

# Microbial Reduction of Odour



**HANTPOL®**



# Essential for Every Livestock Farmer



## M.R.O. – The Solution to Irritating Odours

In livestock farming, particularly during the winter season, the emission of odours from by-products such as manure, slurry, and liquid manure becomes a significant challenge. Daily farm operations, including animal care, fertilisation, and facility maintenance, often result in strong odour emissions.

These odours can be problematic not only for the farmer and their household but also for the livestock and surrounding communities—especially when slurry or other by-products are transported to distant fields. In some cases, the intensity of the odour leads to complaints, protests, and even legal actions from local residents affected by fertilisation activities.



## An Effective Solution

Our advanced M.R.O. biotechnology does not merely mask odours—it tackles the issue at its source, eliminating odour emissions and preventing their recurrence.

According to professionals working in facilities using M.R.O., the air is noticeably less oppressive and aggressive. The odour is significantly weaker, making it less perceptible to bystanders, while improved air quality allows for more comfortable working conditions.



## Versatile Applications

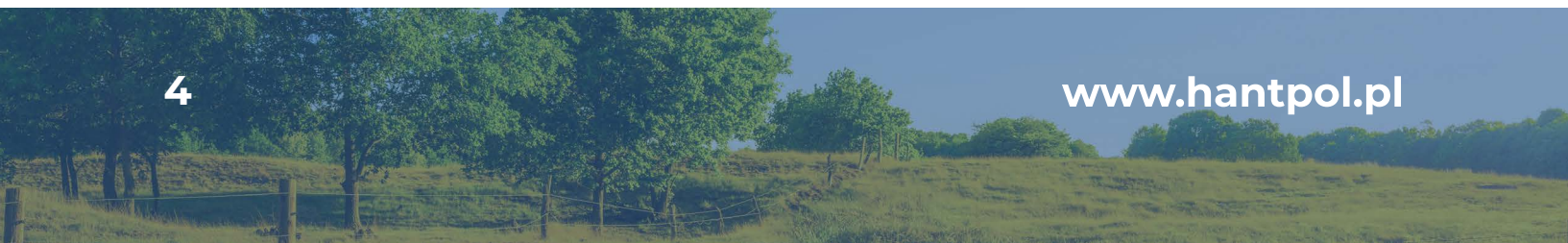
The M.R.O. biopreparation eliminates unwanted odours while offering numerous additional benefits for:

- Cattle and pig farmers
- Farmers, crop growers, and agricultural producers
- Poultry farms
- Horse stables

## Tailored Solutions

Our clients receive a customised offer based on their specific needs and the unique requirements of their farming or agricultural operations. We take into account factors such as the type and scale of the farm, the capacity of storage tanks, and the estimated volume of by-products. We then prepare a personalised dosing guide, along with a detailed dosing and maintenance plan, ensuring the product is portioned according to the client's exact requirements.

We also offer on-site training and consultations to support optimal product application.





# EFFECTS OF USING M.R.O.



# Eliminates Unpleasant Odours

## M.R.O. tackles the root cause of the problem instead of merely masking it

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### Improved Working Conditions

A specially selected blend of bacteria and enzymes effectively neutralises the emission of compounds harmful to both animals and humans.

As a result, M.R.O. significantly reduces the unpleasant odours associated with livestock farming, preventing unwanted issues.

M.R.O. also allows for longer and more comfortable working conditions within the farming facility.

### Calmer Work and Life

Fresher air improves the quality of life not only for farmers, their families, and workers but also for livestock.

The absence of strong odours also enhances the well-being of nearby residents, reducing complaints related to farming operations and fertilisation practices.



# Dissolves Sediment and Crusts



## No More Issues With Slurry Pumping

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### Unclogs Pumps and Storage Tanks

The buildup of surface crusts and bottom sediments in storage tanks and lagoons often leads to mechanical blockages in pumps, valves, and drainage channels. M.R.O. effectively solves this problem, ensuring smoother farm operations.

### A Solution for Crust and Sediment Accumulation

Existing crusts and sediments are dissolved, while newly formed deposits no longer obstruct mechanical pumping. The biotechnological process not only eliminates unpleasant odours but also frees up installations from blockages that hinder the removal of liquid by-products. Additionally, M.R.O. gradually breaks down settled sediments in storage tanks, improving overall system efficiency.



# Natural and Safe

## Biotechnology Safe for Humans and Animals

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### Healthier Livestock

By eliminating odours and reducing ammonia, volatile nitrogen compounds, and hydrogen sulfide emissions, M.R.O. positively impacts herd health, fattening efficiency, and milk production.

### Fewer Pests

Using M.R.O. significantly reduces the number of flies and larvae around livestock facilities. This also lowers animal stress and helps maintain high hygienic standards for milk production.

### 100% Natural Bacteria

M.R.O. is a fully organic bioproduct, free from GMOs, toxins, and pathogenic additives.

It contains only specialised, beneficial microorganisms and enzymes without any artificial enhancers. M.R.O. is biodegradable and completely safe for humans, livestock, and the environment.





# Reduces Fertilisation Costs



## Effectiveness Proven in Lab and Field

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### More Valuable Fertiliser

M.R.O. prevents the loss of plant-available nitrogen and significantly enhances the fertilising properties of livestock by-products. Studies have shown an increase in fertiliser value by up to 400%, making it comparable to mineral fertilisers.

*Research conducted at the  
Prof. Wacław Dąbrowski Institute  
of Agricultural and Food  
Biotechnology –  
State Research Institute*

### Improved Drought Resistance

Soil fertilised with M.R.O.-treated livestock by-products retains moisture better and has improved water absorption. This leads to enhanced soil fertility and overall water management.



# Fast Results and Easy Application



## Effects Visible in Just a Few Days

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### Noticeable Improvements

Changes in slurry structure can be observed as early as 48 hours after application. A significant reduction in ammonia and other odour-causing compounds is noticeable in livestock facilities.

By the end of the first week, odour levels drop dramatically, and its emission profile changes significantly.

### Hassle-Free Application

The application process is quick and simple. Depending on the facility's setup, M.R.O. is either introduced into underfloor and storage tanks or sprinkled over manure.

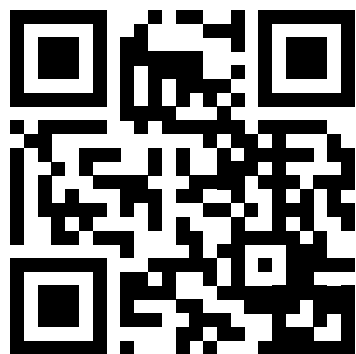
In terms of safety, M.R.O. is completely harmless to humans and animals and is fully biodegradable. No dust masks or special protective gear are required. After application, simply wash your hands with soap.







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