



# JEFO PROTEASE IN DIETS FOR LAYERS DURING THE PEAK OF PRODUCTION

Jefo Research Center, Saint-Hyacinthe, Québec, Canada

## OBJECTIVE

To evaluate the effect of **Jefo Protease** on the performance of laying hens during the peak of egg production.

## MATERIAL AND METHODS

The trial was conducted in a experimental facility with 112 laying hens (Lohmann White). Each one of the 28 cages with 4 layers constituted 1 experimental unit. The laying hens were 20 weeks old at the beginning of the trial.

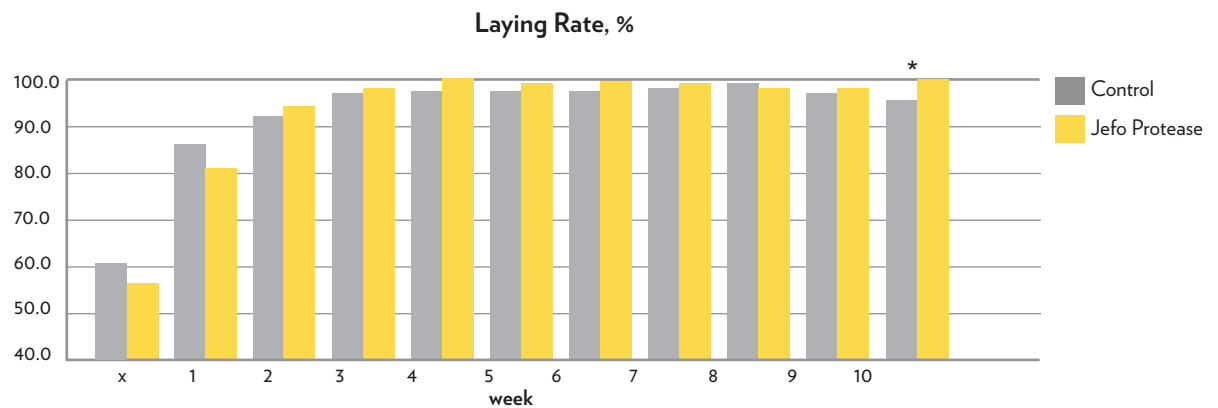
### Treatments:

- 1 - Control: commercial feed
- 2 - **Jefo Protease**: commercial feed supplemented with **Jefo Protease** (125 g/t).

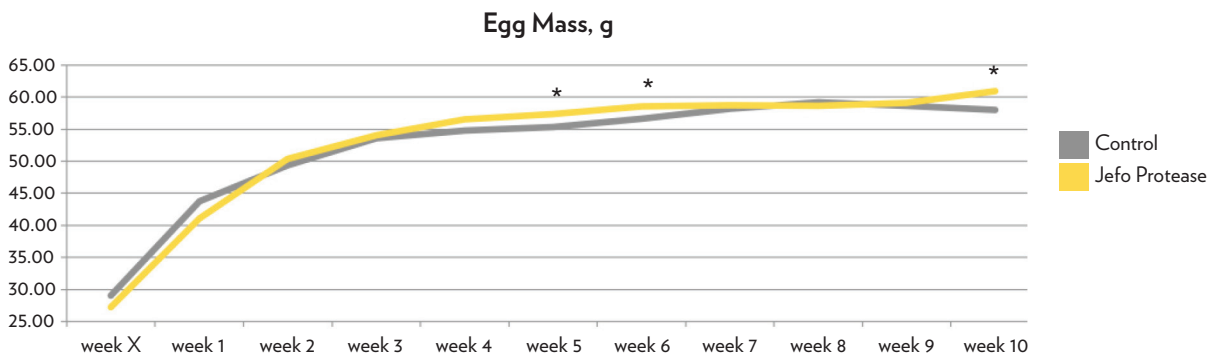
Diets were distributed in mash form. The trial was run on a 10 week period (from May to mid August) with 1 week of data collection before supplementing the supplementation with **Jefo Protease** (week x).

