



## PRO-LAK® FREQUENTLY ASKED QUESTIONS

Q. What is PRO-LAK®? PRO-LAK® is a specially formulated, premium quality, marine and animal bypass protein supplement designed for springer and early lactating dairy cattle requiring additional essential amino acids.

Q. What is the basis for PRO-LAK®? A recent project with five universities, 35 dairy herds, and 7,289 cows showed a benefit of 5.82 pounds more milk in early lactation by feeding PRO-LAK®.

Q. So what exactly is PRO-LAK®? PRO-LAK® is a fish meal based product. It also contains high quality blood meal, hydrolyzed feather meal, meat and bone meal, and synthetic methionine blended to supply the 10 essential amino acids known to limit milk production in high producing cows.

Q. Why PRO-LAK® versus other sources of animal proteins? The quality, consistency, and digestibility of animal proteins is known to vary considerably. Research has shown that many herds already feeding meat and bone meal alone with blood meal had significant milk yield increases when fed PRO-LAK®. Some of this response was due to the variability seen in animal proteins.

Q. Are the proteins in PRO-LAK® any different? PRO-LAK® is subject to stringent quality assurance procedures. Only specific raw ingredients suppliers are considered. The ingredients are analyzed and critically evaluated before mixing. Only raw ingredients meeting the protein digestibility requirements are utilized. Finished PRO-LAK® is continuously tested and monitored to insure that proper levels of amino acids and bypass proteins are satisfied.

Q. Why should I use PRO-LAK® versus other bypass products on the market? Unlike other bypass products on the market, PRO-LAK® is a fixed formula. Although the market prices may change, the formula remains constant. Furthermore, no other supplier of bypass protein supplement has subjected their product to the scrutiny of a national feeding trial conducted by respected members of the academic community. This research was presented for the first time at the annual ADSA meeting held in June, 1994 (Ferguson, et. al., J. of Dairy Sci, Vol 77, Sup. 1, Article No. 490 and 918).

Q. What is the bypass level of PRO-LAK®? 72% of the crude protein bypasses the rumen.

Q. Is this enough bypass protein? The objective of feeding PRO-LAK® is to increase the flow of essential amino acids to the intestine of the cow. A full profile and balance of amino acids is required to get a milk production response. Lysine and Methionine are particularly important, but the other 8 essential amino acids are critical for optimum production, especially in early lactation. Increasing the bypass protein beyond 37.40% of crude protein is sometimes detrimental to milk production. Feeding proteins of high quality, digestibility and containing high levels of balanced bypassed amino acids is what's really important.



Q. What should my strategies be for feeding protein? Obviously, protein nutrition varies considerably depending on the level of production, stage of lactation, and whether cows are actually milking or dry. The first priority when establishing a protein strategy must always be to maximize rumen microbial fermentation and output.

Q. OK, what would a suggested early lactation ration possibly look like containing PRO-LAK®? Rumen degradable protein sources should also be the starting point for balancing protein. Feed a combination of low cost plant proteins, such as soybean meal and cottonseed, to meet the DIP requirements. Rations high in either com silage or hay can benefit from appropriate levels of NPN proteins. Next, feed bypass proteins high in balanced essential amino acids that are consistent in quality and highly digestible. This is where PRO-LAK® fits. Try to increase bypass protein to 37.40% in early lactation cows by using PRO-LAK®.

Q. How much PRO-LAK® is fed to lactating cows? Typically, 2.0-2.25 pounds per cow daily. This can range from 1.5-2.5 pounds.

Q. Does feeding PRO-LAK® allow the level of crude protein to be reduced? Yes, in some rations, excess crude protein is being fed because adequate intestinal essential amino acids are lacking for optimum milk production. Crude protein should not need to be over 18-19%.

Q. Give me some more information on this multiple university research study done with PRO-LAK®? A total of 35 commercial herds were fed PRO-LAK®, replacing other proteins the herds were already feeding. These herds ranged in size from about 40 cows to over 2000 cows and in milk production from about 16,000-23,000 pounds. The dairies were located in a total of eight states with over 7,000 cows involved in the study. The statistical power of the research is very good given the large number of cows and sound trial design. Detailed information on the entire study has been printed in FEEDSTUFFS (Vol. 66, No. 38). Further information is available upon request from H.J. Baker & Bro., Inc.

Q. Explain the recommended feeding strategies for PRO-LAK®? Prefresh and early lactation rations are the key areas to focus on in improving the protein and balanced amino acid concept. Extensive research shows early lactation cows produce high levels of milk and milk protein when a balance of the 10 essential amino acids to the small intestine is improved. Limited research suggests prefresh cows also require higher levels of balanced essential amino acids. A reduction in metabolic problems (reduced blood NEFA's) at calving, has been linked to feeding higher levels of bypass amino acids prior to calving.

Q. Should high producing herds feeding a one group TMR feed PRO-LAK®? It largely depends on the level of milk production and management. If cow comfort and management are excellent, it's likely that nutrition is the limiting factor to even higher more profitable production. Feeding PRO-LAK® proteins across all stages of lactation (in the university research trial) increased milk production an average of 3.5 pounds on 5,776 cows. This was a profitable feeding change.



Q. How much does meat and bone meal vary in quality? Recent data from the University of Minnesota showed that 11 different samples of meat and bone meal average 59% bypass protein. However, these same samples ranged in bypass from 40-88% UIP This data also found that average intestinal protein digestibility was only 55% with a range from 41-70%. Most proteins have an intestinal digestibility of 75% or higher.

Q. Does this mean meat and bone meal should not be fed? No. The important point is that meat and bone meal can vary in quality considerably. Quality has a price and it's worth paying.

Q. What about the amino acid profile of meat and bone meal? Good question. Meat and bone is a good source (but not excellent) of lysine and other amino acids. Feeding bypass protein is done solely for the purpose of supplying a balance of the 10 limiting amino acids to the lower gut. There are protein sources other than meat and bone meal that offer much higher levels of bypass amino acids such as Lysine and methionine.

Q. Can PRO-LAK® be stored for extended periods? Yes. Stabilizers and preservatives have been incorporated into PRO-LAK® to guarantee freshness. Any feed should be sold and fed within 2 months of manufacturing when possible.

Q. Can PRO-LAK® be handled in bulk? Yes, it flows and handles in bulk nicely.

Q. How is the palatability of PRO-LAK®? Any animal-marine protein should be blended into the TMR or grain mix to insure good palatability. Stepwise, introduction over a six (6) to ten (10) day period into the diets for cows that have never consumed animal proteins is advised.

Q. Is PRO-LAK® protein supplement manufactured in dedicated facilities? Yes, PRO-LAK® dairy bypass protein supplement is manufactured at dedicated facilities in Sanford, NC and Westville, OK. All PRO-LAK® protein supplement manufacturing facilities are ruminant free.