ANIMAL SCIENCE PRODUCTS®
INCORPORATED

OrganiGuard

Liquid

Liquid

OrganiGuard

Effectively shield feed from microbial contamination

OrganiGuard is an organically-based heat stable antimicrobial solution that provides unsurpassed feed ingredient and finished feed hygiene. It is not an antibiotic, so it can be used in antibiotic-free programs or in combination with any medication regimen. Also, because ***OrganiGuard's*** pH is neutral, it does not have the corrosive properties of acids. It offers superior protection against molds, such as Aspergillus, and bacterial contaminants, such as Salmonella. The results of independent laboratory testing demonstrate ***OrganiGuard's*** shield of antimicrobial effectiveness is more powerful than competitive products.

- ***Fast-Acting Liquid***
- ***Safe for all feeds***
- ***Safe for your equipment***
- ***Keeps feed fresh***
- ***Guards against molds and bacteria***

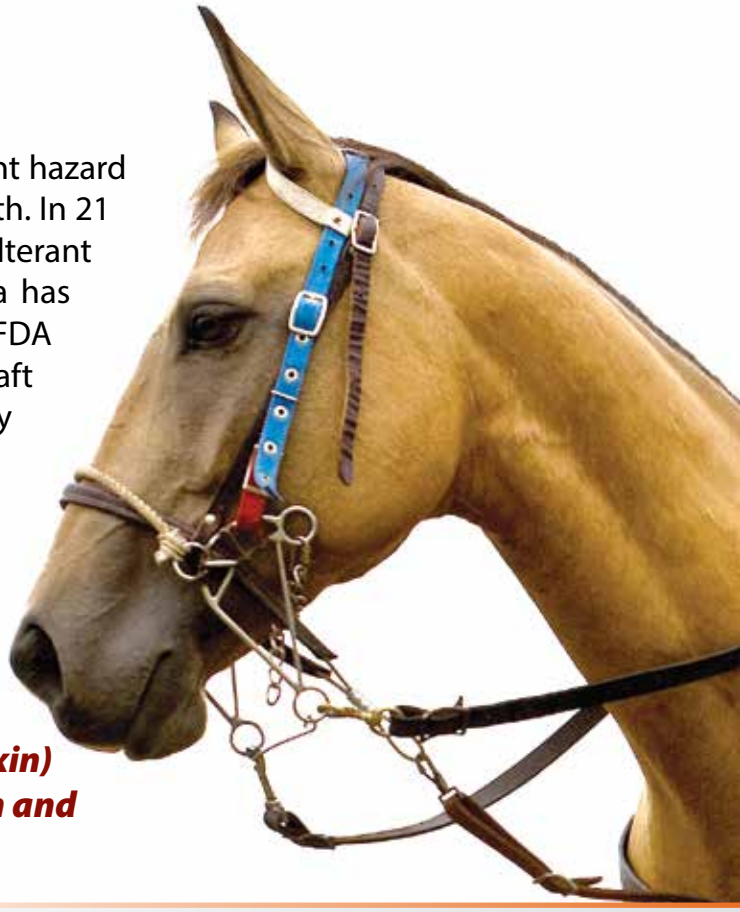
Mold And Mycotoxin Contamination

Aspergillus molds draw more attention than other molds found in feedstuffs because their mycotoxins, called aflatoxins, are substantially more poisonous than those produced by other molds such as Fusarium and Penicillium.

To help protect feed hygiene, FDA established maximum allowable mycotoxin levels. These limits vary depending on the specific mycotoxin present. FDA calls them "guidance levels" for fumonisin, and "advisory levels" for vomitoxin. The more strict term "action level" is reserved for the more hazardous aflatoxins. Guidance levels for fumonisin and advisory levels for vomitoxin (both produced by less toxic Fusarium molds) range from 5 to 50 ppm. However aflatoxin, because of its higher toxicity and status as a potent carcinogen, is limited to a range that is a thousand times lower, down to 20 ppb. Because aflatoxin is extraordinarily potent, guarding against Aspergillus growth is critical for optimum livestock feed and pet food safety. This remains true even though Aspergillus may be present in fewer numbers than other mold species.

Bacterial Contamination

Similarly, FDA has highlighted Salmonella as an important hazard that threatens feed hygiene and animal and human health. In 21 CFR 500.35, FDA specifically named Salmonella as an adulterant in animal feeds and ingredients. Controlling Salmonella has become an integral part of many HACCP programs, and FDA has included Salmonella contamination limits in the draft framework of their "modernized" Animal Feed Safety System (AFSS).



Guards against

- ***Salmonella***
- ***Mycotoxin producing molds***
- ***Penicillium (produces Ochratoxin)***
- ***Aspergillus (produces Aflatoxin and Ochratoxin)***
- ***Fusarium (produces T2, vomitoxin, fumonisin and zearalenone)***

...offers ingredient and feed manufacturers a better tool for HACCP and AFSS compliance, meaning more responsible and safer food products for livestock and pets.

