

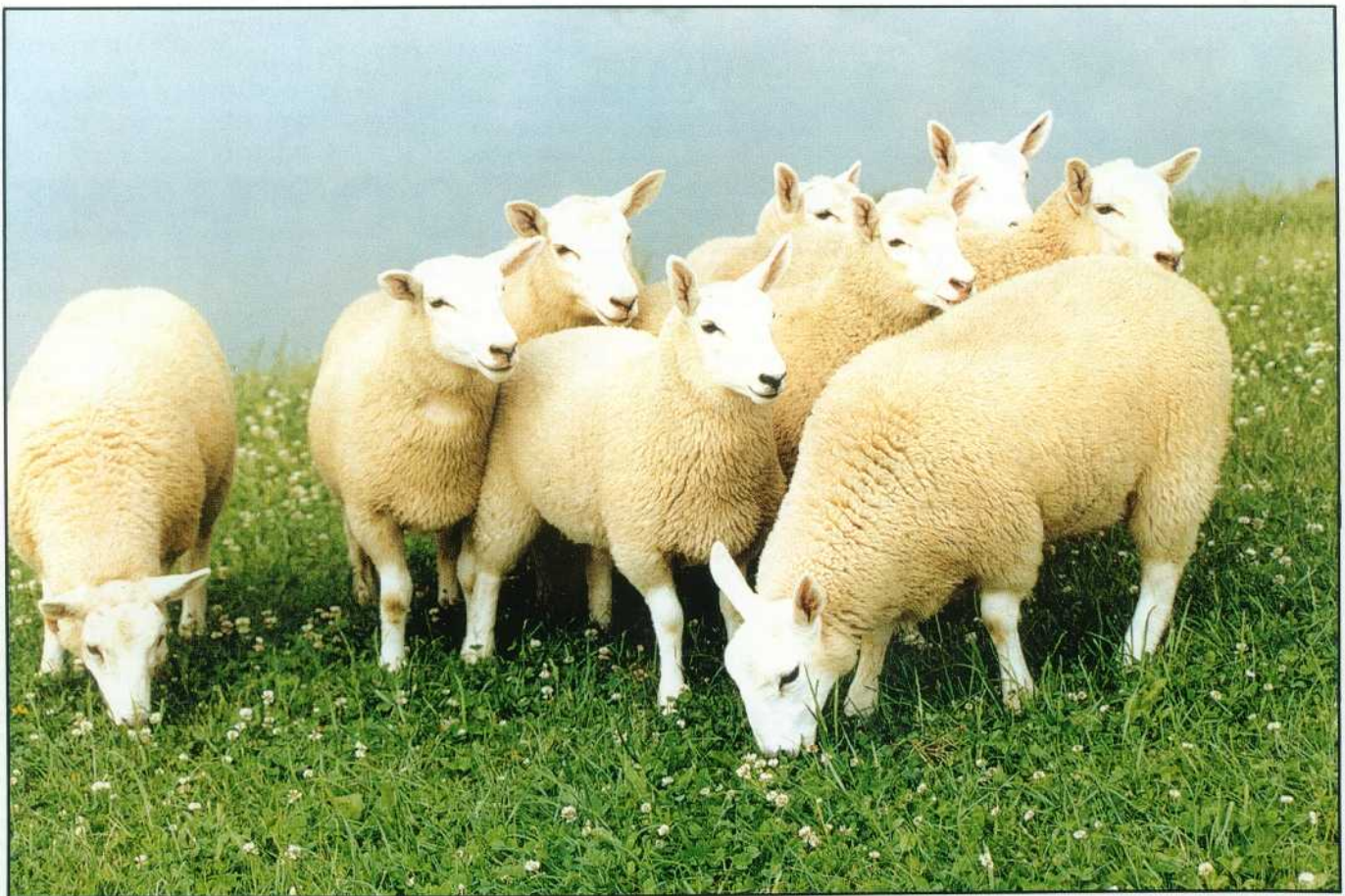
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Evaluation of Romanov Carcasses

