COMPOSTING A REAL ALTERNATIVE TO HIGH DENSITY PIG OPERATIONS IN CHILE

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AGRO SUPER
Chile

• The biggest agricultural company in Chile
• The holding is composed by different operating companies
AGROSUPER
Chicken, Turkey, Pork and Salmon
Vertical integration strategy
Animal breeding, feed production, slaughtering, packing and distribution
AGROSUPER

2,600 hectares of land planted to produce grapes, apples, kiwis, peaches, nectarines, plums, lemons, oranges, avocados, walnut, almond trees and olives. The large majority of their production is exported to the United States, Europe, Asia and Latin America, and it exceeds 2 million boxes per year.
AGROFORESTAL CORNECHE

1,2 million pig generating approx. 300,000 ton of manure annually.

Highest density of pig in the world
Melipilla Central Valley, Chile.
Why Composting?
Why Not Composting?

Advantages of aeration include the potential reduction of emissions of odor, methane (a greenhouse gas), and ammonia.

“carbon farming”

“organic matter”
Pig Production Process!
Four Aerobic Pre-Treatment Facilities

Liquid = water
The Four Treatment Plant Generated Two Solid Residues and Water

Primary effluent (guano)
Pressing the raw pig manure (60-70% moisture)

Secondary effluent (lodo)
Slurry (80% moisture)
Composting Facilities

• These materials are been composted in four composting facilities located in close proximity to the pig production areas around the Melipilla Central Valley.
Four Composting Facilities

La Estrella (30 acres)

La Manga (8 acres)
La Manga #2 (28 acres)

Tantehue (14 acres)

Maitenlahue (14 acres)
Challenges and Opportunities

- High in moisture content
- Low participle size
- High in Cu, Zn and EC based in the Chilean compost quality regulation.
- Weather conditions in the summer are dry and hot and during the winter are wet and cold/cool.

Even though compost it is not well know in the market. Melipilla Central Valley offers a tremendous potential for a variety of compost users such as fruit, wine yards and ornamental in close proximity plus high inputs of fertilizer.
How to Improve Composting Process!

• Drying area for the fall, summer and spring
• Buying bigger turning equipment
• Increase pile size
• Reduce residues on the side of the piles to reduce odors
• Mixing “In Situ” instead mixing area
• Improve composting pad
• Planting trees around composting site to reduce odors
• Improve C:N ratio
Drying Area for the Fall, Summer and Spring
Buying bigger turning equipment
Increase Pile Size

Pile: Residues Side Reduction to Reduce Odors
Improve C:N ratio
Mixing “In Situ” instead Mixing Area
Planting Trees around Composting Site to Reduce Odors
Improve Composting Pad

Difficult!
Potential Market

- Melipilla Central Valley offers a tremendous potential for a variety of compost users such as fruit, wine yards and ornamental in close proximity with high inputs of fertilizer.
Compost Workshop (120 peoples)

BIO FEED S.A. TIENE EL AGRADO DE INVIATARLE A PARTICIPAR COMO AUSPICIAN OR DEL CURSO:

CURSO - SEMINARIO INTERNACIONAL SOBRE PRODUCCIÓN Y UTILIZACIÓN DE COMPOST

AGREGUE VALOR A SU EMPRESA USANDO LO QUE HOY DESEA... LAS POSIBILIDADES SON INFINITAS!!!

Dictado por Dra. Mónica Ozares-Hampton, Phd. de la Universidad de Florida

UNIVERSITY OF FLORIDA
IPAS

ORGANIZA Y AUSPICA:

BIOfeed S.A.

AUSPICA:

EL MERCURIO
Current and Future Projects

• Reduced the electrical conductivity by reducing NH$_4$-N.
• We are in the process of tracking the sources of Cu and Zn therefore be able to reduce them at the source.
• Reduced the impact of rainfall during the winter season
Conclusions

• Composting high density pig manure can be successfully achieved and the final compost can have a high quality in the Chilean market.