

## Research Abstract

### METABOLISM AND NUTRITION

#### **The Investigation of the Effect of LinPro on the Omega-3 Fatty Acid Profile on Hen Eggs**

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#### Purpose :

To determine the omega-3 fatty acid profile of hen eggs from 3 different strains of layers when fed different levels of LinPro in the diet.

#### Methodology :

- Four layer diets were prepared to contain either 0, 12, 15, or 17% LinPro
- Each diet was fed to 12 birds of each of the following strains of bird:
  - Shaver White
  - Lohman White
  - Rhode Island Red
- Hens were approximately 35 weeks of age
- Hens were housed in individual cages and offered feed and water *ad lib*
- After 40 days on the diet, 5 eggs per treatment per strain of bird were collected for fatty acid analysis at Lipid Analytical (Guelph, ON)

#### Results :

Increasing levels of LinPro in the diet generally results in very significant levels of Omega-3 fatty acids in the egg. It also appears that Rhode Island Red hens may accumulate Omega-3 fatty acids in their yolk to a greater extent than the other 2 strains of hen.

#### Conclusion :

- Including increased levels of LinPro in the diet of laying hens is an effective way of increasing egg omega-3 fatty acid profiles.