

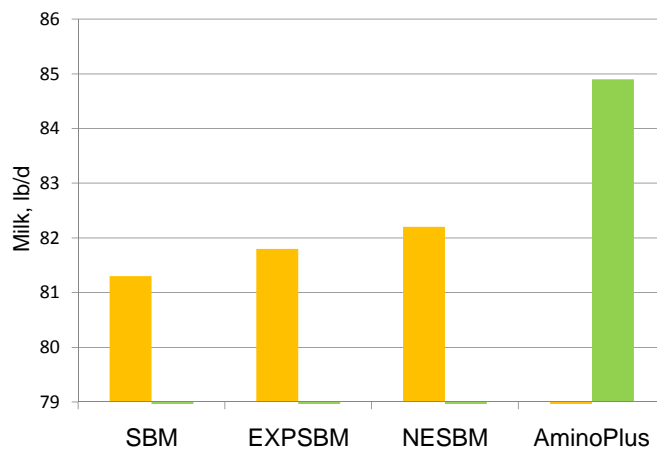
### AminoPlus High Bypass Soybean Meal

AminoPlus is the number one volume bypass soybean meal product produced in the United States.

AminoPlus has shown improved production performance.

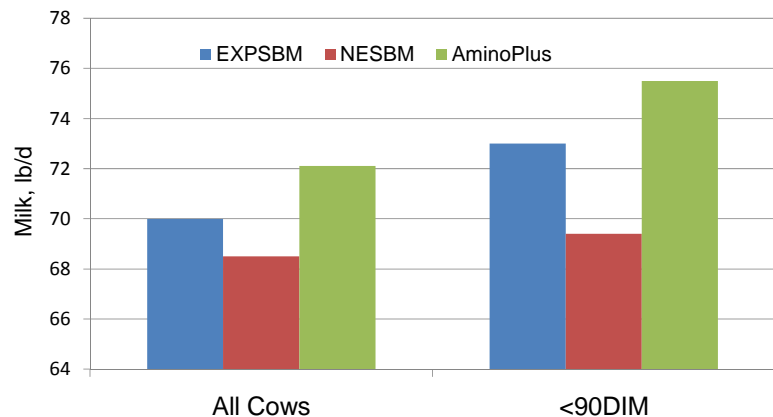
- ❖ University of Wisconsin study using alfalfa/corn silage based forage diets observed improved milk production in cows fed AminoPlus (Graph 1).

**Graph 1. Comparison of ByPass Soybean Meals**



- ❖ FARME Institute study evaluated bypass soybean meal products in complex corn/grass/ alfalfa silage rations. Feeding AminoPlus results in the highest level of milk. Early lactation cows, those less than 90 DIM at the start of the trial, had a higher level of production than All Cows on test however AminoPlus fed cows maintained their production advantage over cows fed the competitive bypass soybean meal products (Graph 2).

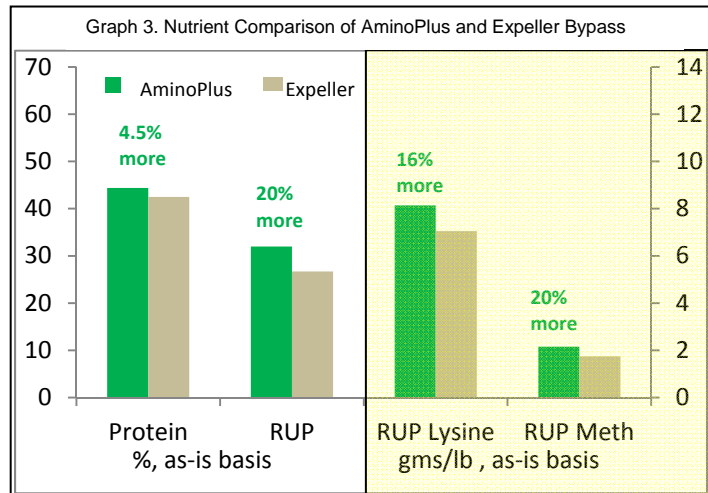
**Graph 2. Effect of ByPass Protein Source and DIM**



AminoPlus provides More (Graph 3):

- ❖ Protein
- ❖ RUP
- ❖ RUP Lysine
- ❖ RUP Methionine

More nutrients mean inclusion rates can be reduced.



Analytical Comparisons:

- ❖ **RUP** - Split samples of bypass soybean meals analyzed for RUP (*in situ*) at multiple laboratories shows AminoPlus and SoyPass to have similar high concentrations of RUP with a lower concentration in Soybest and standard soybean meal to have the smallest proportion. There was reasonable agreement of within sample results for all laboratories except for the lower values reported by Univ for each of the samples.

	QC Lab	Univ	Com 1	Com2
SBM	48.2	30.7	34.7	41.9
SoyPass	80.2	67.7	77.9	78.7
SoyBest	61.1	45.0	61.1	61.1
AminoPlus 1	77.5	59.0	75.7	72.3
AminoPlus 2	78.5	64.0	75.3	76.5

❖ **Intestinal RUP Digestibility**

- Mobile Bag Technique data (European and independent laboratory studies) indicates high RUP digestibility of AminoPlus and expeller bypass SBM tested (Table 2).

Europe	Independent	Laboratory
<u>AminoPlus</u>	<u>AminoPlus</u>	<u>Expeller</u>
99.0	96.4	94.2
91.8	98.0	96.3
	94.4	92.5

- An independent comparison using the Modified 3-Step Procedure found AminoPlus to be highly digestible with numerically greater RUP, RUP lysine and RUP methionine digestibility than expeller bypass SBM (Table 3).

	<u>AminoPlus</u>	<u>Expeller</u>
RUP Protein	97.46	96.91
RUP Lysine	90.33	89.39
RUP Methionine	97.45	96.56

\* FeedAC