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The first evaluation of the carcass of lambs from the Romanov breed was published in my first article on these sheep back in 1986 (*The Shepherd*, Vol. 31, No. 10, October 1986). Then, the Romanov was an unknown breed to the American sheep breeders and I am sure many did not read the article since I get many phone calls and letters inquiring about and requesting information on the carcass quality of the Romanov. During these six years we did not stand still, but rather conducted two more evaluations of the lambs, once comparing males to females at a rather heavier slaughter weight and in a second study, comparing Romanov purebred to half and quarter bred, using the Suffolks as a standard. The results of the new studies as well as those of the first ones are shown in table 1.

In all the studies except No. 4, the lambs were slaughtered at the traditional 90 lb., live weight, in study No. 4 they were slaughtered at around 104 lb. The samples used were 18 male lambs in study No. 11, 6 males and 6 castrates in study No. 2, 6 Suffolk lambs for comparisons in study No. 3, 20 males and 24 females in study No. 4 and 12 Suffolk, 11 Romanov, 13 half Romanov half DLS and 12 quarter Romanov three quarters DLS, in study No. 5.

In all the studies the same procedures were followed. The animals were deprived of food for at least 12 hours and weighed before slaughter. They were skinned, then opened and emptied of all internal organs except the kid-

neys. Carcasses were chilled for three days and weighed again. The percentage of chilled weight to weight before slaughter was calculated as the dressing percentage. The carcass was then divided into three wholesale cuts, the shoulders, the loin-rack and the legs, each was weighed. The percentage of each wholesale cut to the chilled carcass weight was calculated. The internal fat in the area of kidneys and pelvis was removed and weighed. The weight including that of the kidneys was expressed as a percentage of the chilled carcass weight and is referred to as kidney fat. The 12th rib was removed from the carcass and weighed. The backfat over the loin-eye muscle was measured at three points, at the two extremes and half way between them. The area of loin-eye muscle was measured and then the 12th rib was dissected into lean, fat and bones (figure 1). Each tissue was weighed separately and its percentage to the total was calculated. The percentages of the tissues of the 12th rib give an approximate indication on the distribution of these tissues in the whole body. In study No. 5, the intra-muscular fat in the loin-eye muscle was determined chemically to give an idea on the marbling in the meat of these breeds of sheep.

In studies No. 4 and 5, roasts from all the animals were cooked and a taste panel evaluated the eating characteristics of the meat. Juiciness, flavor and tenderness were among the traits evaluated. To evaluate these characteris-

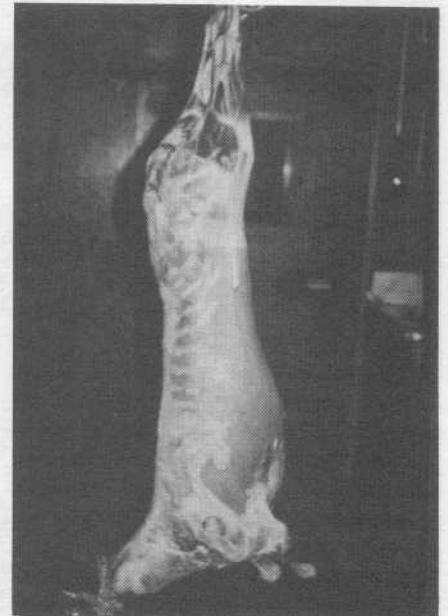


Figure 4. Romanov carcass, notice the poor fat cover on legs and shoulder.

tics, ten and seven assessors for studies No. 4 and No. 5, respectively, received each sets of samples to evaluate. The evaluation of perceived intensity of lamb flavor, tenderness and juiciness was made using a 15 cm. unstructured line scale. From left to right, the descriptive anchor points (1.5 cm. from each end) were as follows: tenderness, very tough to very tender; juiciness, very dry to very juicy; and lamb flavor, slight to intense. In study No. 5, the presence or absence of off-flavor was evaluated as a "yes" or "no" answer, a higher percentage indicated more off-flavor taste.

