



PORK BRIEFS

The Latest Information
on Swine Nutrition



TIPS ON FEEDING WHEAT AND BARLEY

By: Ken Palen



Every year pork producers look at wheat and/or barley values to see if it is advantageous to harvest and feed it or harvest and sell it. Pork producers not growing these grains also look at the value of low test weight or off spec material to see if any deals exist to incorporate some wheat or barley into the ration to help reduce costs.

Typically wheat is used for human consumption so it generally is too expensive to feed to swine in Ontario when corn is readily available. Around the world though wheat and barley are the main ingredients used to raise pigs. They complement each other in a ration with wheat being higher energy and barley adding a bit of fibre. Most wheat grown in Ontario is either soft white or soft red wheat although hard red wheat seems to be increasing in acres. Table 1 shows the Typical Nutrient Composition, different wheats and barley compared to corn.

Table 1. Typical Nutrient Composition of Wheat & Barley

Nutrient	Dry Corn	Soft Wheat (Red or White)	Hard Red Wheat	Barley
Protein (%)	8.50	11.40	12.60	11.50
Lysine (%)	0.25	0.36	0.40	0.40
Fat (%)	3.60	1.60	1.60	1.70
Fibre (%)	2.30	2.30	2.60	5.00
Calcium (%)	0.03	0.05	0.04	0.05
Phosphorus (%)	0.28	0.36	0.37	0.34
M. Energy, Kcal/kg	3420	3300	3300	3040

Based on National Research Council – Nutrient Requirements of Swine, Tenth Revised Edition, 1998

When reviewing the typical analysis chart depending on commodity prices, good quality wheat would range between 95 – 105% the value of corn. Bar-

Cont. >>

Inside this Issue

Tips on Feeding Wheat and Barley

By: Ken Palen

It's a fact - Another Kenpal Customer has Success with Lacta-Fat™

Lacta-Fat in the Lactation Sow Diet has increased the sows milk production and increased litter weaning weight by over 10%.

**Kevin Van Bakel
Dublin, Ontario**



Call your Kenpal Sales Representative today for more information

Volume 3, Issue 5
July 2010

69819 London Road, RR #1, Centralia, Ontario, Canada, N0M 1K0

Tel: (519) 228-6444 or 1-800-265-2904 • Fax (519) 228-6560 • Email kpalen@kenpal.on.ca • www.kenpal.on.ca

ley would be more 85 – 90% value of corn. Good quality is important when evaluating value of grains. Table 2 shows how low test weight wheat may result in a lower value when actually fed to pigs.

Table 2. Effect of Test Weight of Wheat on Finisher Pig Performance			
Bushel Weight, lb.	59	51	45
Daily gain, gms	807	812	821
Daily feed, kg	2.96	3.17	3.12
Feed/Gain	3.67	3.91	3.79

KSU, 1983; pig initial and final weights were 61 and 121 kg.

Low Test-Weight Wheat

Low test-weight wheat often reaches swine diets as a grain alternative containing 20 to 50 percent more fibre than normal wheat. In turn, the ME content of light weight wheat is less than regular wheat. University re-

searchers report no effect on daily gain but a 6.5 to 8.2 percent increase in feed/gain for grow-finish pigs fed 51 to 45 lb. Test-weight wheat vs. Normal wheat at 60 lb. Per bushel. Based on these studies, ME content appears to decrease 37.5 kcal/kg for each 2 lb. drop in test weight.

This research from 1983 shows that we need to be aware of the potential lower value of lower test weight wheat.

Factors Affecting Feeding:

Processing

Wheat ground too fine (less than 800 microns) can affect its feeding value especially if using soft wheat. In addition to flowability problems, the wheat is pasty in the pig's mouth so reduces palatability. I have seen the pigs make gum balls out of the feed and spit it back out. Ground too course, too many whole kernels can reduce digestibility. Roller mills or hammer mills can be used to process wheat. Barley is best ground through a hammer mill to reduce the particle size of the barley hull. Roller mills can be used if a hammer mill is not available.

Mycotoxins

Similar to corn, Mycotoxins contamination can exist. Wheat and barley should be tested for vomitoxin and zearalenone if field contamination with fusarium mold is suspected. Barley has also been shown to

THE LIQUID CO-PRODUCT RATION ROOM



WHEAT SHORTS

LIQUID YEAST



EXPELLER CANOLA

CORN STEEP LIQUOR

LIQUID WHEY



CDS

DDGS



WHEN YOU NEED AN EXPERT AND A FAST RESPONSE ON CO-PRODUCTS

CALL KENPAL

1-800-265-2904



Kenpal Farm Products Inc.

