FOR OPTIMAL CONTROL IN ANIMAL HOUSING
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The importance of good biosecurity

Biosecurity means taking steps to ensure good hygiene practices are in place, so that the risk of a disease occurring or spreading is minimised.

Good biosecurity is necessary always, not just during a disease outbreak. Taking the right measures can help protect your stock, the industry and the community.

It means reducing the chances of infectious agents coming into contact with stock, thus protecting them from pathogens such as bacteria, fungi, viruses and parasites.

Key elements every biosecurity protocol needs to contain are effective hygiene and disinfection agents.

Stalosan F is your answer to good hygiene in rearing and animal housing situations.

- It helps control bacteria, viruses, fungi, parasites, fly larvae, ammonia and moisture in animal bedding.
- It’s unique because it is non-toxic and will remain active for several days as a drying agent.

Stalosan F can be used to treat existing problems, however real cost benefit comes from using it as a preventative.

Stalosan F is sold and registered in more than 65 countries.
What’s in Stalosan F?

It is a natural mineral formulation, containing forms of phosphates, specialist clays, minerals and oils:

- The minerals bind ammonia and moisture, improving the environment
- Better environmental conditions reduce the potential proliferation of pathogens
- Acid-buffers with a high capacity inhibit pathogens (sensitive towards pH values below 4)
- The real cost benefit comes from using Stalosan F as a preventative; it works well in areas where there is a high bacteria risk.

How does Stalosan F work?

Stalosan F contains no toxic ingredients. It does not invade or destroy cells, rather, it works as an absorbent, attaching to organic matter.

The drying agent remains active for several days, providing consistent disease control by stabilising the microflora and chemical balance in animal bedding.

<table>
<thead>
<tr>
<th>Effects</th>
<th>Stalosan F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dessicant effect</td>
<td>++++</td>
</tr>
<tr>
<td>Ammonia neutralisation</td>
<td>++++</td>
</tr>
<tr>
<td>Hydrogen sulphide neutralisation</td>
<td>++++</td>
</tr>
<tr>
<td>pH-value</td>
<td>3.5</td>
</tr>
<tr>
<td>Drying</td>
<td>++++</td>
</tr>
<tr>
<td>Application dose</td>
<td>50g/m²</td>
</tr>
<tr>
<td>Application rate weekly</td>
<td>1</td>
</tr>
</tbody>
</table>

*Weekly application and dose can be increased in case of elevated moisture level and pathogenic load.

Key:  - product has no effect, + product has little effect, ++ product has some effect, +++ product has strong effect, ++++ product has very strong effect
How does Stalosan F compare to liquid disinfectants?

Liquid disinfectants kill pathogens as they come into contact with them but can be quickly deactivated by organic matter in animal houses. Stalosan F will minimise the proliferation of diseases entering the animal house with newly introduced animals, whereas a previously applied liquid disinfectant would have no effect.

By reducing moisture and ammonia in the environment, you will get improved control of the following:

<table>
<thead>
<tr>
<th>Bacteria</th>
<th>Viruses</th>
<th>Fungi</th>
<th>Parasites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clostridium</td>
<td>Rotavirus</td>
<td>100% effective against all types</td>
<td>Coccidiosis</td>
</tr>
<tr>
<td>E. Coli</td>
<td>No viral resistance</td>
<td></td>
<td>Fly larvae</td>
</tr>
<tr>
<td>Pasturella</td>
<td></td>
<td></td>
<td>Roundworms</td>
</tr>
<tr>
<td>Pseudomonas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmonella</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staphylococcus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Streptococcus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No bacterial resistance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Preventing them from growing again.

**AgriVantage recommends using Stalosan F in conjunction with a strong liquid disinfectant for a total hygiene solution.**
Keep animal housing bacteria-free

For farmers managing housed animals, like pigs, poultry and dairy cows, it’s important to provide an environment that protects the skin of the animals – the aim is to neutralise ammonia and adjust the pH value from alkaline to neutral.

In general, pathogenic bacteria perform poorly in acidic environments. The animal’s protection mechanism is to excrete a sticky acidic substance (sebum) that covers the skin, leading to an inhibition of harmful bacteria.

Sebum is regarded an important first line of defence against disease-causing bacteria.

Figure 1.