The results showed that for animals slaughtered at the traditional 90 lb. live weight, dressing percentage is between 40 and 43%, not different from a standard breed such as the Suffolk. The

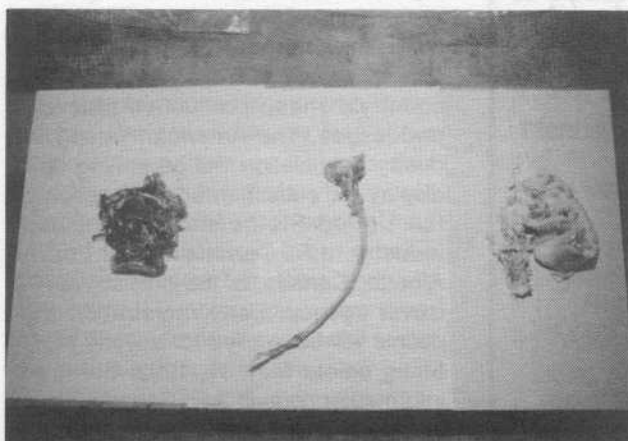


Figure 1. The 12th rib separated into lean, bone and fat.

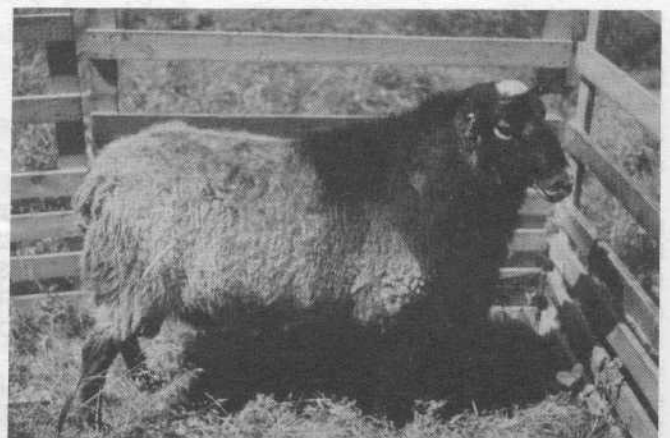


Figure 2. Romanov male, notice the heavier shoulders.

Table 1
Carcass characteristics of Romanov, Romanov crosses and Suffolk lambs in five studies.

	Study #1		Study #2		Study #3		Study #4		Study #5			
	Romanov male	Romanov male	Romanov Castrated	Suffolk male	Romanov males	Romanov females	Suffolk male	Romanov male	1/2R male	1/4R male		
No. of animals	18	6	6	6	20	24	12	11	13	12		
Slaughter weight (kg.)	42.2	42.7	41.5	42.0	47.5 ^a	46.0 ^b	43.4	42.4	44.6	43.5		
Age at slaughter (days)					223 ^a	248 ^b	204	222	198	220		
Dressing percentage	42.8	45.7	44.7	45.7	51.5	51.6	40.7	41.2	41.5	40.4		
Leg (%)	33.0	32.3	33.3	34.9	31.2	30.4	34.3	33.4	33.4	34.0		
Loin (%)	28.6	29.1	31.3	27.8	25.4 ^a	30.0 ^b	28.4	28.3	29.3	28.7		
Shoulder (%)	38.4	39.0 ^a	35.0 ^b	36.6	38.2 ^a	32.8 ^b	37.3	39.0	37.4	37.3		
Kidney fat (%)	3.0	3.6 ^a	5.0 ^b	1.8	4.0 ^a	6.8 ^b	2.74	3.37	3.00	2.87		
Loin eye area (cm ²)	12.0	12.2 ^a	11.0 ^b	14.0	17.2 ^a	15.6 ^b	11.8	10.8	11.9	11.8		
Backfat thickness (cm ²)	3.1	3.8	5.7	3.8	5.4 ^a	9.0 ^b	4.0	3.0	4.4	4.0		
12th rib lean (%)	41.3	44.3 ^a	38.5 ^b	46.5	47.1 ^a	34.7 ^b	41.1	43.8	39.8	42.7		
12th rib fat (%)	36.8	34.4 ^a	43.3 ^b	32.1	33.9 ^a	50.1 ^b	35.6	31.8	39.7	35.7		
12th rib bone (%)	17.5	17.5 ^a	14.4 ^b	21.9	17.1 ^a	13.6 ^b	22.2	23.2	19.1	20.3		
Intra-muscular fat (%)							9.4	8.9	10.8	9.2		

