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WHEAT HAY FOR LIVESTOCK

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The Payment in Kind program is forcing many acres of wheat that were intended for grain to be harvested as hay. The value of wheat hay depends on the stage of maturity at which it is baled. Maximum tonnage and maximum feed value are not mutually achievable with wheat. The big decisions for the producer are (1) for what type of animal is the hay intended and (2) at what stage of maturity will weather conditions allow harvest. If the hay is intended for dairy or stocker cattle, the quality needs to be very high and the hay will need to be harvested at a relatively early stage of maturity to insure high protein and energy levels. Somewhat lower quality hays will have some use in wintering programs for cows although this type of hay will have little commercial value. Table 1 shows the effect of stage of maturity of wheat on the nutritional properties.

It is difficult to harvest wheat forage at the optimum stage of maturity. The problem is that the quality is rapidly declining during Oklahoma's most unfavorable haying weather in April. In most cases, experience has shown that it is very difficult to put up a marketable quality of wheat hay.

When haying conditions permit, wheat hay can be excellent livestock feed if harvested at the right stage of maturity. Wheat hay harvested in the late boot stage and put up in good condition will equal good alfalfa hay in both crude protein and energy.

In the late boot to early head stage wheat forage can be expected to run 15-18% crude protein and a total digestible nutrient (TDN) of 55-65% on a dry matter basis. This kind of wheat forage is excellent feed for cattle, sheep and horses.

As wheat hay matures beyond the early head stage (into late head, milk and dough stage) protein and energy deteriorate rapidly. Wheat forage in the early head stage will run about 15-16% protein compared to 8-9% in the milk stage, a loss of approximately 50%. Energy loss is also substantial. In addition, wheat hay harvested after significant heading has occurred will likely be subject to rodent damage.

The only advantage of harvesting wheat hay at a later maturity is more tonnage per acre. From year to year the excellent quality forage will yield 2 to 4 1/2 tons per acre, while the later maturity, low quality wheat can yield 5 to 6 tons per acre.

With high quality wheat hay beef cows may be wintered without protein and energy supplements, and young stocker cattle can be expected to gain at desirable weights. Dairymen should be especially alert to harvest or acquire the high quality wheat hay. Forage quality has tremendous influence on milk production.

Late boot to early head stage is the time to make wheat hay or silage. However, if quality is critical, the best advice may be to bale the first chance that tonnage is acceptable and drying conditions permit.

Table 1. Digestibility, protein, and net energy of wheat hay.

Stage	Cellulose	Crude Protein	In Vitro Dry Matter Digestibility	% TDN	Net Energy Lactation
		% of Dry Matter			Megacalories per 100 lbs.
Emerging	20.11	39.90	90.59	83.7	80
Early Vegetative	23.87	26.30	93.36	85.8	83
Late Vegetative	24.50	22.45	93.53	85.9	83
Boot	27.59	20.87	89.22	82.7	76
Early Head	31.18	15.31	83.12	78.2	68
Mid-Head	31.55	11.26	78.89	75.1	61
Late Head	34.04	10.27	67.51	66.7	46
Milk Stage	31.03	8.99	64.84	64.7	49
Dough Stage	31.10	8.49	72.07	70.0	56
Ripe Seed	26.77	6.78	71.22	69.4	55

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