Weekly performance was evaluated using a Fisher's LSD test with ( $P < 0.05$ ).

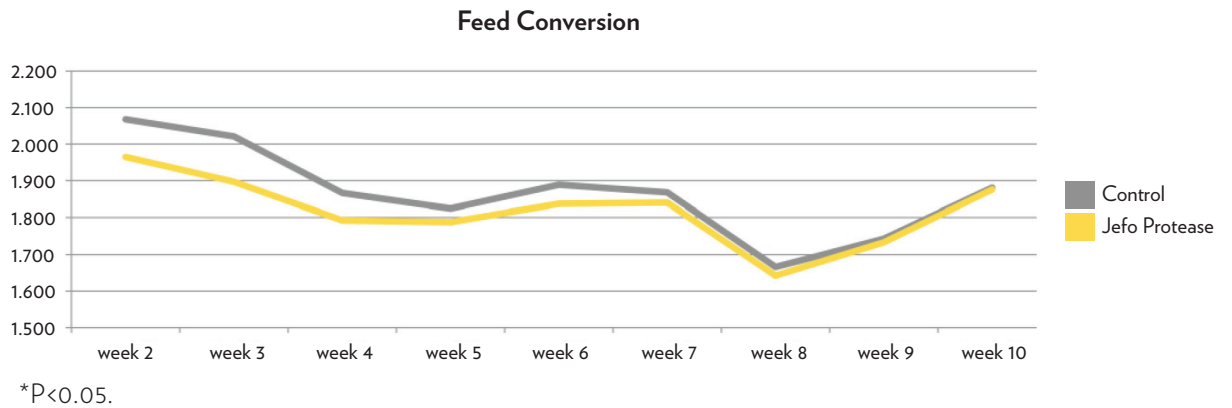
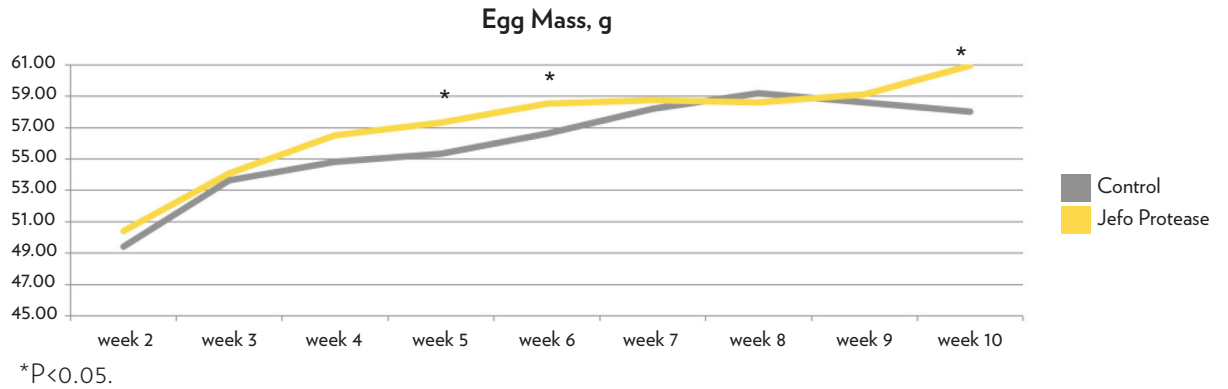
## RESULTS



\* $P < 0.05$ .



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## **CONCLUSION**

- **Jefo Protease** supplementation in a commercial feed improved performance of laying hens.
- Based on a feed cost of \$490 CAD/t of feed, this trial shows that the inclusion of **Jefo Protease** on top of feed would lead to an economic advantage of 0.41¢ per dozen of eggs.

