

Haccp Principles On The Broiler Farm

Disease challenge by viruses, bacteria, fungi and coccidia presents a major threat to profitable poultry production. Biosecurity, in other words reducing the number of infectious organisms in the environment, is the most effective form of protection.

The Antec Biosecurity Programme has been developed over many years with leading poultry producers around the world. Antec products and procedures have proven effective in practical farm conditions against a broad spectrum of pathogens. These include persistent and difficult to destroy immunosuppressive viruses causing Gumboro and Chicken Anaemia which make the birds more susceptible to additional disease challenge. Antec disinfectants are also proven effective against bacteria causing a threat to food safety such as salmonella and campylobacter.

HACCP (Hazard Analysis and Critical Control Points) principles are increasingly being applied on poultry farms to control such threats. Antec Biosecurity programmes are entirely consistent with HACCP principles, the seven point approach to food safety.

HACCP strategies identify pathogen hazards and areas where they may be controlled. The production chain is audited to ensure procedures are effective.

Principle 1 Hazard Analysis

To identify hazards, both microbiological and physical, at each step in the process, from receiving through to delivery. For example Salmonella, Campylobacter or Gumboro.

Principle 2 Critical Control Points (CCP's)

At CCP's action can be taken to reduce or eliminate the hazard. Within the broiler farm there are control points at which pathogen reduction can take place as part of a biosecurity programme.

1 Site Security	transport sanitation, wheel dips and footdips
2 Personnel Hygiene	protective clothing, hand hygiene and showering in and out
3 Water System	sanitize the drinking water
4 Aerial	fogging the house to control airborne pathogens
5 Litter	clean litter can be sprayed to reduce infection
6 Rodent Control	Integrated Pest Management (IPM) programme
7 Broiler House	Terminal Disinfection programme

Points 1 to 6 form part of a continuous programme with Terminal Disinfection at the end of each cycle. The Antec Biosecurity Programme gives full details of the action to be taken at each Control Point, with Terminal Disinfection broken down into a number of stages for effective control.

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Attention must be paid to personnel hygiene throughout the process, with the use of protective clothing, hand hygiene, footdips and showering in and out where possible.

Principle 3 Critical Limits

The limits to which the hazard must be reduced. Cleaning and disinfecting in accordance with Antec's Biosecurity Programme will ensure that microbiological hazards meet those limits. Below is a table showing suggested critical limits of disease organisms following disinfection. Total Viable Counts are the total number of microorganisms cultured, and the presence of salmonella specifically.

	Satisfactory		Doubtful		Un-satisfactory
TVC Primary Areas	0-100	100-500	500-1000	1000-2500	2500+
TVC Secondary Areas	0-10	10-50	50-100	100-300	300+
Salmonella presence	Negative	Positive	Positive	Positive	Positive

TVC =Total Viable Count per cm²

Primary Areas are those which have most organic challenge, such as floors and vents. Secondary Areas are those which have less organic challenge, such as walls, posts, feeders and drinkers.

Principle 4 Monitoring

Observation and measurement of cleaning and disinfecting to ensure the critical limits are met at each step. From our research four key areas for control of contamination have been identified:

1. Hard surfaces - Concrete floors, aprons and walls
2. Porous surfaces - Earth floors and timber
3. Equipment - Feeders and drinkers
4. Moveable equipment and personnel.

Principle 5 Correction

Action that must be taken if the critical limits are not met at each step. A review of the application procedure to ensure that it is in accordance with Antec guidelines.

Principle 6 Recording

Records must be kept that the biosecurity programme is in place and implemented correctly and continuously. Records should be kept of products used, critical limits, cleaning schedules and any corrective action provide documentation for control and for monitoring. A complete set of records are important for legal action and may form part of a current Quality Scheme e.g. BS EN ISO 9000.

Principle 7 Verification

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Tests and procedures to ensure the HACCP system is working properly. Often performed by an outside person or organisation, for example third party verification of bacteriology tests, calibration checks and dosing tests.

The Antec Broiler Farm Biosecurity Programme, consistent with the HACCP system, provides a strategy for pathogen reduction on the broiler farm. Each of the Antec Products included in this programme has undergone a rigorous programme of activity and safety testing by independent organisations to prove their effectiveness in practical conditions, and their safety to the user and environment. Those products which are in contact with the broilers have been proven to have no adverse effect even after repeated and prolonged contact.

