FEED or FILLER?

Fillers are inexpensive ingredients which don't have significant nutritional value for the target animal and are added to a formula to lower the cost of a supplement.

Liquid supplement is often criticized because of the water content compared to dry feeds. This is valid. No useful nutrient is carried in the moisture fraction of the feed. Water is inherent in the ingredients used in liquid feeds, and can't be eliminated from them; it's there, and must be considered. That's why we guarantee the dry matter content of our liquid supplements.

However, dry feed supplements also contain some moisture, and often include fillers which have no more nutritional use than water for the intended animal. These can include limestone, salt, pellet binders, and added fiber, none of which are usually included in a liquid. Additionally, an unavoidable loss of fines will occur in the handling and feeding of dry feeds, a problem which liquids do not incur.

The following example worksheet shows how to calculate filler and loss in feeds so that the proportion of feeds which are made up of nutritionally useful ingredients can be compared. It can be applied to both liquid and dry feeds.

Note that an ingredient may be a filler in one supplement, but useful in another, depending on the needs of the animal. For example, calcium is needed in significant quantity by feedlot and dairy cattle, but not by cattle being fed primarily roughage rations. So calcium is not a filler when added to a feedlot diet, but it is when included in a range cube.

Example Filler Calculation

A range cube feed tag lists Ca 3%, Salt 3%, and Crude Fiber 12%, and includes bentonite in the ingredient list.

Nutrient	Factors	Tally
Moisture	The moisture in a feed is usually not added as filler, but it can't contain needed nutrients. Use the tag guarantee, assay of moisture level, or use 12% for pellets and cubes, 15% for pressed blocks, and 28% for chemical blocks. Tag, assay, 12%, 15%, or 28% =>	**12**
Salt	The tag guarantee shows the amount of salt added. Salt can be provided much less expensively as part of a mineral mix. It is a filler in dry feeds. Tag guarantee =>	**3**
Calcium	There is almost no Ca in nutritive feed ingredients (Corn is 0.02% Ca). Ca is usually added in the form of limestone, a very inexpensive ingredient. Limestone is about 1/3 Ca, so multiply the "filler" Ca by 3 to estimate limestone addition. **%Ca x 3 =>**	**9**
Binders and Suspending Agents	Pellet binders and suspending agents have no nutritional value. Look for attapulgite clay, bentonite or lignin in the ingredient list. About 1% is usually used, so subtract 1%. If used, 1% =>	**1**
Fiber	Refined fiber sources (rice hulls, cottonseed hulls, screenings, etc.) are relatively indigestible. A conservative estimate is 60% of Crude Fiber is indigestible, so use: Crude Fiber % x 0.6 =>	**7.2**
Fines	Storage, handling, feeding, and sorting loss of fines in mash, pellets or cubes will average at least 4%. While this is not an intentionally added "filler", it is a portion of the feed bought and paid for which will not be consumed by the animal. There is no fines loss with liquid feeds. Mash, Pellets or Cubes, use 4% =>	**4**
Total Filler	Total the values. This shows the percent of the feed which is of no significant nutritive use to the intended animal.	**36.2 %**

Filler Calculation

Filler is material in feed which has little or no nutritional value for the intended animal. Calculate the amount of filler in the supplement you are evaluating using the following:

Nutrient	Factors	Tally
Moisture	The moisture in a feed is usually not added as filler, but it can't contain needed nutrients. Use the tag guarantee, assay of moisture level, or use 12% for pellets and cubes, 15% for pressed blocks, and 28% for chemical blocks. **Tag, assay, 12%, 15%, or 28% =>**	
Salt	The tag guarantee shows the amount of salt added. Salt can be provided much less expensively as part of a mineral mix. It is a filler in dry feeds. **Tag guarantee =>**	
Calcium	There is almost no Ca in nutritive feed ingredients (Corn is 0.02% Ca). Ca is usually added in the form of limestone, a very inexpensive ingredient. Limestone is about 1/3 Ca, so multiply the "filler" %Ca by 3 to estimate how much filler Limestone has been added. **%Ca x 3 =>**	
Binders and Suspending Agents	Pellet binders and suspending agents have no nutritional value. Look for attapulgite clay, bentonite or lignin in the ingredient list. About 1% is usually used, so subtract 1% **If used, 1% =>**	
Fiber	Refined fiber sources (rice hulls, cottonseed hulls, screenings, etc.) are relatively indigestible. A conservative estimate is 60% of Crude Fiber is indigestible, so use: **Crude Fiber % x 0.6 =>**	
Fines	Storage, handling, feeding, and sorting loss of fines in mash, pellets or cubes will average at least 4%. While this is not an intentionally added "filler", it is a portion of the feed bought and paid for which will not be consumed by the animal. There is no fines loss with liquid feeds. **Mash, Pellets or Cubes, use 4% =>**	
Total Filler	Total the values. This shows the percent of the feed which is of no significant nutritive use to the intended animal.	

How does that compare to a Westway Liquid Feed Supplement?