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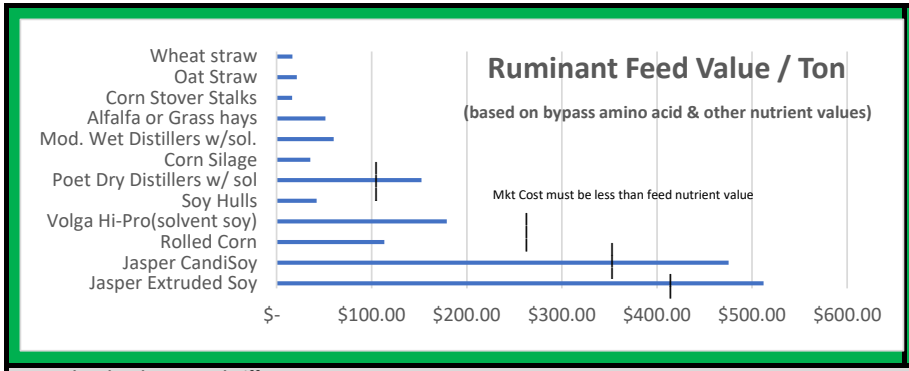
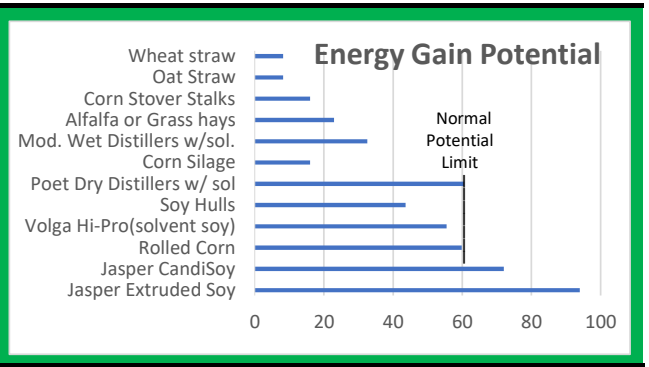
Ruminant Common Ingredient Evaluation Guide





Soy Analyzed and Measured Differences

Analyzed Samples of Products are listed in the order of Ruminant feed Energy

Urea Basis | Blood Basis | Vegoil Basis

Product Name	DM%	As is CP%	% Lysine	(Bypass) RUP % CP	Total Digestible CP	Digestible Rumen CP	Digestible Intestine CP (RUP-undig.)	Fat%	TIU	NEG as fed basis	PDI	Value of Rumen CP @ $.28	Amino Acid Value of Bypass Intestine CP @ $.78	Lecithin & Fat Value @ $.36F/.50L	Total Ruminant feed Value
Jasper Extruded Soy	93.45	40.24	2.40	57.39	93.39	42.61	50.78	19.0	3400	94	7.8	$ 34.17	$ 219.73	$ 190.30	$ 512.20
Jasper CandiSoy	93.24	39.22	2.71	63.49	94.05	36.51	57.54	10.7	3500	72	7.2	$ 28.54	$ 274.01	$ 106.90	$ 475.45
Rolled Corn	88.00	8.80	0.25	54.00	87.82	46.00	41.82	4.2	na	60	na	$ 8.07	$ 74.94	$ 30.24	$ 113.25
Volga Hi-Pro(solvent soy)	88.00	46.27	3.00	35.00	83.00	65.00	18.00	1.0	4900	55	na	$ 59.94	$ 111.95	$ 7.20	$ 179.08
Soy Hulls	89.00	12.10	0.89	30.00	88.25	70.00	18.25	2.3	na	44	na	$ 16.88	$ 8.81	$ 16.56	$ 42.25
Poet Dry Distillers w/ sol	89.00	26.40	0.93	62.67	88.60	37.33	51.27	10.6	na	61	na	$ 19.64	$ 56.40	$ 76.25	$ 152.29
Corn Silage	34.00	8.00	0.20	28.00	94.68	72.00	22.68	3.1	na	16	na	$ 11.48	$ 1.63	$ 22.32	$ 35.42
Mod. Wet Distillers w/sol.	46.50	13.69	0.47	51.00	88.60	49.00	39.60	4.9	na	33	na	$ 13.37	$ 11.29	$ 35.46	$ 60.12
Alfalfa or Grass hays	88.00	22.00	0.26	22.00	88.17	78.00	10.17	2.0	na	23	na	$ 34.20	$ 2.65	$ 14.40	$ 51.25
Corn Stover Stalks	80.00	5.00	0.05	30.00	72.03	70.00	2.03	1.3	na	16	na	$ 6.98	$ 0.02	$ 9.36	$ 16.36
Oat Straw	91.00	4.00	0.04	40.00	60.68	60.00	0.68	2.3	na	8	na	$ 4.78	$ 0.00	$ 16.56	$ 21.35
Wheat straw	91.00	3.00	0.03	40.00	60.26	60.00	0.26	1.8	na	8	na	$ 3.59	$ 0.00	$ 12.96	$ 16.55

