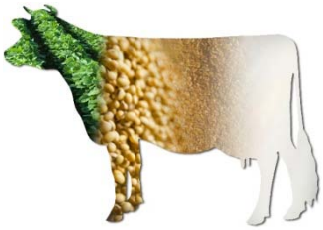
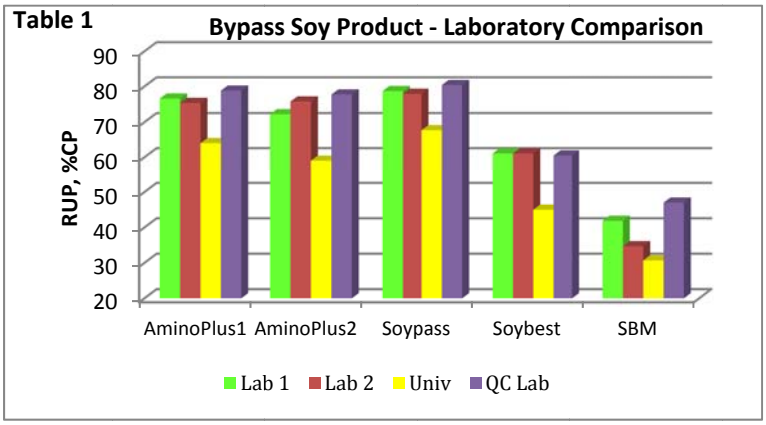
AGP Ag Processing Inc

AMINOPLUS®



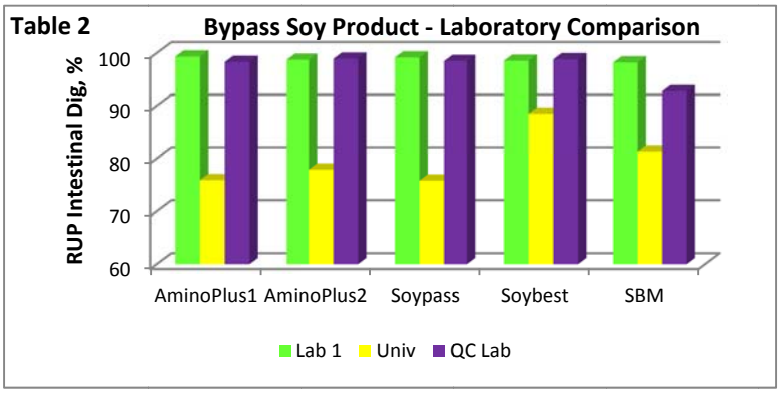
Delivers Quality and Performance

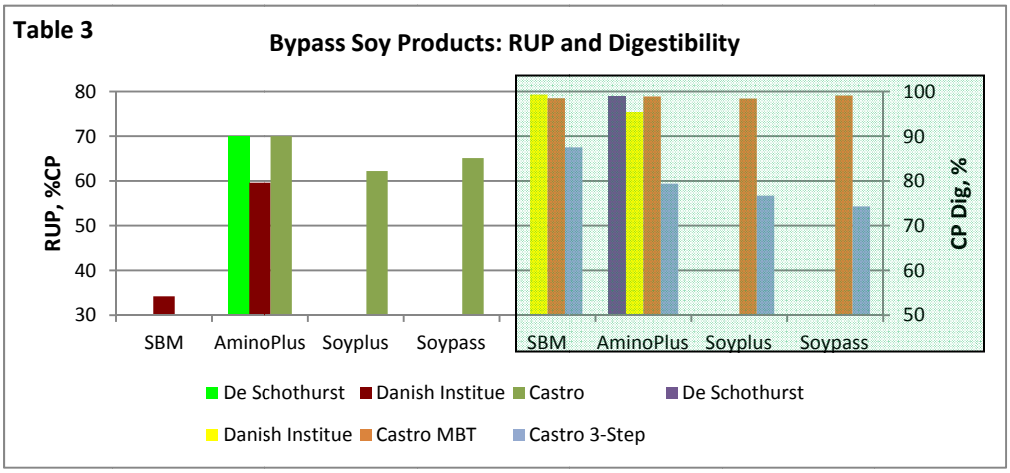
AminoPlus, a blend of dehulled soybean meal and soy hulls processed under specifically controlled conditions of time, temperature and moisture, is an enhanced bypass soy protein product with high intestinal digestibility.



Split samples of bypass soybean products and SBM analyzed for RUP content at multiple laboratories (2 commercial labs, a university lab and lab used by AGP for quality control) indicated dehulled based products (AminoPlus, Soypass) to have a higher proportion of RUP than the expeller product (Soybest), all of which contain more RUP than SBM (Table 1). This data also shows differences in laboratories with the Univ lab consistently lower for all samples.

RUP intestinal digestibility data (analysis not available at lab 2) indicated variability between laboratories (Table 2). The Univ lab reported lower and more variable digestibility's for all products. Lab 1 and QC Lab reported similar high intestinal digestibility for all products. The inconsistency of same sample results between laboratories points to potential differences between animal based and laboratory based procedures for estimating intestinal digestibility.





Analytical procedures for estimation of RUP and digestibility can vary between trials. Trials comparing AminoPlus with other bypass protein sources reported AminoPlus RUP content to be higher than SBM, Soyplus and Soypass (Table 3). Intestinal digestibility of AminoPlus was also reported to be similar or greater than other bypass products compared within a trial or analytical procedure. Data of Castro (JDS 90:810-822) reported lower digestibility values with the lab based 3-Step procedure (procedure used by Univ lab in previously discussed data) compared to the animal based mobile bag technique (MBT) for all products evaluated.

