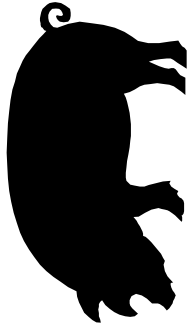




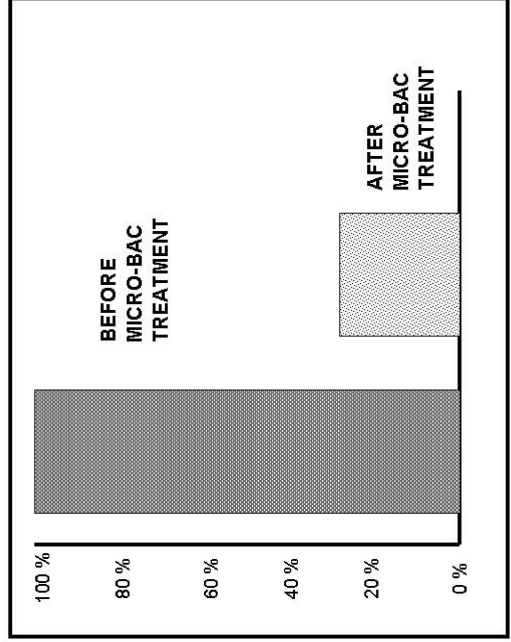
*Biological solutions for a clean, safe environment*

### Reduced Blockages

Micro-Bac's bacterial solutions degrade the waste products and thus reduce the build-up of solids. A regular treatment program makes pumping the channels and tanks easier and reduces the risk of blockage— meaning great savings in both time and money.



**PATTERN OF REDUCTION OVER 15 HOG BARN TEST SITES**



### Micro-Bac and Mega-Bac

Highly concentrated bacteria products composed of microorganisms that degrade waste from livestock-producing operations.

- ✍ Ready to use liquid products
- ✍ Safe, natural and non-toxic
- ✍ Easy to use
- ✍ Reduce ammonia
- ✍ Reduce blockages
- ✍ Reduce smells
- ✍ Reduce sludge volumes
- ✍ Help with ammonia exposure and odors
- ✍ Improve animal house air quality
- ✍ Reduce time and money spent on emptying waste pits
- ✍ Reduce problems with flies and rodents
- ✍ Minimize disease and mortality losses
- ✍ Increase production



### Biological products for a clean, safe environment

#### Safe & Easy to Use

Because Micro-Bac's products are natural, non-pathogenic and are not genetically altered or engineered, they are not harmful to people, animals or equipment. The treatments are applied in the waste pit manually or with an automated metering pump. Custom application can also be designed for individual facilities.

#### Environmental Protection

Over and above the compelling cost benefits, Micro-Bac treatments are environmentally safe. Waste is treated without harmful chemicals. No added contaminants pollute our natural resources.

#### Strong Service and Support

Micro-Bac International, Inc. has been specializing in microbial products for over two decades. As a leader in the industry, Micro-Bac stands behind its products with sophisticated lab facilities, and ongoing commitment to research and development, proprietary technology for in-house production and quality control.

*Micro-Bac offers a wide range of microbial products & services for the petroleum industry, municipal wastewater systems, food preparation and processing, agricultural industry & a host of hazardous waste application.*

# Microbial Products for Agriculture Waste



Micro-Bac International, Inc.

3200 N. IH 35, Round Rock, TX 78681

Phone: (512) 310-9000

Toll Free: (877) 559-1800

Fax: (512) 310-8800

<http://www.micro-bac.com>  
[mail@micro-bac.com](mailto:mail@micro-bac.com)

HUB & MBE Certified

## Livestock Waste Treatment

Livestock companies world-wide face difficult challenges in handling animal waste. High ammonia levels inside the livestock facilities and in the waste treatment process can contribute to respiratory disease and high mortality among newborn livestock, as well as poor working conditions for the staff. These offensive odors can also permeate the air into the surrounding community. The crushing and sedimentation that come with organic buildup can cause channel blockages as well. To handle these sludge problems, Micro-Bac International, Inc. has developed the Mega-Bac product line for livestock waste treatment.



## The Product

Mega-Bac and Micro-Bac are highly concentrated bacteria products composed of various microorganisms that have been specifically selected to handle waste found in a livestock-producing operation. The waste pits beneath the pens are treated periodically to handle current problems and to prevent future difficulties.

## Ammonia Control

Microbial products have been used in livestock waste pits to reduce odor levels by enhancing the breakdown of solids. The available biodegradable carbon level is increased, causing microorganisms to scavenge free ammonia nitrogen more effectively. With ammonia reduction, it is possible for livestock weight gain to return to normal and a decrease in newborn mortality.

TIME DIAGRAM OF AMMONIA REDUCTION OVER  
15 HOG BARN TEST SITES

