

HIMMERLAND DAIRY FARM CASE STUDY

A. PRE-TREATMENT

Barn Type:	60 tie stall dairy barn. Mats used in stalls.
Manure Handling:	Barn houses about 17 – 20 cows along each of two 120 foot parallel pits 2.5 feet wide and 5 to 9 feet deep (stepped). The pits gravity drain to the center of the pit and then flow out to an outside manure storage pit via 2.5 foot square pipe. Half of south gutter is used to handle parlour wash. At the present time 8 stall on the north gutter and 2 stalls on the south gutter are all unusable for cows due poor flow and accumulated solids. These stalls are presently being used for calves with bedding
Producer Goals:	Producer wanted to liquefy the manure in the pits so that they flow and significantly reduce the volume of accumulated solids so that lost stalls at the east end o the south gutter could be reclaimed and used., The producer also wanted to reduce the impact of pit pumping on the air quality of the barn. Normally pit pumping results in a significant increase in ammonia levels in the barn, resulting in a burning sensation in the eyes of staff in the barn.

B. TREATMENT

Treatment Date (s):	April 22, 2005 & May 4, 2005
Product Application:	15 kg BactiDomus [®] Technology product:
Method of Application:	April 22, 2005: 8 Kg of BactiDomus [®] Technology product was applied to entire 120 foot length of north gutter. Applied additional 4 kg to half (non-parlour wash side) of south gutter. No treatment was applied to 60 foot length that handles parlour wash. In all cases the product was sprinkled dry on top of the metal grid covering the gutters and was subsequently watered in.

May 4, 2005: An additional 1 kg of BactiDomus[®] Technology product was applied to each end of north gutter and to the east end of the south gutter where flow was poorest and a significant amount of feed was present in pits.

It was suggested that the producer continue these treatments with maintenance dosages every four months after the initial treatment. Maintenance dosage was prescribed at 2 kg of BactiDomus[®] Technology product per 15 stalls (1/4 pit).

C. OBSERVATIONS

May 4, 2005: Producer noted that he was starting to see liquefaction of the manure in his pit.

May 27, 2005 Producer indicated that pumping of pit had been uneventful which was not always the case. He stated that typically ammonia in the barn would increase dramatically when manure was pumped from the storage pit causing burning eyes. In addition the neighbour about .5 km north would always know when he was pumping, in this instance the neighbour indicated he wasn't aware that he producer had pumped the pit. The producer was also of the opinion that product had improved the liquidity of the manure, eased pumping and eliminated need to agitate the pit. Visual inspection of the gutter showed far less crusting on the applied areas compared to the untreated south west gutter. Problem areas showed significant improvement and producer felt he could most likely return milk producing cows to those stalls thus more than off-setting the cost of the treatment.

D. ADDITIONAL TREATMENTS & OBSERVATIONS

September 5, 2005 Producer requested maintenance treatment as recommended for the treated area. Applied 6 Kg of BactiDomus® Technology product to previously treated gutters (2 kg per quarter). Producer asked that 4th area (quarter) be treated. This area had not been treated previously because this was the gutter that handled the parlour wash which alternated between high and low PH washes which Nordevco felt might diminish the effectiveness of the treatment. However producer insisted as cost was deemed reasonable for area to be treated, an additional 4 Kg was applied to this area. Producer indicated that all benefits previously experienced were still in place.

October 24, 2005 Visited barn and inspected gutters. Newly treated gutter (parlour wash) looked more liquid and producer indicated he believed treatment was having beneficial effect in this area.

February 4, 2006 Producer requested assistance with new treatment as he was experiencing increased barn and pump odour and loss of manure liquidity. Producer indicated he had not applied any product in early January which would have been the next 4 month interval from the previous treatment. Producer was asked to apply 3 kg of BactiDomus® Technology product to each of the treated quarters of the pits.

March 6, 2006 Producer reported that barn environment had improved and had been returned to the point at which virtually no manure smell remained in the barn. He also reported that manure flow-out and pumping was excellent with no detectable odour from manure unless you stood immediately beside the pump out and even then smell was only marginal.



October 26, 2006

Producer indicated he continued to apply BactiDomus® Technology product maintenance dosages at the prescribed intervals and was still very pleased with the results. Producer asked for assistance in dealing with feed build up in pit that was a result of an overly active cow tossing feed over it's back. Build up was contained to a 14 foot length of the pit about 10 inches wide and 3 – 4 feet deep. Producer was prescribed 100 grams of BactiDomus Accelerator to be applied 50 grams at a time with a two week interval between. Producer also mentioned that field applications of manure were being done that day and application was virtually odourless and the only way to discern any smell was to virtually stand on top of the applied area and even then the smell was minimal.

November 3, 2006

Producer indicated he had applied product to only half of the problem area to evaluate it's effectiveness. He indicated that treated area was already showing remarkable improvement after only 9 days and that he would complete treatment as prescribed.

PHONE: 1-204-261-1801
FAX: 1-204-269-9097
EMAIL; INFO@NORDEVCO.NET
WWW.NORDEVCO.NET