

# linPRO<sup>®</sup>-BR as a source of Omega 3 and Bypass Protein for dairy cows

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As is well known, Omega-3 fatty acids are a very important element in modern human nutrition circles. In times past, however, flaxseed (as reported in older books) was widely used in the diets of all dairy animals, being the main “oil meal”. Of course, it was almost always the by-product of oil extraction from flaxseed, but today the interest is more focused on the whole seeds which contain the full complement of oil (over 40%) of which about 50% is the important Omega-3 fatty acid called alpha-linolenic acid (ALA).



Interest in feeding cows Omega-3 enriched diets stems from several reports indicating improved overall reproductive performance, animal health and reduced methane. Omega-3 fatty acids are linked to improved immunity and given the sensitivity of today's cows to even subclinical forms of several diseases, any help is welcome among dairy producers. In order to feed whole flaxseed, it is important that it is thermally processed; one such treatment is extrusion. It appears that feeding extruded flaxseed may have more benefits in terms of being a good source of bypass protein, thus competing with bypass soy.

## WHY linPRO®-BR ?

linPRO®-BR is a rumen bypass Omega-3 fat source for dairy cows made by dry extrusion of several ingredients, such as flaxseed, alfalfa, vitamin E and peas. What makes linPRO®-BR unique is that it is a stable, ready-to-use source of land-based Omega-3s (found in flaxseed), which can be added to a dairy cow's diet to provide a rumen-protected source of essential Omega-3 fatty acids. The ability to protect the softer Omega-3 fats found in linPRO®-BR from being digested through the microbially rich rumen is a key functional attribute for this product.

The essential Omega-3 fats found in linPRO®-BR have numerous nutritional advantages, the most important being their anti-inflammatory nature. Since current dairy diets are heavily loaded with inflammatory Omega-6 fats found in ingredients such as corn, corn silage, soy, rapeseed, and cottonseed, there is a need to balance these two types of polyunsaturated fats. With an imbalance of Omega-6 and Omega-3 fats used to feed dairy and beef cattle, there is an opportunity to implement the rumen-protected Omega-3 fat ingredient; linPRO®-BR.

linPRO®-BR is manufactured through a dry extrusion process, which protects the Omega-3 polyunsaturated fatty acids using proteins found in peas, ultimately creating a unique protein-fat complex. O&T Farms has successfully increased the ruminal escape value of dietary Omega-3 fatty acids and developed a reliable, consistent and easy method to incorporate into dairy cow diets.

In summary, dairy cows fed linPRO®-BR showed improved performance and health history. In detail, positive immune response, improved reproductive performance, increased milk production, maintained milk component production, decreased incidence of mastitis, decreased milk somatic cell counts, less involuntary culling, unaffected dry matter intake and reduced methane production by 27% with 7.5% inclusion. It is important to note that milk is also substantially enriched with omega-3 ALA, something the dairy industry can use to its advantage.

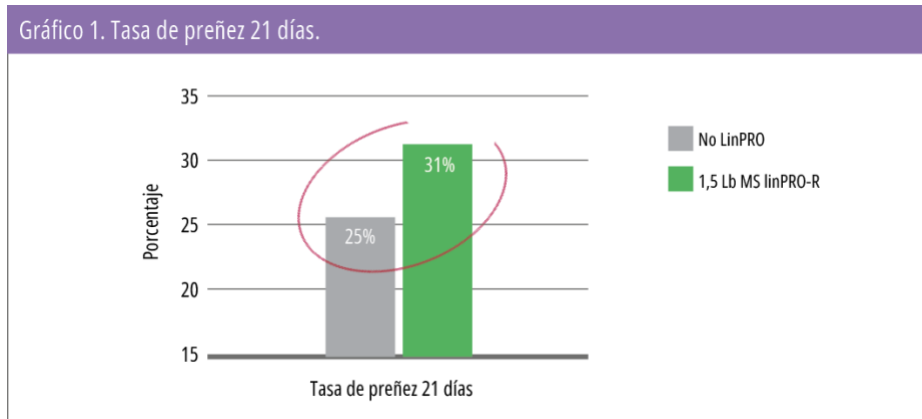


Gráfico 2. Efecto sobre eliminación.

