div 0.1] \times O\}$	53.27	_____	\$/hL
Q	NON-FLUID PAYMENT PRICE	$M + \{[(I - 3.6) \div 0.1] \times O\}$	46.07	_____	\$/hL
R	ADD FEDERAL SUBSIDY	$Q + (N \times I)$	51.35	_____	\$/hL
S	MSQ REQUIRED TO SHIP 365 LITRES (EQUIVALENT TO 1 LITRE OF FLUID QUOTA)	$I \times 3.65$	12.78	_____	kg
T	MSQ REQUIRED TO SHIP MILK VOLUME EQUIVALENT IN VALUE TO 365 LITRES OF FLUID	$S \times (P \div R)$	13.26	_____	kg
	VALUE OF MSQ RELATIVE TO FLUID	$G \div T$	24.13	_____	\$/kg