

Innovative compound for a more sustainable and healthy litter

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Intro to Good Practice

In intensive farming the quality of the litter is pivotal, as well as the possibility to keep it dry. Bedding must be handled properly to ensure that the animals are kept in a comfortable environment and avoiding plantar injury. Moreover, a well-managed and dry litter is more reusable and less damaging to the environment, reducing ammonia emissions and thus the concentration of ammonia in the housing environment.



Photo 1. Shed with distributed product



Photo 2. Manual distribution of the product



Photo 3. Product in a powdery state



Photo 4. Automatic distribution of the product

This GP (Good Practice) involves the administration in litter of a powdered product, composed of a mixture of mineral absorbers, vegetable absorbents and essential oils (bentonite and citrus essential oils). A part of the product is distributed at the time of preparation of the environment for the chick, normally placing it between the floor and the litter. The product is then distributed under the watering troughs whenever the litter becomes particularly wet in those points. This product is allowed for use in the presence of animals and is not harmful to humans.

Background & challenges

This GP can address and improve manure and farm waste management. The main benefits for the farmer are increased profitability, reduced costs, reduced bird losses, higher bird welfare and better work-life balance.

There are no connected risks to this GP. The challenging aspect can be the discomfort of the administration, especially if the sheds are long, because it is better to distribute it by hand, during the cycle, under the troughs or where the litter tends to get wet, to avoid too much dust and noise; this is the case when using automatic blowing machines for the distribution.

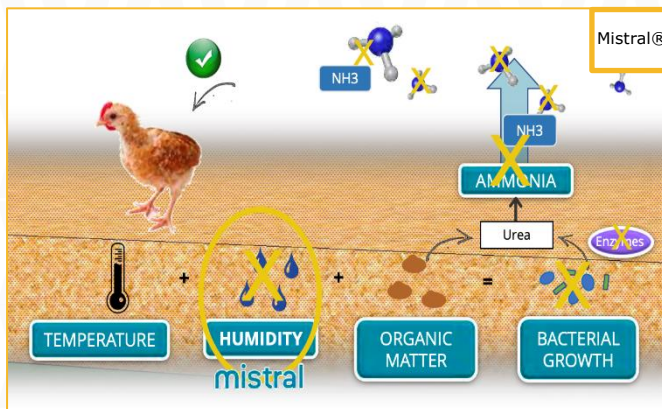


Photo 5. Scheme representing the process

From: <https://olmix.com/product/mistral/>

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Trial and implementation

The trial has been carried out on a 250,000-animal farm consisting of 5 sheds and 4 cycles/year and, given the positive results, it will be applied on other farms that have wet bedding problems. At the moment, in Italy only a few farms are implementing this GP as a voluntary measure, but it can be quite relevant and contribute to the rest of the broiler sector in Europe.

This GP is quite easy to adopt, but it is farmer's responsibility to know when and how utilize this product in order to maximize results. The operator must be trained in order to understand when and how to use the product to make it effective.

Benefits and costs

The actual impact during the cycle is to have a drier litter, reducing the frequency of milling and lowering the incidence of foot injuries. It also helps to reduce the environmental bacterial load: this aspect is very important and has helped to maintain the qualification "antibiotic free".

Favorable cost benefit from implementing the GP has been observed.

The cost savings is about 0.005 euro/kilo meat on the drug budget.

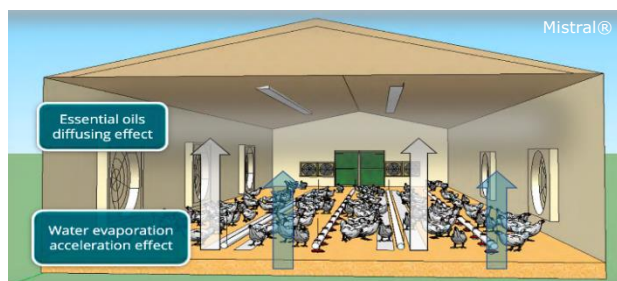
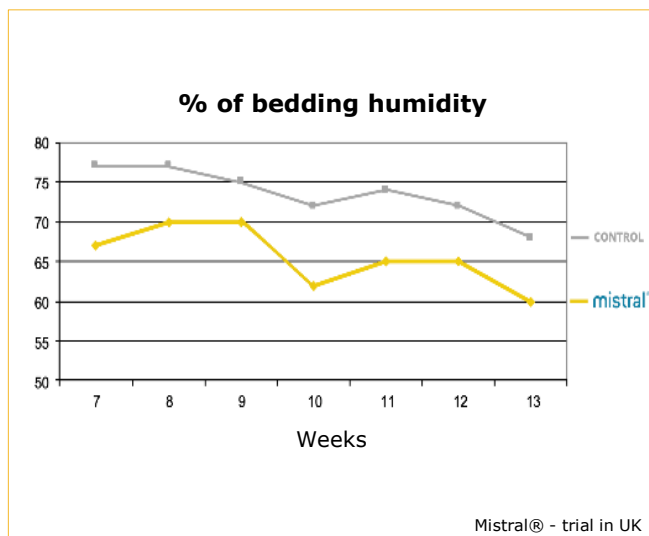


Photo 6. Representation of what happens inside the shed.



Graphic 1. Humidity percentage of the control and Mistral litter

The cost of the product is not high and there are no additional costs. The overall incidence is about 1.5 cents/kilo meat and it is due to the cost of the product, the cost of the manpower for mechanized administration during the preparation of the sheds for the chicks and the manpower for the distribution by hand under the water lines during the farming cycle.

Approximately, it results in a return of at least 0.005 euro/kilo meat, considering savings in milling, savings on drugs and reduction of about 1.5% in deaths and rejections at the slaughterhouse compared to conventional cycles.



Scientific article on the use of a compound based on phyllosilicates and essential oil of cinnamon for broiler litter

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