Effect of Alkaline products on the skin

Ammonia, limestone, hydrated lime and other components with pH break down sebum and increase the risk of infection.

Sebum consists of wax, fatty acids and beneficial non-pathogenic bacteria. It keeps the skin moist and flexible and possesses antimicrobial activity through acidity, enzyme activity and symbiosis with beneficial bacteria.
Ammonia from animal waste products has a pH-value of 13.

This creates an alkaline environment that breaks down sebum and skin, compromising an animal’s defence system and increasing the risk of infection (see figure 1).

Typical powder hygiene agents for animal housing are alkaline, with a pH-value between 9 and 13. This is due to a high content of limestone or hydrated lime (see figure 2). These products will compromise the skin defence system even more, so it’s not advisable to use alkaline products in animal housing.

It’s crucial to counteract the high pH-value in these areas by using a powder bedding product with a low-pH value.

Stalosan products are unique in composition by having a high concentration of acidic minerals with low pH-values (see figure 2). The mineral acids prevent the breakdown of skin and protect the animals.

Ammonia from slurry builds up in the animal environment and generates alkaline conditions with elevated pH-values. This compromises animal skin and mucosal tissue, leading to an increased risk of infection and diseases. Stalosan neutralises ammonia and adjusts the pH-value down to the natural conditions on skin at 4,5-5,5. At this pH level, skin has a high resistance to infection.
Stalosan F vs other drying agents

Most hygiene powder products on the market are primarily made of limestone. This makes them less expensive but also limits the efficacy profile to a minor drying effect.

Stalosan F is a complex mixture of carefully selected ingredients, making it a multi-functional biosecurity aid.

Functions include:

- Unique mode of action
- Increased water holding capacity in the presence of ammonia
- Binds ammonia helping to neutralise pH and reduce odours
- Improved environment reduces proliferation of bacteria

In summary, it is an ideal dessicant for ammonia rich environments like animal housing.
AgriVantage are the exclusive suppliers of Stalosan F in New Zealand. You can order direct through AgriVantage, or through your local rural retail store.

**Stalosan® F**

- For improving the environment and minimising proliferation of bacteria, viruses, fungi, parasites, fly larvae, ammonia and moisture to improve bedding quality in animal housing
- Easy to apply by hand or with an AgriVantage applicator
- Remains active for several days, even in the presence of manure and bedding
- Powerful drying agent
- Can be applied to most animal housing, including cattle, pigs, goats, sheep and horses
- Available in 15kg

**Application rate**

Apply 50g Stalosan F per square metre.

**AgriVantage Applicator**

These easy to use applicators are ideal for Stalosan F application, available from AgriVantage direct.
Ensure a naturally healthy rearing environment

With the ability to improve the environment, aiding in the control of pathogens Stalosan F is the ideal biosecurity aid for rearers.

Pre-season pen preparation
We recommend using Stalosan F in combination with a liquid disinfectant to provide a hygienic environment that will not only protect your growing animals but get them off to a strong start in life.

1. Clear pens of old bedding material.
2. Spray with a strong liquid disinfectant to kill bacteria. Take care to spray rails, gates and vertical walls.
3. Let disinfectant dry.

4. Cover the floor with a layer of Stalosan F (100g/m²). The layer of Stalosan F underneath the bedding is an excellent preventative and will absorb moisture and ammonia that filters through the bedding.

5. Add bedding on top of the Stalosan F.

Regular application (50g/m² once weekly) of Stalosan F stabilises the microflora and chemical balance in bedding, creating a naturally healthy rearing environment. Use in conjunction with a quality liquid disinfectant, alternating applications every 3-4 days.
Optimise animal performance with AgriVantage

AgriVantage specialises in animal nutrition and feed ingredients, offering farmers solutions to optimise the health and performance of livestock and poultry.

We stand by our brands 100%.

Every product under the AgriVantage umbrella is top quality, scientifically proven and used by farmers and rearers worldwide. Using our products will add value and better sustainability to your operation.

On farm advice when you need it.

When you purchase any AgriVantage brand or product, you gain access to the very best advice on how to get the most out of it.

With the support of Dr Bas Schouten, one of New Zealand’s most renowned rearing experts, Nutritionist Natalie Chrystal and our global partners, we work with you to maximise the development and subsequent production capacity of your livestock.

Want to know more?

Please get in touch.

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