Note: Jasper Soy Processors employs an exclusive MX (measured extrusion) 7 step technique which protects Phyto-nutrient levels, and improves the digestibility's of all the respective nutrients needed to support life. **By-Pass Lysine and Extra Energy are the Limiting Nutrients In High Production Corn Based Diets** *--- Jasper Soy Products have Higher Density of these Limiting Nutrients .*

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Why Home Raised Feedstuffs in every Ruminant Ration?

Jasper Soy Processors highly encourages **using your home raised feedstuffs as a first choice in all rations.** However, it is well known that more income and health can be achieved by enhancing the potential in those feedstuffs. Home raised feeds are whole sum, without high valued nutrients removed or damaged by processing. The evaluation guide provided, shows compared feeding values of feedstuffs. Corn's feed value is close to it's market value. Corn and forages, provide major nutrients needed for production. When production managers use majority home produced ingredients, more health and profit is experienced. Many ingredients provide less net energy than rolled corn. Whereas, JSP soy ingredients can add net energy to rations. This is important to consider, since forage/corn diets are limited in energy and other amino acids and cannot totally meet the needs of a highly profitable ruminant production model.

Why Wet Distillers Grains in Ruminant Rations?

Modified Distillers Grains provide a popular choice in many rations due to low price and high palatability, When mixed with dusty or low quality rations, it's use can bring cattle to the bunk, improving intakes, and facilitating less feed refusal. Many producers are encouraged to feed higher levels of this protein source, due to it's cheap cost. Using high protein formula's can add to animal performance if balanced properly with forage fiber, and adequate energy. MWDG's come from processed corn after the alcohol has been removed. During processing, the starch is consumed, resulting in a concentrated corn protein/fiber. While heat applied during processing makes the remaining protein somewhat less digestible, this remaining protein which bypasses to the intestine can be valuable. This is a plus, since plenty of rumen degradable protein comes from the other feedstuffs in the ration anyway, whereas bypass protein (amino acids) is usually deficient in forage/corn diets. MWDG'S is a good low cost initial protein source when free of toxins and processed appropriately.

Why include Soy in every Ration?

Balancing a forage/corn diet using only distillers grains may be low cost. However, such a ration has problems. Adding extruded soy can supply numerous nutrients not found in such a diet. Extruded Soy can add energy and by-pass lysine to any corn based diet, both of which are the most limiting factors of corn based diets. High Energy in extruded soy comes from accelerated levels of Lecithin oil, a fat emulsifier high in phospholipid choline and vitamin E. A lack of energy at an animals cellular level reduces potential for gain, and also reduces energy needed to support immune system and fight health issues. Reduced acidosis is also experienced from the valuable benefits of phospholipid choline. Extruded Soy products, contain much of what is lacking in corn based diets and allows for improved health, reduce death loses, increased production, and reduced costs of production. Adding Extruded Soy may increase daily input costs, however, the cost of gain and health may actually be reduced.

Why Soy Processed by Jasper Soy method is preferred

While the amino acids found in all soy products can improve any distillers grain based diet, it's the benefits of phospholipid choline, tocopherols, sterols, tocotrienols, high energy, and extra digestibility within Jasper Soy and the special process that really adds to nutritional benefits. Any amount of inclusion of Extruded soy will adds benefit. However, the more extruded soy that is added, the more the diet is improved. At Jasper Soy processors we recommend not less than .5 lb. per day in every ruminant ration, even though more is optimal. Not all extruded soy is produced the same way, therefore, benefits may be different if soy is purchased from another processor. JSP uses an exclusive measured process which reduces anti-nutritional factors, protects valued nutrients, co-mingles and ruptures cells much better than other extrusion processes. This unique process provides greater digestibly, and higher levels of intestinal bypass (as indicated in testing). The finished JSP soy has not had nutrition removed, nor have vitamins been damaged. Unnecessary water has been removed, not added, improving overall nutrient density. (See Nutritional data chart above)

