

# Swine Facility Conversion

- Lincoln University of Missouri

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# Typical Room Before Conversion



# Closer View





Return Line to Biofilter from Sump

Biofilter

Air Lines to Tanks

Return Lines to Tanks

Air Line to Biofilter

Drain Lines from Tanks

Solids Settling Area Between Headers to be Filled with Filter Media

Water Flow

Header with Sliding Gates

Air Diffusers

Return Line to Biofilter from Sump

Drain Standpipe

Solids Settling Area to be Filled with Filter Media



Air Lines to Tanks and Filter

Return Line to Tanks

Tank Bypass

Water Flow

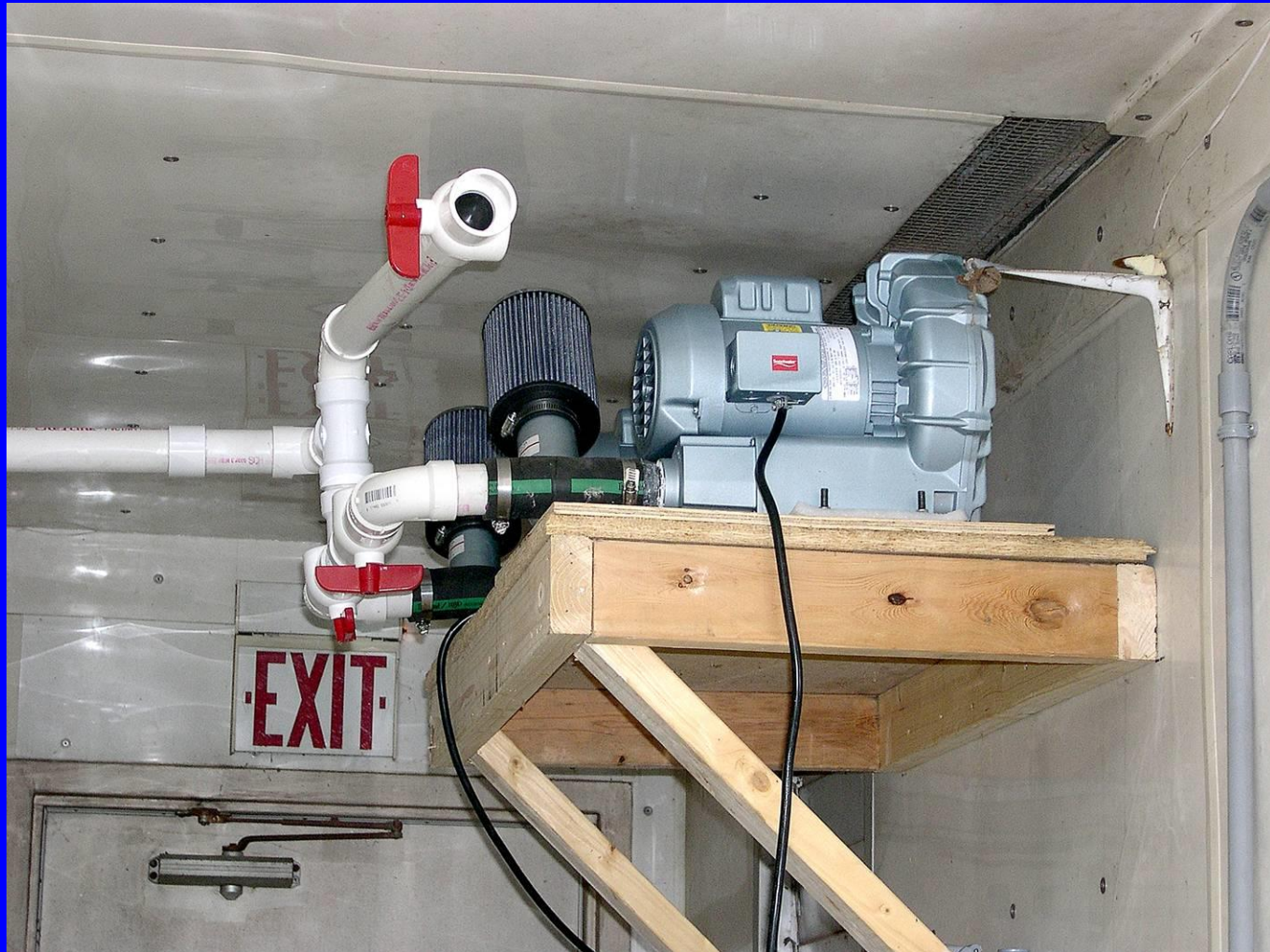
