



# Why Wheat?

- Wheat has great digestibility (84% gross energy)\*
- Wheat provides high quality protein, with fiber, minerals and carbohydrates
- Food allergies are uncommon, comprising only 1% of skin disease in dogs and cats\* .
- Of pets who have a food allergy, 15% of dogs and 4.5% of cats have been reported to have allergies to wheat.\*
- Wheat is the primary grain used in U.S
- Wheat is the third most popular grain in the world
- Wheat is used in many products like pasta, bread, cereal, cookies, gravy, and pastries



\*Kempe R, Saastamoinen M, Hyyppä S, Composition, digestibility and Nutrient value of cereals. Agriculture and Food Science Vol. 13: 5-17, (2004)

\*\* A. VERLINDEN, M. HESTA, S. MILLET, and G.P.J. JANSSENS, Food Allergy in Dogs and Cats: A Review, *Critical Reviews in Food Science and Nutrition*, 46:259–273 (2006)

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# Why Barley?

- Barley provides high quality protein and has high digestibility (84% gross energy)\*
- Barley is high in beneficial fiber; 50% is soluble
- Barley is the world's oldest grain
- Barley is the 4<sup>th</sup> largest crop in the United States
- Barley has been shown to lower cholesterol in people
- Barley is used in foods such as breakfast cereals, soups, pilaf mixes, breads, cookies, crackers and snack bars



\*Kempe R, Saastamoinen M, Hyypä S, Composition, digestibility and Nutrient value of cereals. Agriculture and Food Science Vol. 13: 5-17, (2004)

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# Why Sorghum?

- Sorghum has great energy and digestibility (80% total GI tract digestion)\*
- Sorghum is a great protein source
- Sorghum came to the US in the early 1700s
- Sorghum ranks 5<sup>th</sup> in cereals for global production
- Sorghum contains iron, calcium and potassium. Before vitamins, many doctors prescribed it as a daily supplement for people with deficiencies in these nutrients.
- Sorghum is used to make cereal, snack foods and ground into flour to make pancakes and other baked goods



\*Murray SM, Fahey GC, Merchen RN, et al. Evaluation of selected high-starch flours as ingredients in canine diets. J Anim Sci 1999; 77:2180-2186.

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# Why Oats?

- Oats provide high quality protein and has high digestibility (86% gross energy)\*
- Oats were first brought to North America in 1602
- Oat bran is recommended for people, because it is easy on digestion and assists in regulating gastrointestinal function
- Oats for people have anti-inflammatory properties, and have been clinically shown to help heal dry, itchy skin
- Oatmeal is famous for lowering cholesterol in people
- Oats is used in porridge and muesli, added into breads, biscuits, cereal bars

\*Kempe R, Saastamoinen M, Hyyppa S, Composition, digestibility and Nutrient value of cereals.

Agriculture and Food Science Vol. 13: 5-17, (2004)

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# Why Grains?

- Common grains are wheat, corn, barley, oats, sorghum and rice
- Grains are highly digestible, (starch component is >99%)
- Total GI tract digestion (gross energy) is 80-88%\*
- Grains provide high quality protein
- Grains provide beneficial fatty acids, vitamins and minerals
- Food allergies are rare making up 1% of all skin diseases and 10% of all allergic skin disease\*\*
- Grains are used in breads, crackers, cookies, cereals, pasta, popcorn, gravy and so much more



\*Murray SM, Fahey GC, Merchen RN, et al. Evaluation of selected high-starch flours as ingredients in canine diets. J Anim Sci 1999; 77:2180-2186.

\*\*Verlinden V, Hesta M, Millet s, et al. Food allergy in dogs and cats: A review. Critical Reviews in Food Science and Nutrition, 46: 259-273 (2006)

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# Why Corn?

- Corn is highly digestible (82% gross energy)\* and provides high quality protein
- Corn provides beneficial fatty acids, for skin and coat
- The prevalence of grain allergies is very low compared to other environmental allergies
- Corn is also called Maize
- Corn is the number one crop in the world
- Corn is used cereals, chips, soups, cornbread, tortillas and popcorn



\*Kempe R, Saastamoinen M, Hyyppä S, Composition, digestibility and Nutrient value of cereals. Agriculture and Food Science Vol. 13: 5-17, (2004)

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# Why Rice?

- Rice is easily digested (88% total GI tract digestion)\*
- Rice provides high quality protein
- Rice has the second-highest worldwide production
- Rice is the staple food of over half the world's population
- Rice is used to provide welcome relief from gastrointestinal upset.
- Rice is used for rice-pilaf, noodles, cereal, risotto and sushi



\*Kempe R, Saastamoinen M, Hyypä S, Composition, digestibility and Nutrient value of cereals. Agriculture and Food Science Vol. 13: 5-17, (2004)

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