

Diestel Turkey Ranch Case Study: Using CitroBio on all their birds



Over 1.5 Million Turkeys Per Year Processed with CitroBio using this unique, cost saving, highly efficient poultry misting system.

The Diestel Family story began with range growing turkeys in 1949 on our ranch nestled in the Sierra Nevada Foothills. Today, they produce 1.5 million turkeys per year.

Now using CitroBio on all their birds, based on the results of the following tests for shelf life.

SWAB TEST ON BIRDS WITH AND WITHOUT CITRUS EXTRACT (CitroBio) FOR SHELF LIFE

Tested for Total Plate Counts (TPC's).

On 6-10-99 a twenty (20) bird swab test was performed. Ten of the birds swabbed were sprayed with citrus extract the other ten birds were not so sprayed. The birds were numbered and swabbed twice at different dates so as to form a comparison base between growth rates of total plate counts (TPC's) from each date. This test was performed with shelf life as follows:

The results for the test performed on 6-10-99 are as follows:

Ten birds were swabbed at the bagging table after being sprayed with CitroBio:

- 1 79.33 mpn/cm²
- 2 45.00 mpn/cm²
- 3 41.67 mpn/cm²
- 4 63.33 mpn/cm²
- 5 66.67 mpn/cm²
- 6 71.67 mpn/cm²
- 7 38.33 mpn/cm²
- 8 46.67 mpn/cm²
- 9 46.67 mpn/cm²
- 10 38.33 mpn/cm²

Ten other birds were swabbed at bagging table after chlorination and chilling

Test #

- 11 100.00 mpn/cm²
- 12 93.33 mpn/cm²
- 13 3 66.67 mpn/cm²
- 14 153.33 mpn/cm²
- 15 206.67 mpm/cm²
- 16 136.67 mpn/cm²
- 17 193,33 mpn/cm²
- 18 83.83 mpn/cm²
- 19 248.33 mpn/cm²
- 20 295.00 mpn/cm²

On 7-22-99 started opening birds for shelf life test. Two birds were swabbed each workday: one with citrus extract, the other without. the dates and results of the final swabs are as follows:

Birds 1-10 WITH CitroBio

Test # Date Swabbed Result

1. 7-13-99 100.00 mpn/cm²
2. 7-7-99 63.33 mpn/cm²
3. 7-8-99 44.17 mpn/cm²
4. 7-12-99 66.67 mpn/cm²
5. 7-19-99 71.63 mpn/cm²
6. 7-15-99 79.33 mpn/cm²
7. 7-22-99 55.00 mpn/cm²
8. 7-16-99 63.33 mpn/cm²
9. 7-6-99 58.33 mpn/cm²
10. 7-20-99 45.00 mpn/cm²

Birds 11-20 WITHOUT CitroBio

11. 7-6-99 110.00 mpn/cm²
12. 7-7-99 100.00 mpn/cm²
13. 7-8-99 366.67 mpn/cm²
14. 7-12-99 163.33 mpn/cm²
15. 7-19-99 248.30 mpn/cm²
16. 7-15-99 172.50 mpn/cm²
17. 7-22-99 204.16 mpn/cm²
18. 7-16-99 93.33 mpn/cm²
19. 7-6-99 260.00 mpn/cm²
20. 7-20-99 307.50 mpn/cm²

After completion of the shelf life test (42 days duration), all birds remained in excellent condition. the TPC's were significantly lower on the birds treated with citrus extract than on those not so treated. In addition, the birds treated with citrus extract had a much better smell than those not so treated.

Based on the accumulated statistics, I believe that the citrus extract offers more days of shelf life. The last two birds tested were kept an extra three days, making them forty-five days old. #16 began to develop a bad color. #7 still had a good smell.

One way Diestel ensures the quality of its product is by controlling the entire process, from breeding to shipment. The small, independent turkey company relies on its own breeders, growing facility, and processing and production regimen, along with all-natural vegetable feed, to raise top-quality turkeys. In addition to being in control of the entire process, Diestel recently began using an all-natural germicide, called CitroBio, which is diluted to specification and then misted onto the turkey carcasses as one of the last steps before bagging. Tim Diestel, Owner of the ranch, says, "We found it [CitroBio] to be beneficial to take the whole body of the turkey and mist it on," adding that they have been using CitroBio for a year. "Through testing in our own lab, we have shown a 50% to 70% reduction in bacteria counts."

"We didn't have anything to apply to the birds, but we knew we wanted something that was a natural product," Diestel says. "CitroBio is a 'no brainer' in that respect. Plus, it gives us an edge."