Finding the right match:
A comparative study between male line and diet
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Problem
- Feed costs are the largest cost in broiler production it is important to determine ways to decrease costs and increase overall profitability
- Substitution of wheat in Canadian commercial broiler rations is frequently done to reduce feed costs

Introduction
- Significant strain differences in feed conversion rate (FCR) and growth have been shown between different cereal diets [1]
- The inclusion rate of wheat in broiler diets can vary substantially among regions
- When making male line selections it is important to fully understand the cereal effect on overall growth, efficiency and yield.
- We hypothesized that birds from the European male line would perform better than the North American Male line on wheat based diets

Objective
- To determine the growth, efficiency, and yield responses to corn and wheat based diets in Ross 708 chicks from North America and European male lines

Materials and Methods
Experimental Design
- Ross 708 x Two Broiler Male Lines
  - European Male Line (EU ML)
  - North American Male Line (NA ML)
- Diet
  - Corn
  - Wheat
- 3,200 broilers raised with a stocking density of 0.74 ft²/bird
- Group body weights and feed intake data were collected at placement, day 10, 25, and 35
- FCR was calculated
- At 36 days of age 288 broilers were processed at the ACPPTC
- In addition to individual body weights at processing, Pectoralis major and minor, thighs, drums, wings and fat-pad weights were collected

Results
- Total breast muscle yield was high in the corn treatment compared to the wheat treatment (Figure 1)
- Thigh yield was lower in European male line fed corn than the other treatments (Figure 1)
- There was no statistical difference in FCR among treatments (Average = 1.84)

Conclusions
- Based on our data we conclude that the North American male line had a higher BW and breast muscle yield on corn and wheat diets than the European male line
- Yield increases were greater between the cereal treatments (corn and wheat) than the strain treatments (NA ML and EU ML).
- The North American male line appears to be better suited for growth in Alberta than the European male line

References