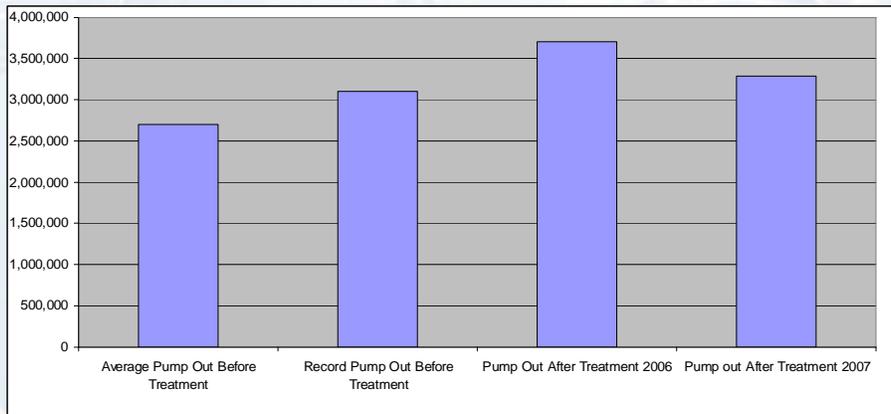




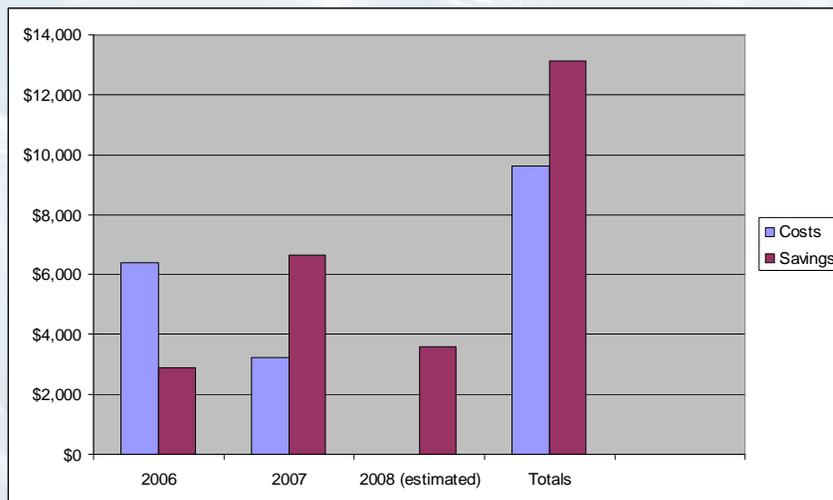
WALDHEIM COLONY HOG MANURE LAGOON TREATMENT

THE CHALLENGE: Lost manure storage capacity in the lagoon due to solids accumulation

THE OBJECTIVE OF THE TREATMENT: To reduce the volume of sludge accumulated in the lagoon and recover lost storage capacity using the BactiDomus® Technology Bio4Swine®.



In 2006 the treatment resulted in a 37% increase in the volume of slurry pumped as compared to the normal average. In 2007 the goal was only to pump 3,000,000 gallons to meet the Colony's fertilizer needs for the season. It is also clear that had they wanted to, they could have easily met or exceeded previous year's total of 3,700,000 gallons





This data above is based on the Colony only pumping 3,000,000 gallons of slurry in 2007. For every additional 100,000 gallons pumped the Colony will save an additional \$1,145 (based on 7,000 gallons of slurry per acre and a chemical fertilizer cost of \$80.00). Not only has the Colony recovered lost storage capacity and created a better more consistent and less odorous fertilizer, but also generated a 36% return on their investment. There were no costs attributed to 2008 because no additional product was required.

In addition to the chemical fertilizer savings, the treatment also had other positive paybacks including:

- ✓ A major impact on the odour of the slurry both in terms of the odour coming from the slurry as it was injected, but also in terms of residual odours on equipment and clothing
- ✓ Reduced clogging of pumps and lines allowing for pumping with less problems over greater distances
- ✓ A more uniform consistent slurry with a higher organic content for better soil recharging

Colony members had the following comments about the treatment:

According to Dave Waldner, Field Boss for both Colonies, not only was there no smell on his coveralls, even after five days of pumping and being sprayed with the slurry on numerous occasions, but his hands also did not smell after coming in contact with the slurry.

This was also noticed by Mrs. Waldner who noted that Dave did not come home smelling after working at the lagoon and with the slurry.

Other comments from Colony members:

The agitator comes out of the lagoon clean – there is no thick sludge on the blades”

“Lagoon looks more liquid – it looks good”

“Lagoon looks more liquid, especially with the dry summer we had”

“One corner of the lagoon is usually covered with solids but not this summer

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