**Robotic Milking Notes**

**Some Notes About Robotic Milking & Developing a Quality of Life**

1. Robotic milking has been around since early the 1990’s The improved technology of

recent years has made the robot very attractive and capable of performing consistently.

Currently there are nearly 12,000 robots worldwide, but only around 100 in the USA.

2. Essentially, two companies are now marketing in the USA – Lely and DeLaval

3. Both companies are successful with milking cows with consistency and accuracy.

4. They have different theories of cow flow – **Forced Flow vs. Free Flow**. In other words,

Forced flow will cause cows to get milked prior to eating or laying down (whichever you

prefer). Free flow allows cows to be milked completely on their own free will.

5. Both will generate an “**Attention list”** – cows that need to be milked that have not yet

done so in the timeframe you establish.

6. 2X herds typically see about an 8 pound increase in production, when moving to robotic

milking. I believe this is due to the increased milkings / day. Generally, cows choose to

get milked 2.8 – 3.1 times / day in a robotic system.

7. **SCC Counts** appear to be very good – consistent or improved from conventional milking.

Both machines measure conductivity for SCC and will sort out high count milk. Robots

wash the units after each milking. Lely can ‘Steam’ wash if desired between each

individual cow milking.

8. **Culture Change:** Watch the Cows & owners – you will see them very relaxed. Robot

cows are not used to being herded, like parlor cows. They are very calm and have a

natural, almost grass based mentality.

9. If a problem occurs with the milking process the robot will call you.

10. Cow is weighed each time she milks – great for herd health management.

11. Lely will come out with Rumination – measuring the number of times she regurgitates –

again a great herd health management tool.

12. **Cow ‘Activity’** is measured each time the cow enters the robot. Activity is a great tool

for herd health, and particularly for breeding. Highly active cows are likely in heat,

whereas low activity cows may have health / feet issues.

13. We measure robots by pounds of **milk harvested per day** (not by # of cows / day). We

expect to harvest about 4700+ # / day or 17,000 cwts per year. (Remember our goal for

one FTE of employment is 1.1 – 1.2 million # / year or 11,000 – 12,000 cwts). Therefore

we are replacing more than 1 FTE / robot.

14. **Finance:** Numbers are estimates and may vary with individual installations. Additional

cost will be associated with other capital improvements.

1 Robot: $168,000 installed @ 7.5 % for 7 yrs = $31,718 annual pit.

Plus $2500 maintenance fee = $34,218 / 17,000 cwts of milk = $2.01/ cwt.

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**Multiple robots will come at reduced cost each, as the software and piping etc is**

**not duplicated.**

2 robots: $310,000 @ 7.5 % for 7 yrs = $58,258 + $2500 Man = $60,758

$60,758 / 34,000 cwts of milk = $1.79 /cwt

15. Typical labor cost on a dairy is generally $2.50 - $2.65 / cwt. It appears that

approximately 50% of the installed robots are being leased.

16. We can not think of the robot cost as a debt per cow, but instead as a debt per cwt of milk

and a replacement of labor cost, which now becomes a fixed cost.

17. Electrical cost to install is greatly reduced from parlor installs. Milk pump is included on

the Lely. Utility room is much smaller and reduced cost as is the entire building structure

with no holding area or excessive parlor structures. Many parlors appear to be ‘overbuilt’

for the potential of possible expansion. This is not the case with robots.

18. Robots show up for work each day, no complaining, and no asking for time off and

provide a **host of accurate information about the cow**.

19. Robot computer data is obtainable at anytime anywhere in the world with **internet**

**access**.

20. Types of folks installing robots:

a. Expansion to a new site – manure closer to fields, Animal Units spread

b. Middle aged folks who are tired of stalls etc, but still to young to retire.

c. Milking Facilities are wearing out and need to update.

d. Young families who want to have a flexible schedule for family events e.g. kids

sporting events, church etc. ---- **Quality of Life Issues!!!**