^{a,b} Signifies that the differences between males and castrates (study #2) and males and females (study #4) were statistically significant.

dressing percentage can reach over 50% if animals are slaughtered at heavier weights of about 104 lb. Romanov males tend to have heavier shoulders and smaller legs than meat-type breeds such as the Suffolk, however, crossing with meat type sheep (in this case the DLS) tend to correct for that undesirable characteristic (study No. 5). It seems that in females and in castrate, the problem of heavier shoulders is less evident. Accordingly, breeders are well advised to castrate males destined for market as soon as possible. The area

Table 2
Tenderness, juiciness and flavor of Romanov, Suffolk and Romanov crosses.

	Study #4		Study #5			
	Males	Females	Suffolk	Romanov	1/2R	1/4R
Tenderness	7.2	8.0	9.3	6.8	5.9	6.6
Juiciness	7.3	6.8	7.7	7.7	7.6	7.8
Flavor	8.6	7.6	8.1	8.5	7.9	8.4
Off-flavor %			1.7	12.1	7.3	3.4

For tenderness, juiciness and flavor, higher values indicate more tender, more juicy and more intense flavor, respectively.



Figure 3. Romanov first cross with DLS, notice the more rounded legs and smaller shoulders.

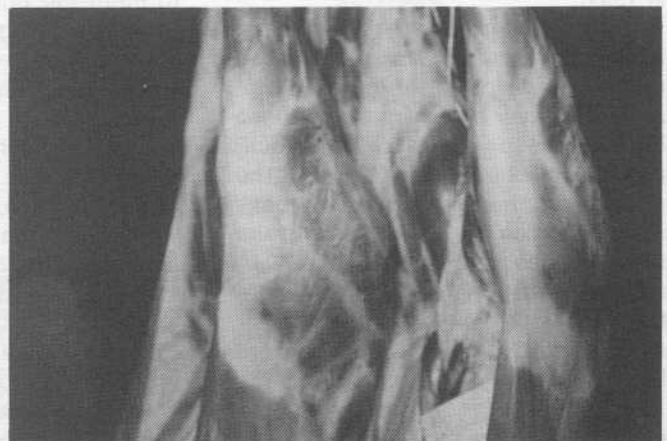


Figure 5. Close-up of two Romanov carcasses showing lack of fat cover.

of loin-eye is slightly smaller in Romanovs than in Suffolks but in Romanov crosses the area was similar to that of Suffolks.

Fat in the body is distributed differently in the Romanov as compared to a breed such as Suffolk. The fat over the body is thinner resulting in poorer grades and less protection of the meat, while that stored inside the body cavity around the kidneys and in the pelvic area is heavier and mostly is waisted (this tendency is similar to that observed for Finnsheep). The situation is corrected in the crosses. The dissection of the 12th rib in study No. 5 showed that Romanov lambs have more bone and lean and less fat percentages than the Suffolks and that the crosses have finer bones but were fatter than the pure Romanovs. Studies 2 and 4 indicated that castrates and females are generally fatter than un-castrated males. Study No. 4 also showed that slaughtering Romanov lambs at heavier weights is not recommended in view of the over-fatness of the carcasses.

