

Reduced Protein for Heritage Chickens



LIVESTOCK BREED
SELECTION



ALTERNATIVE
LIVESTOCK FEED

Farmer-Researcher(s):

Heather Newman, D&H Newman Farm - West

EFAO Contact

Sarah Hargreaves, sarah@efao.ca, 226-582-0626 (chat and textable)

This document outlines the steps that Heather will follow to execute her research project, *Reduced Protein for Heritage Chickens*, including design, execution, data collection and data sharing. It also serves as a Memorandum of Understanding between Heather and EFAO.

Background

Heather raises Chantecler chickens, a dual purpose bird that is also Canada's only heritage breed of chickens. Until now, she's raised them on the standard commercial rations, but she suspects they have different feed requirements compared to commercial hybrids. Heather is curious to see if the Chantecler can grow well on a reduced protein feed during the grow-out period. This, in turn, would reduce her feed costs. Even more, it would demonstrate that raising Chanteclers can be an economic enterprise for meat and layers, which better maintains genetic diversity over breeding the birds just for show.

Experimental Design & Feed Rations

During the growing stage of development, Heather will compare a standard commercial ration (16% protein) to a reduced-protein ration (13% protein) with the goal to maintain her current performance metrics (growth, health, livability etc).

Heather will raise 3 cohorts of Chantecler chickens per year, and follow this design for 2+ years. For each cohort, she will raise them as follows:

Age Range	Control ration	Treatment ration	Note
0 - 8 weeks	20% protein		Until birds are feathered out
8 weeks - 6 months	Grower 16%	Grower 13%	Until fully grown; with short transition period of a few days
6 months+ for hens	Layer ration, 17%		Cockerels will be butchered.

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Cohorts

Heather will grow out three cohorts of Chantecler chicks throughout the 2019 season. When chicks are ready to go to the reduced protein ration (at ~ 8 weeks), she will divide each cohort in half using by placing a divider in the brooder in such a way that approximately half the hens (chicks that crowd to back of brooder) and cockerels are in each group. She will count chick numbers after this separation and adjust as needed. The two groups from the cohort will be grown out in separate pens on pasture until males and culls are butchered and hens are sold as layers or kept as breeding stock.

Heather will weigh each chick in all cohorts **monthly** using a hanging scale.

Measurements

Evaluation Forms

General Flock Records - see [linked sheet](#)

Feed Records

Weight measurements

Health Records

Research Expense Budget

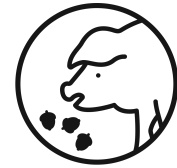
Prices are approximate; NA or in-kind for any materials that you already own or have access to. Please indicate if you intend to give any of the supplies to EFAO's Tool Library for others to use after you are finished with them.

Material	Quantity	Unit	Total Cost	EFAO's Tool Library (Y/N)
Materials for keeping the treatment and control separate				N
Pull-out hanging scales				Y

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Research Calendar

Time	Task	Action Item
March	Hatch 1	
April	Divide and weigh	
May	Begin grower feed	
	Hatch 2	
	Weight 1 and move to outdoor pen	Sarah will check-in
	Divide 2	
June	Weigh 1 & 2	Sarah will check-in
	Hatch 3	
July	Begin 2 on grower	Sarah will check-in
	Weigh 1 & 2	
Aug	Weight 1, 2 & 3	Sarah will check-in
Sep	Process 1 (Sep 11) Record live hen weights and carcass weights	Sarah will check-in
	Begin grower for 3	
Oct	Weigh 2 & 3	Sarah will check-in
Nov	Process 2, record live hen weights and carcass weights	Sarah will check-in
	Weigh 3	
Dec	Weigh 3	Sarah will check-in
Jan	Process 3, record live hen weights and carcass weights	Sarah will check-in

Deadline for data, progress report and photo submission
 October 31, 2019 or earlier - with as much data as is available.

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Memorandum of Understanding

Please refer to efao.ca/research-mou for Memorandum of Understanding.

Acknowledgements

We thank members of the Advisory Panel, Jason Hayes, Matt Jones, Ken Laing, Annie Richard, Darrell Roes, Steven Wolgram and Dr. Ralph Martin, for their thoughtful input that helped guide the design of this trial. We are also very grateful for help from Dr. Elijah Kiarie and Dr. Michelle Edwards for help and advice with the trial design.

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The Robert and Moira Ideas Foundation,
a fund within the

Ontario
Trillium Foundation



Fondation Trillium
de l'Ontario

An agency of the Government of Ontario
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Feed Records

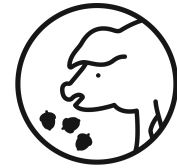
Start when chicks are separated and the reduced protein ration starts. Print a sheet for every cohort.

Cohort # _____			
Date	Commercial Ration - Control (kg or lb)	Commercial Ration - Treatment	Oat Pellets - Treatment

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Weight Records

Weigh the chicks **MONTHLY**. Print a sheet for every cohort.

Cohort #: _____					
Date: _____					
#	Control	Treatment	#	Control	Treatment
1			21		
2			22		
3			23		
4			24		
5			25		
6			26		
7			27		
8			28		
9			29		
10			30		
11			31		
12			32		
13			33		
14			34		
15			35		
16			36		
17			37		
18			38		
19			39		
20			40		

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Health Records

General vigour, even feathering, good colouring in the legs, eyes and mouth, healthy excrement, foot pad lesion.