69819 London Rd, RR#1 Centralia, ON, N0M 1K0

Tel 519-228-6444 or 1-800-265-2904 • Fax 519-228-6560

kpalen@kenpal.on.ca • www.kenpal.on.ca

Cont. >>

contain T-2 toxin (from fusarium mold) and in certain years has been infected with ergot (looks like black mouse droppings).

Ration Balancing

As with any major change in rations, switch gradually to the new formulations over one or two stages to help avoid digestive upsets or palatability issues. Have your feed ration properly balanced for Protein (amino acids), Energy and Phosphorus.

Table 3 shows some typical Ontario inclusion rates that have been used in rations as a percentage (%) of the diet. Diets with soft wheat should be monitored closely and adjusted as required.

Table 3. Guidelines for Soft Wheat, Hard Wheat and Barley in Swine Diets			
	Soft Wheat (Red or White)	Hard Wheat (Red)	Barley
Dry Sow Diets	50%	50%	100%
Lactation Sow Diets	30%	40%	30%
Pig Starter Diets	25%	40%	20%
Grower/Developer Diets	50%	100%	100%
Developer/Finisher Diets	50%	100%	100%

Source: Adapted from various industry charts

The above chart is guidelines only and rations should be checked with your nutritionist for final feeding percentages. It is always important to monitor the rations for performance and health responses, mycotoxin contaminations, flowability and feed intake at the farm level when incorporating new rations.

Summer is such a fun time for farmers gathering up the bushels of wheat, barley, etc. In return for the fruits of your hard work. Deciding to feed or sell the crop is the final piece of the puzzle. Enjoy the summer and be careful when harvesting.

Thank you.

PIGLET MILK REPLACER 24/18



*With larger litter sizes, comes the need
for a solution to feed smaller piglets.*

Here is what swine producer Brian McNichol has to say about firstSTART P Piglet milk replacer:

We have worked with Kenpal for all our feed since the mid 1980's and when we were looking for a new supplier for piglet milk replacer, Ken suggested we give their new milk replacer product firstSTART P a try.

We find that firstSTART P works just as well as the other milk replacers available and at a better price. With other products we have tried the piglets look swollen, but with firstSTART P they fatten up nicely!

We use the milk replacer with the piglets that fall back on the sows. With the larger litters we see, it is important to have this option available and we find that these runt piglets can usually be weaned at the same time as the rest of the litter.

Brian McNichol
Blyth, Ontario



Helping to minimize body weight loss and maximize weaning weights

Here is what swine producer John Van Dorp has to say about sowSTART sow supplement:

John and Karen Van Dorp and sons operate a 180 sow farrow-to-finish operation near Woodstock, ON. sowSTART has become a regular part of their lactation feeding program:

“On a four week weaning program, sowSTART has helped keep sow condition by maximizing intake while increasing milk production, resulting in heavier weaning weights. Since using sowSTART we have noticed our sows breed back in a timely fashion which enables us to keep our crates full and maximize production. In these tough economic times, this is one product we would not be without, it definitely pays for itself.”

John Van Dorp
Woodstock, Ontario



Livestock Supplier of:



- * Specialty Feed Products
- * Vitamin & Mineral Premixes
- * Lacta-Fat liquid fat
- * Liquid Molasses blend
- * STARTline including drySTART™ (drying agent for livestock & poultry facilities)
- * International Stock Food (ISF) - Specialty livestock feed products
- * Silo Guard®II Forage Additive (dry and liquid)

- Providing Products to the Livestock Industry since 1983
- Feed Assure™ (HACCP) Certified since 1999 (First in Canada)
- Family owned company doing business with family principles



WE APPRECIATE YOUR BUSINESS

69819 London Road, RR #1, Centralia, Ontario, Canada, N0M 1K0

Tel: (519) 228-6444 or 1-800-265-2904 • Fax (519) 228-6560 • Email kpalen@kenpal.on.ca • www.kenpal.on.ca

© Kenpal Farm Products Inc.

™ Trademark of Kenpal Farm Products Inc.07/10 PRINTED IN CANADA

July 2010 • Kenpal Pork Brief • 4