Antimicrobial Comparisons By Independent Laboratory

Procedure: Tryptic soy broth (TSB) tubes were inoculated with 24-72 hour old Aspergillus, Penicillium or Salmonella cultures. Culture plates (150 mm diameter, 4 mm thick, pH 7.2-7.4) were inoculated by dipping a sterile cotton swab firmly against the side of the TSB tube, and streaking the swab evenly over the entire surface of the plate. Test antimicrobial samples were impregnated in ½ inch diameter sterile blank discs, and then placed in the organism-inoculated agar within 15 minutes. The inoculated plates were inverted and incubated at 33-35°C (91-95 °F) for 2-5 days. All test samples and controls were run in triplicate.

Interpretation: In this type of comparison, effective antimicrobials prevent the organisms from growing on the culture plates in an area around the impregnated disc. The most effective antimicrobials produce large clear zones with no organism growth around the sample (the zone of inhibition). The diameter of the zone of inhibition indicates how powerful the antimicrobial product is. Zones are measured from the underside of the plate, using a standardized angle and illumination.

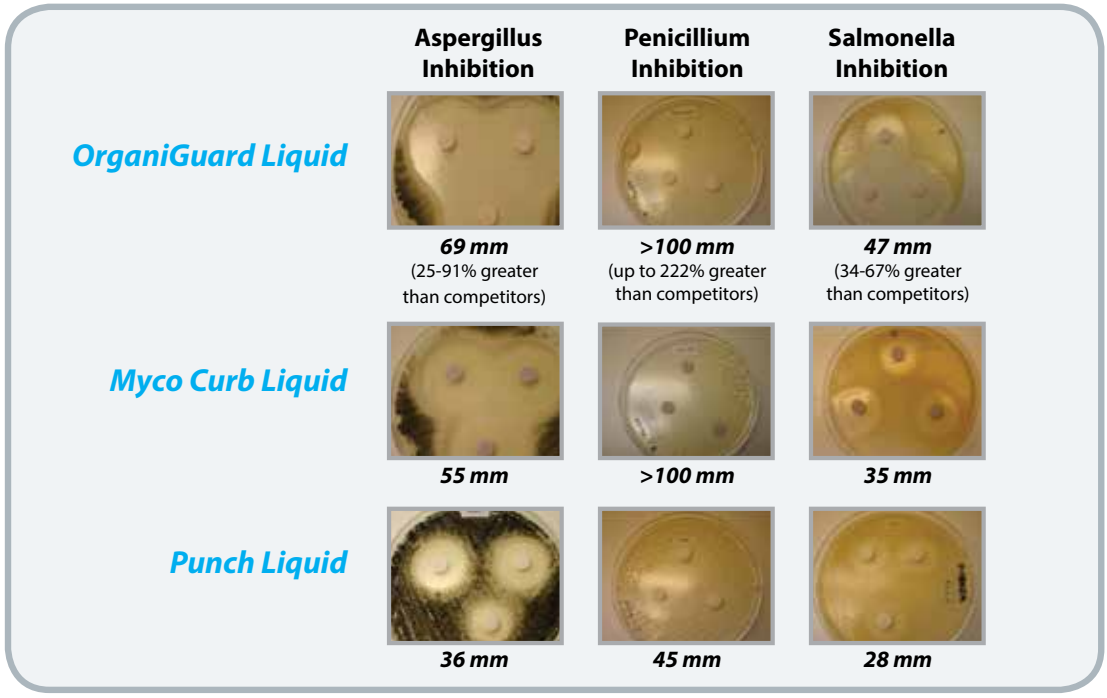
Results: ***OrganiGuard*** and the competitive products all exhibited antimicrobial activity. The larger sterile inhibition zones surrounding the discs impregnated with ***OrganiGuard*** (see figure) indicate greater protection against the contaminating organisms. ***OrganiGuard's*** average zone of inhibition against Aspergillus ranged from 25 to 91% greater than the competitors. Similarly, ***OrganiGuard*** provided greater hygiene when faced with Penicillium mold (up to 222% more coverage) and Salmonella bacteria (34-67% more inhibition).

Directions For Use: ***Mixed feeds:*** Thoroughly mix 1-2 pounds of ***OrganiGuard*** Liquid into each ton of feed.
Processed Ingredients: Mix or spray 1-4 pounds of ***OrganiGuard*** Liquid into each ton of processed ingredient, such as flaked grain etc.

OrganiGuard's powerful feed hygiene translates into more protection against mycotoxins and bacterial adulteration. More importantly it offers ingredient and feed manufacturers a better tool for HACCP and AFSS compliance, meaning more responsible and safer food products for livestock and pets.

Animal Science Products, Inc. has the capability of designing and installing your ***OrganiGuard*** liquid application systems.

Laboratory photographs of the culture plates with inhibition zones.



Made in the USA

Manufactured By
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