

Antibiotic Residue and Human Pathogen Testing of Broiler Meat

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Monitoring

- The testing programme is part of the project:
- “A Monitoring Programme for Veterinary Drug Residues and Pathogenic Bacteria in Foods of Animal Origin”
- Which was approved for **The Veterinary Services Laboratory** by **The Ministry of Finance** in 1998.
- **IT IS A FOOD SAFETY PROGRAMME UNDER THE VETERINARY AUTHORITY**

Surveillance

- Salmonella surveillance starts at day-of-age.
 - Six live chicks from each hatch are sacrificed
 - The internal organs are removed aseptically,
 - And liquified by stomacher for testing using standard culture techniques.
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- Breast meat is also tested at slaughter
 - As are livers and crop contents.
 - Samples are taken for antibiotic residue and Salmonella testing from both large and small slaughterhouses

Salmonella Results 2002 (poultry only)

- 324 Day-of Age 9 +ve 3%
- 98 liver 9 +ve 9%
- 97 crop 4 +ve 4%
- 66 Chick. Breast 3 +ve 5%
- 500 Clinical 3 +ve <1%

Antibiotic Residue Testing

- Testing has been ongoing since 1999. Over 3000 tests have been done over all (meat, milk and eggs)
- Antibiotic Residue Testing is now done weekly.
- There have been about 120 submissions since July 2002 (poultry meat only)
- These have generated some 640 tests (5 antibiotics/sample July to Nov., Chloramphenicol added in Nov 2002)

Charm Assays

- Testing is done with the Charm II 7600 System (microbial & antibody receptor assays)
- We have recently introduced the ELISA (Enzyme Linked Immuno Sorbent Assay)
- We hope that this will provide as accurate a result at less cost.

Industry Cooperation

- A major processor has made it abundantly clear to their broiler growers that any farmer caught violating their “antibiotic free” growing conditions **will be struck off as a supplier.**
- This has assisted tremendously in minimising the unwarranted use of antibiotics.

Funding

- The programme is funded by the **Barbados government** as a vital component of primary human health care
- And by the **IAEA** as part of a worldwide project to develop internationally acceptable, but affordable residue testing systems for third world countries.

- **The major benefit to Barbados has been:**

- An improvement in poultry meat quality
- The consumer can be confident that locally produced chicken is free of antibiotic residues *and that*
- All efforts are being made to minimise exposure to *Salmonella* in poultry meat.