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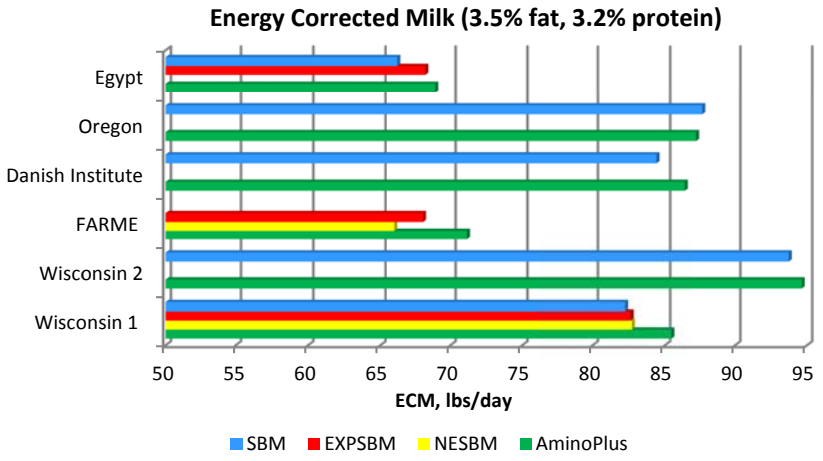
Table 4



Laboratory tests and nutrient evaluations can help to estimate how ingredients will perform when fed. The true measure is animal performance when the ingredient is included in the ration. Table 4 lists the energy corrected milk (ECM) results of several trails which compared AminoPlus containing rations to equal protein rations containing SBM or other bypass soy proteins. In each trial the ECM for AminoPlus fed cows was equal to or greater than cows fed the other protein sources.

Efficient utilization of nutrients fed is critical for profitability in any livestock operation. Efficient utilization of protein fed helps control feed cost and reduce the amount of nitrogen excreted into the environment. Efficiency of ration protein utilization can be impacted by many factors including balance and quality of ration nutrients and level of production. Protein efficiency (milk protein produced/protein intake) was consistently improved for cows fed AminoPlus in these trials (Table 5).

Table 5

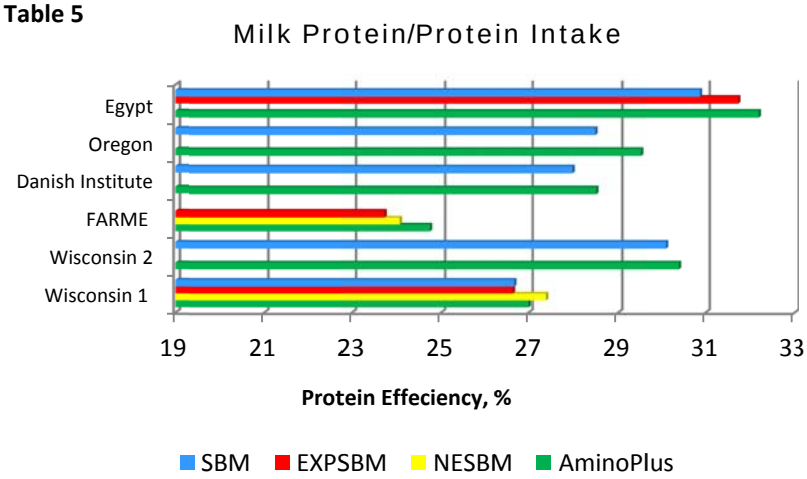
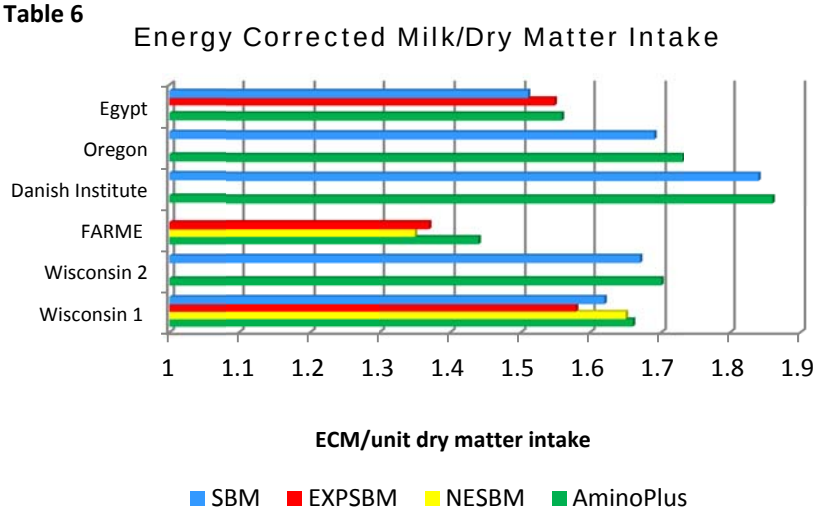


Table 6



All feeds have a cost and must be utilized as efficiently as possible. Monitoring milk produced per unit of dry matter intake helps to evaluate the overall efficiency of nutrient utilization in a ration. Milk production per unit of intake can be high in early and mid-lactation and decreases in later stages of lactation but can be impacted by the quality of ration nutrient balance at any stage of lactation. The inclusion of AminoPlus in the ration consistently improved the milk/unit of intake over the other rations fed within each trial (Table 6).

Laboratory analysis has shown AminoPlus to be a quality bypass soy protein that is high in RUP content and intestinal digestibility. Lactating dairy cows have shown AminoPlus to be a high quality, high RUP, highly digestible bypass protein with improved ECM production, improved efficiency of protein utilization and improved milk/unit of dry matter intake.

Castro (JDS90:810-882); Egypt (Pak J of Nutr 8:695-703); Wisconsin1 (JDS 81(Supple 1):338); Wisconsin2 (JDS 90(Supple1):348