

# Selecting By-product Feedstuffs for Feeding Dairy Cattle<sup>1</sup>

B. Harris Jr. and C. R. Staples<sup>2</sup>

Numerous by-product feedstuffs are produced annually from the processing of a variety of crops for food and fiber. Many of the by-product feedstuffs are unique to a given area while others are commonly known throughout the country. Even so, usage of such products is sometimes limited due to a poor understanding of the nutritional and economic value of such products and their proper usage in dairy cattle rations. Also, size of herd, feeding and storage facilities, source of feed (feed mill, etc.) and economic and labor conditions at the dairy tend to influence the usage of such products.

The potential incorporation of by-product ingredients into ruminant rations requires careful planning, evaluation and study. Rations formulated using by-products must be efficient, safe, economical and result in equal performance as those containing traditional feed grains.

Table 1 lists several by-products available and commonly or occasionally used in the southeast.

- 
1. This document is Fact Sheet DS 32 of the Dairy Production Guide, published September, 1992 as, Florida Cooperative Extension Service. For more information, contact your county Cooperative Extension Service office.
  2. Professor and Associate Professor, respectively, Dairy Science Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville.

The Institute of Food and Agricultural Sciences is an Equal Opportunity/Affirmative Action Employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, or national origin.  
Florida Cooperative Extension Service / Institute of Food and Agricultural Sciences / University of Florida / John T. Woeste, Dean

**Table 1. Composition of by-product feeds used in dairy cattle rations (as-fed basis).**

	DM (%)	CP (%)	Bypass Protein (%CP)	TDN (%)	Acid Detergent Fiber (%)
Bakery product, dried	91	10.7	20	80	11.8
Beet pulp, dried	91	7.2	35	70	30.0
Blood meal	92	80.0	82	60	-
Brewers grains	91	24.0	60	62	21.8
Canola meal (Rapeseed)	91	35.0	27	63	15.0
Citrus pulp	90	6.2	30	70	19.8
Corn cobs, ground	90	2.5	50	45	31.5
Corn gluten feed	90	21.5	20	74	10.8
Corn gluten meal	92	60.0	69	81	4.6
Corrugated boxes, ground	92	-	-	70	72.0
Cottonseed hulls	90	4.0	50	40	65.7
Cottonseed meal	92	41.0	37	70	18.4
Cottonseed, whole	91	22.0	40	85	30.9
Distillers dried grains	92	27.0	59	78	16.6
Feather meal	93	82.0	65	64	2.0
Fish meal	90	60.0	65	63	-
Hominy feed	89	10.5	45	82	11.6
Linseed meal	91	35.0	33	73	15.0
Malt sprouts (pellets)	90	16.0	30	63	24.0
Meat and bone meal	93	50.0	65	66	-
Meat meal	94	47.0	63	67	-
Molasses, cane	70	6.0	0	62	-
Peanut hulls, coarse	89	6.0	40	20	57.8
Peanut meal	92	50.0	30	74	5.4
Peanut skins	90	17.0	50	60	18.0
Rice bran	91	12.4	35	60	16.4
Rice hulls, ground	92	2.8	60	15	66.2
Rice mill by-product	91	12.2	0	73	25.0
Soybean meal	89	44.0	26	74	8.9
Soybean hulls	91	11.0	40	68	45.5
Sugarcane bagasse, pellet	92	1.8	50	40	56.1
Sunflower meal, with hulls	90	28.0	40	58	29.7
Sunflower meal	90	40.0	31	64	14.0
Wheat midds	89	16.0	40	76	8.9
Whey dried	91	13.0	0	70	-
Whey (Lacto Whey)	61	44.0	-	60	-