

Fundamentals of Feed Mixing

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It is not always possible to purchase the desired mixture of feeds needed on the farm. Sometimes there is a need to mix purchased feeds with feeds available on the farm. This is the reason producers need to know the basics of how to mix feed ingredients.

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 of the animals that will consume the mix? 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. Use the table at the bottom of the page to evaluate the nutrient content and cost of proposed feed mixtures.
- **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 feedstuffs, mixing the small amount thoroughly, then adding to the main mix. Label feed bags or bins so that feeds will be fed only to intended animals. Remember that some feed additives are beneficial to some species and harmful to others.

- **Weigh ingredients** - Bushels and other volume measures are generally less reliable than weights. Weigh ingredients if possible.
- **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 will deliver desired results. Start animals on the new feed mix slowly to reduce the possibility of digestive upset. 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.

Feedmix RecipeEvaluation.

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) TDN %	(6) TDN 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) = $D / A * 2000 = \underline{\hspace{2cm}}$

Additional information on beef cattle nutrition can be obtained by contacting your local Extension office.