

FEED MIXING FUNDAMENTALS

Warren Gill, Professor, and
James Neel, Professor and Leader
Extension Animal Science - Beef, Sheep, Horse

Feedstuffs are “mixed” to achieve a desired nutrient composition. A typical example is to combine a high-energy feed such as cracked corn with a high-protein feed (soybean meal or cottonseed meal are often used) to obtain a mixture that is “balanced” for both energy and protein.

Feed mixtures can be simple or complex. Simple mixtures may be done on the home farm, but complex mixtures are more typically developed by commercial feed manufacturers.

Following are some feed-mixing tips:

! **Start with a valid recipe** - Develop the mixture on paper before preparing the feed. Does it meet the nutritional needs? Are the feed resources available? What will be the cost? In most cases with cattle, it is preferable to start with a forage test, then develop a ration based on test results that most economically complements the base forage.

! **Follow label directions on feed additives** - Mistakes can be expensive and dangerous. Adding small amounts of feed additives is often best accomplished by initially adding the ingredients to a gallon or two of ground corn or other feedstuff, mixing the small amount thoroughly, then adding to the main mix.

! **Weigh ingredients** - Bushels and other volume measures are generally less reliable than weights.

! **Mix thoroughly** - Follow instructions provided by equipment manufacturers, if available.

! **Check the resulting feed** - A feed test is a relatively inexpensive way to make certain your procedures are delivering desired results. It is also advisable to carefully observe livestock

when starting on a new feed mixture. Pay special attention to feed consumption. Consider weighing the animals and evaluating gain to ascertain if performance is desirable.

Additional information on beef cattle nutrition can be obtained by contacting your local Agricultural Extension Service office or from the Extension-Beef, Sheep & Horse home page: www.utextension.utk.edu/ansci.

Feedmix Recipe Evaluation.

Use this table to estimate nutrient percentages and costs of a feed mix.

(1) Ingredient	(2) Lb.	(3) C.P. %	(4) C.P. Lb (2*3/100)	(5) T.D.N. %	(6) T.D.N. Lb. (2*5/100)	(7) Fiber %	(8) Fiber Lb. (2*7/100)	(9) Ingredient Cost (\$/Lb)	(10) Cost per Ingredient (2*9/100)
Totals	<u> </u> A		<u> </u> B		<u> </u> C		<u> </u> D		<u> </u> D

C.P. (Crude Protein) % of Mix = $B / A * 100 = \underline{\hspace{2cm}}$
 T.D.N. (Total Digestible Nutrients) % = $C / A * 100 = \underline{\hspace{2cm}}$
 FIBER % = $D / A * 100 = \underline{\hspace{2cm}}$
 Estimated Cost (\$/Cwt.) = $D / A * 100 = \underline{\hspace{2cm}}$
 Estimated Cost (\$/Ton) = $D / A * 2000 = \underline{\hspace{2cm}}$