# Flush Tank Bio-Filter



# Bio-Filter Material



# Aeration Blowers





# Aeration System in Round Tanks



# Notice Used Nursery Decks



# Aeration in Raceways



# Waste Drain to Lagoon



# Waste Pit Divider



# Pit Aeration in Cleaning Mode





# Expanded View of Finishing Room

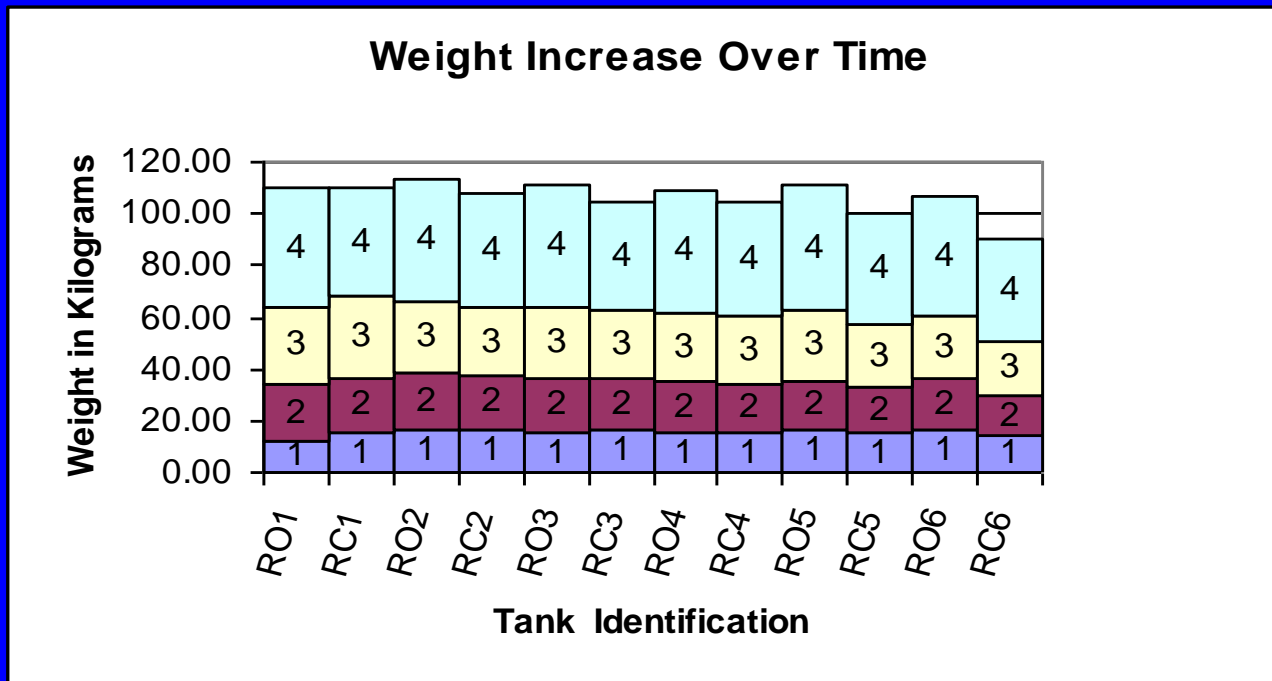




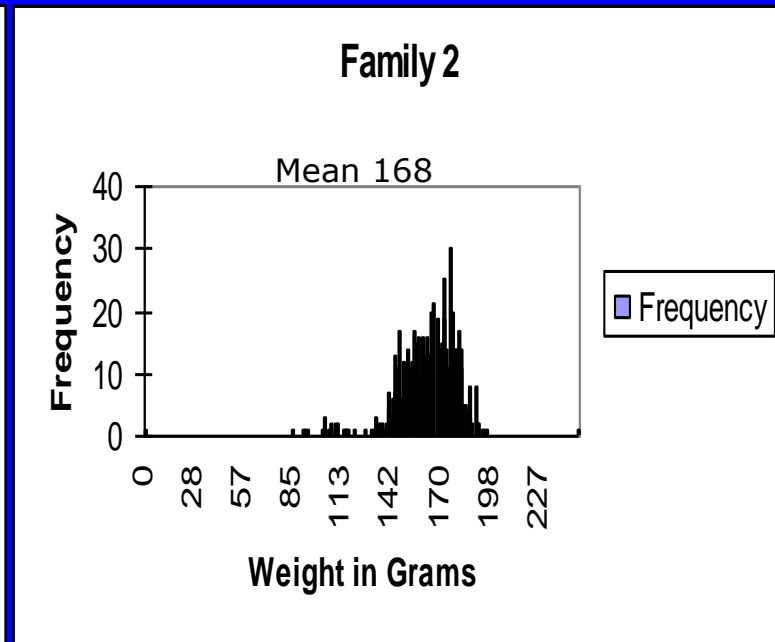
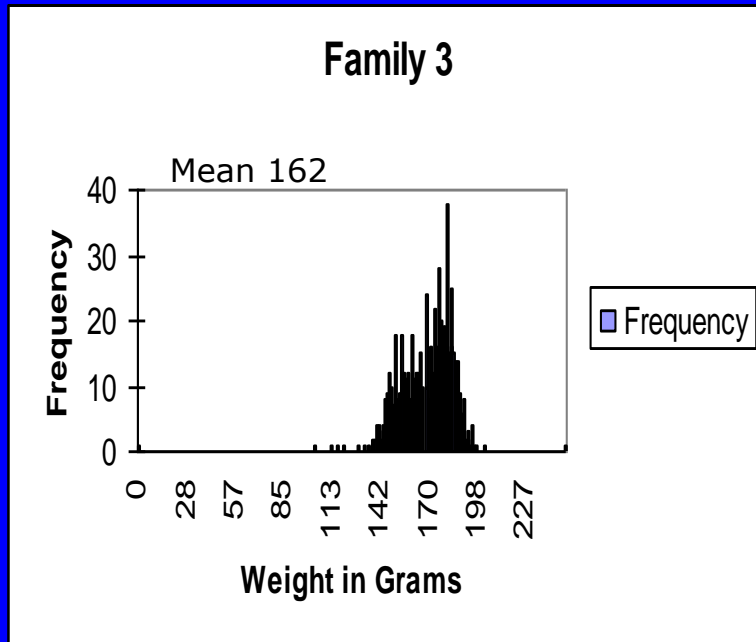
# Design Criteria

- Tank size-6 round at 984 L, 6 raceways at 984L.
- Turnover rate in fish tanks-26 minutes
- Settling basin-20 minutes retention
- Bio-filter 0.63 M<sup>3</sup> (Bio-Fill<sup>TM</sup>).
- New water-0.95 L/min.
- Maximum Density-8 Kg/M<sup>3</sup>.

# Gain in Weight



# Length Frequency August 2005 ( 14 Months)



# Component Costs

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