How is Digestible Intestinal Protein is Improved

By cooking under Pressure in the presence of a bath of oil along with moisture it is impossible to damage proteins, vitamins, and other Phyto nutrients, therefore, JSP Soy's highest quantities of nutrients and digestibly are preserved and available to the animal. A slower process requires lower heat, and a more thorough cook to destroy the anti-nutritional parts of the soybean while protecting valuable nutrients from excessive heat damage. This lower and slower heating, process produces more mastication and rupture of the nutrient cells, resulting in the highest intestinally digestible protein. This high digestibility compliments other microbial nutrients produced by rumination.

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How Liver Abscesses are Eliminated

The entire immune system, the brain, and the liver cells of animals are dependent on an abundant supply of Phospholipid choline. Unadulterated Full Fat Extruded Soy contains high levels of Phospholipid choline. Every living cell needs this stuff. Which is voided when oil is removed or processed in other ways. Animals can produce phospholipid choline by converting starch, however, excessive starch decomposition can stress the liver, causing liver abscesses, and poor performance. The liver damage is repaired with the added phospholipid choline. Every other living Cell also has 60% of this needed stuff before it can reproduce. Extruded Soy in the diet relieves the liver of this high stress production activity. (it should be noted that adding nucleotides can multiply results of this action)

How Milk Production, Marbling and Carcass Quality is Enhanced

Extruded Soy is high in three nutrients working together to enhance meat, milk, and eggs quality. The worlds most powerfully known antioxidant, vitamin E provided as Delta and Gamma tocopherols and trienols, usually destroyed in all other grain processing extraction systems is preserved in the JSP process. This adds protection to the health of the animal, also adding protection to the meat, milk, or eggs during storage, and furthermore adds protection to the immune system of animals and to the health of the human consumer of those products. Lecithin found in extruded soy is a fat emulsifier loaded with high energy Omega 3 fatty acids and vitamin E. This co-mingled combination has been proven to decrease backfat, and increase marbling of muscle tissue when fed for appropriate periods of time. Any amount of extruded Soy can add to meat, milk, and egg quality. However, inclusion is better.

How Acidosis is Reduced

High starch diets coupled with low fiber are most prone to acidosis. Adding low fiber or wet feeds, and over feeding nitrogen producing protein adds to this problem. Furthermore, upset of feed intake from weather changes or management mistakes, accelerates this disaster. Extruded Soy has higher levels of energy without the starch. Therefore, more forage lbs. can replace a lesser amount of protein lbs. This allows the fiber content of the ration to be higher while keeping the energy the same, or one can choose to raise energy while acidosis is controlled, to increase production.

How to Improve Gain to Reduce Labor and Facility Costs

Since all the known essential amino acids needed for life are within Extruded Soy and the MX process makes them highly digestible. It is a cheap protein source on a return basis. Additionally the power packed lecithin energy source is extremely high and very digestible. The vitamin E is high, the phytic acid has been converted to non phytic making the phosphorus more digestible as well. Many protein feeds added to a ration reduce the energy, but extruded Soy increases the energy. **Energy is known to be the first most important nutrient needed to support cellular growth, and health.**

How to Improve Rations More Extruded Soy is Added

As production increases, requiring less feed, it becomes increasingly important to strengthen the vitamin and mineral fortifications as well. At Jasper Soy Processors, our vitamin mineral formulations acknowledge this. We include only quality ingredients in our premixes and base mixes. Since the health of your livestock will be enhanced naturally, many medications are not needed. We highly recommend good parasite management, along with cattle implants. Implants are more valuable when initial gains are improved. Vaccinations are more receptive in the presence of healthy cells developed with the help of Lecithin and vitamin E from the Extruded Soy. We also recommend nucleotide products which have been proven to further enhance cellular proliferation associated with good health and growth of cells.

Supporting Data, University Information and on Farm Feeding Results are available upon request.

Using Extruded Soy can be a great asset to Non-Gmo formulations, Organic Beef programs, or no drug Beef Programs.