## APPENDIX

Table 1. Performance

| Response                       | Treatment      | Week  |       |       |       |       |       |       |       |       |       |       |
|--------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                |                | X     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| Egg/hen/<br>day                | Control        | 4.27  | 6.00  | 6.43  | 6.79  | 6.84  | 6.82  | 6.80  | 6.88  | 6.93  | 6.82  | 6.70  |
|                                | Jefo Protease  | 3.96  | 5.62  | 6.58  | 6.83  | 6.96  | 6.90  | 6.94  | 6.92  | 6.88  | 6.90  | 6.98  |
|                                | <i>P value</i> | -     | -     | -     | -     | -     | -     | 0.07  | -     | -     | -     | 0.02  |
| Average<br>egg weight<br>(g)   | Control        | 47.26 | 50.94 | 53.68 | 55.30 | 56.07 | 56.77 | 58.24 | 59.28 | 59.79 | 60.16 | 60.66 |
|                                | Jefo Protease  | 47.92 | 51.04 | 53.65 | 55.45 | 56.79 | 58.12 | 59.03 | 59.41 | 59.61 | 59.96 | 61.11 |
|                                | <i>P value</i> | -     | -     | -     | -     | -     | 0.005 | -     | -     | -     | -     | -     |
| Average<br>daily feed<br>(g)   | Control        | 97.7  | 96.8  | 100.2 | 107.9 | 101.9 | 100.9 | 106.8 | 108.7 | 98.6  | 102.2 | 108.9 |
|                                | Jefo Protease  | 96.2  | 95.8  | 98.9  | 102.6 | 101.2 | 102.4 | 107.4 | 108.1 | 96.2  | 102.5 | 114.3 |
|                                | <i>P value</i> | -     | -     | -     | 0.009 | -     | -     | -     | -     | -     | -     | -     |
| FC                             | Control        | 3.706 | 2.271 | 2.068 | 2.022 | 1.866 | 1.825 | 1.889 | 1.868 | 1.666 | 1.743 | 1.881 |
|                                | Jefo Protease  | 4.046 | 2.397 | 1.965 | 1.898 | 1.793 | 1.787 | 1.838 | 1.841 | 1.642 | 1.733 | 1.877 |
|                                | <i>P value</i> | -     | -     | -     | 0.02  | 0.09  | -     | -     | -     | -     | -     | -     |
| FC per<br>dozen of<br>eggs (g) | Control        | 2.08  | 1.38  | 1.33  | 1.34  | 1.25  | 1.24  | 1.32  | 1.33  | 1.20  | 1.26  | 1.37  |
|                                | Jefo Protease  | 2.32  | 1.46  | 1.27  | 1.26  | 1.22  | 1.25  | 1.30  | 1.31  | 1.18  | 1.25  | 1.38  |
|                                | <i>P value</i> | -     | -     | -     | 0.02  | -     | -     | -     | -     | -     | -     | -     |
| Egg mass                       | Control        | 29.04 | 43.73 | 49.40 | 53.62 | 54.80 | 55.32 | 56.60 | 58.21 | 59.18 | 58.62 | 58.02 |
|                                | Jefo Protease  | 27.23 | 41.04 | 50.40 | 54.08 | 56.50 | 57.32 | 58.54 | 58.76 | 58.62 | 59.13 | 60.95 |
|                                | <i>P value</i> | -     | -     | -     | -     | -     | 0.01  | 0.03  | -     | -     | -     | 0.03  |
| Laying rate                    | Control        | 61.0  | 85.7  | 91.8  | 96.9  | 97.7  | 97.4  | 97.2  | 98.2  | 99.0  | 97.4  | 95.7  |
|                                | Jefo Protease  | 56.6  | 80.2  | 94.0  | 97.5  | 99.5  | 98.6  | 99.2  | 98.9  | 98.4  | 98.6  | 99.7  |
|                                | <i>P value</i> | -     | -     | -     | -     | -     | -     | 0.07  | -     | -     | -     | 0.02  |