Lamb Auction Increases Navajo Income

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Sheep have been an important agricultural enterprise on the Navajo Indian Reservation for several years. Lambs and wool are a major source of income for many families.

In many cases, however, incomes from these two sources are not being maximized. Sheep production and wool-handling practices, and lamb and wool marketing methods that are followed today differ very little from those used thirty years ago.

For example, a large majority of sheep producers in this area sell their lambs at irregular intervals in lots of five head or less to local buyers. In addition, the few animals in a given sale lot may not be uniform in quality and weight. Also, local buyers have to have holding pens, and provide feed and water as they accumulate relatively large lots of uniform lambs. Providing this ready market and related services increases the local buyers' operating costs, and thereby reduces the prices which they can afford to pay for lambs.

Are there other methods of marketing lambs which Navajo sheep producers can use and realize a higher income? The remainder of this article is directed to answering this question.

Information on two different methods of marketing lambs in 1969 was available for analysis. One of these was direct sales to local buyers as described above. The other method was selling uniform lots of lambs, based on weight and condition, to the highest bidder at an auction in October, 1969.

Direct Sales to Local Buyers — Data on number of lambs per sale lot, weight of lambs, and prices received per hundredweight were analyzed for 334 sale lots sold direct to local buyers. There were a total of 2,030 lambs in these lots (Table 1). Most of the sales were made during the last half of 1969.

Only 2 percent of the 334 lots contained 26 or more lambs per lot — there were 80 lambs in the largest lot; 45 in the second largest lot. There were only 1 to 5 lambs in 64 percent of the sale lots. About 11 percent or 36 of the 334 lots were one-animal lots.

TABLE 1 Number of Lambs Sold Direct to Local Buyers, by Size of Sale Lot, Navajo Indian Reservation, July-December, 1969

Size of Lot	*Lots*		*Lambs*	
(Number of Head)	*Number*	*Percent*	*Number*	*Percent*
1 - 5	214	64	618	30
6 - 15	97	29	846	42
16 - 25	17	5	326	16
26 or more	6	2	240	12
Total	334	100	2,030	100

The range in prices received per hundredweight for these 334 sale lots of lambs is as follows:

Price per Hundredweight	*Number of Lots*
$10 - $19	13
20	86
21 - 22	68
23 - 24	28
25	132
26 - 29	7
	334

This distribution of prices shows that a majority of the buyers paid only one price, either $20 or $25, regardless of weight or quality of lambs.

Average prices received for lambs by different weight groups varied from a high of $22.74 to a low of $22.59 per hundredweight (Table 2). This difference of only 15c in average prices is not significant. These average prices were approximately $4.50 to $5.50 less than the average monthly prices of $27 to $28 received for lambs by all Arizona producers from July to December, 1969.

Also, there was no evidence that prices received on the reservation varied by months. Any differences that may have existed in prices paid by different buyers were not ascertained.

TABLE 2 Average Prices Received for Lambs, by Weight Group and Marketing Method, Navajo Indian Reservation, 1969

Weight Group (pounds)	*Direct Sales (dollars per hundredweight)*	*Auction*
49 or less	$22.74	$22.00
50 - 69	22.60	25.00
70 - 84	22.61	27.00
85 or more	22.59	26.50

Lamb Auction Market — In early October, 1969, 43 producers assembled 912 sheep at the auction pens located

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at Bidahochi, Arizona. Of this total, 870 were lambs and 42 were ewes. These lambs were sorted into 11 uniform sale lots on the basis of weight, quality and condition (Table 3). The six lots designated as "other" included black, crippled, and other lambs with undesirable characteristics which substantially reduce the market price. For these reasons, these animals were excluded from the price analysis.

Prices received at the auction for the five uniform sale lots increased as the average weight of lambs increased (Table 2). However, except for the 27 lambs in the lightest weight group, average auction prices ranged from $25 to $27 per hundredweight. These prices were only slightly less than the average monthly prices of $27 to $28 received by all Arizona sheep producers.

Conclusions of Study — Average prices received for a majority of the lambs sold at the auction exceeded average prices received in direct sales by approximately $2.50 to $4.50 per hundredweight. Also, higher prices were received for heavier lambs at the auction, whereas weight had no apparent effect on prices received in direct sales to local buyers.

Sheep producers on the Navajo Reservation can get a higher price for their lambs if they are willing to (1) assemble their lambs at one point (in this case at auction pens equipped with scales), (2) cull and sort them into uniform lots, (3) provide feed and water, and (4) auction them to the highest bidder.

They must strive to accomplish this at the lowest possible cost, attempt to keep shrinkage at a minimum, and provide buyers with the type and quality of lambs desired.

Finding that prices received at the auction were slightly below average monthly prices received by all Arizona sheep producers suggest, although not conclusively, that the average quality and/or weight of reservation lambs may be slightly below the state average. If so, it may be worthwhile for reservation producers to explore the possibilities for up-grading their breeding stock and improving other facets of sheep management.

TABLE 3 Number of Lambs Sold at Auction, by Weight Group, Navajo Indian Reservation, October 1969

Weight Group (pounds)	*Number of Lots*	*Number of Lambs*
49 or less	1	27
50 - 69	1	106
70 - 84	2	519
85 or more	1	181
"Other"	6	37
Total	11	870

Agricultural Residues . . .

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the best indicator of DDT use in agriculture, when all feed consumed by the animals is grown locally, as in Arizona.

The DDTR residues now found in Arizona alfalfa, soils, and beef fat are primarily DDE, the very persistent metabolite. This indicates that any problems arising in the future will be attributable to the "universal contaminant," DDE, rather than the parent compound, DDT.

In summary, the 1969 and 1970 moratorium on agricultural use of DDT was essential, timely and very effective. Alfalfa residues declined significantly in these 2 years, to a probable constant level of 0.05 ppm. Beef fat residues also dropped in 1970 to one-half the 1969 level. Soil residues have changed almost negligibly, suggesting an approximate half-life longer than 10 years. These residues consist mostly of the very persistent DDE, indicating that any future problems will be due to this "universal contaminant," instead of the parent DDT.

Table 4. DDTR residues in beef fat from selected Arizona feed lots.

Feed Lot No.[1]	*Residues in PPM* 1968 Nov.	1969 Dec.	1970 Sept.
1	1.34	0.59	0.60
2	1.07	1.93	0.45
6	1.15	0.75	[2]
9	0.80	0.71	—
12	0.47	0.84	0.46
Average	0.97	0.96	0.49

[1] *Average of five animals per feed lot.*
[2] *Samples not available during sampling period.*

Sorghum Characteristic

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than did the later two plantings, which required only 9 or 10 days for emergence.

In conclusion, it would appear that planting grain sorghum types from the middle of March to the first of April would result in about the maximum seasonal yield of grain. This planting date would maximize the probability of a stand by reducing the time the crop is in the seedling stage. A dual purpose type planted for grain at this time would likely be too tall to combine in addition to the extra fertilizer and water needed to produce the forage-type plant. Earlier dates of planting tie up the land longer, with greater risks for stand survival with only small gains in yield. In view of recent sorghum production problems in the Yuma area, May and June plantings have become increasingly hazardous for growing a good crop with good grain yield. In summary the March or April planting period would appear to be most advantageous.