The sensory evaluation presented in table 2, showed that meat of females' carcasses is more tender and juicy with

less intense taste than meat from males. Meat of Suffolk lambs is more tender than that of Romanov and its crosses. All the four genetic groups were similar in the juiciness of their meat. Suffolk meat had less intense flavor than Romanov and quarter Romanov, but slightly more than the half Romanov cross. While only 1.7% of the meat samples of Suffolk were off-flavor, 12.1% of the Romanov samples were. The situation seems to improve with crossbreeding with a meat-type sheep.

In conclusion, the results of all these studies indicate that although the carcasses and the meat quality of Romanov sheep is slightly inferior to those of a meat-type breed such as the Suffolk, nevertheless, the carcasses produced from pure Romanov lambs are acceptable and in crossbreeding, many of the unfavorable characteristics are corrected for. Romanov lambs should be slaughtered at light and medium weights and never as heavy lambs. Lambs destined to market should be castrated as early as possible to improve carcass composition and conformation.

potentially 40 to 50 percent of the wools were purchased to go overseas. Helle said he was pleased with the increased competition for American wool.

Edwin Tickle of Texas had the high selling lot. His 19.53 micron wool brought \$2.70 clean and \$1.59 grease.

Campbell said he was a bit disappointed in the outcome of the sale. He said, "There doesn't seem to have been a premium paid for finer microns and better preparation." He said the world market most likely played a part in the sluggish sale of fine wools in Artesia. "The buyers bid what they thought most levels were," he said, "but we thought those levels should have been higher."

The USWMA president also expressed disappointment in domestic wool mills for not supporting the WQIP. But he emphasized the importance of the WQIP and said U.S. growers must participate in the program in order to be competitive in the world market. "We've learned a lot and made lots of inroads through the WQIP," he said, "and we can't let one sale get us down."

Helle thought the prices in Artesia reflected the current market where finer wools are lower and coarser wools are up. He said, "There were a lot of no sales, but I think producers are optimistic that the market will improve." He said the opening of the Australian market probably contributed to the hedging on the buyer's side.

Wool quality was above average at the Artesia sale. Forte, Dupee, Sawyer buyer Leroy Keese said, "The best quality in the United States is right here because of the way it is prepared. I am pleased to see so many growers take pride in putting up their wool. It will lend to their success as sheepmen." Burlington buyer Charlie Chase agreed. He said, "The ASI Wool Quality Improvement Program has really helped."

Warehouseman Wendell Parker of Artesia Wool and Supply shared the buyer's feeling toward the quality of the wool. He said, "The WQIP is the elite way to prepare and sell wool, and the progressive producers are participating in the WQIP because tradition doesn't pay the bills anymore."

The sale was conducted as an open-bid, auction sale, a marketing method that the U.S. wool industry started utilizing just last year. Two years ago, USWMA wools were sold through a sealed bid. U.S. buyers purchase wools in other countries through auctions. All USWMA sales use the auction method.

Record Amount of Wool Offered at First USWMA Sale of the Season

From American Sheep Industry Association

The first United States Wool Marketing Association sale of 1992 brought in nearly 1.7 million pounds of wool, making it the largest USWMA auction to date. More wool was consigned to the April 27 sale in Artesia, NM, than was sold through all three USWMA auctions in 1991.

USWMA president Fred Campbell told the sale crowd, "We are pleased with the participation of the growers." Joe Helle, chair of the American Sheep Industry Association Wool Council, echoed Campbell's words, saying, "The growers did their part and came back with 1.7 million pounds of wool as the buyers requested." All wools at USWMA sales are consigned by USWMA warehouse members and prepared under ASI's Wool Quality Improvement Program.

A general overview of the Artesia sale showed finer wool prices to be down and coarser wool prices to be stronger. Some speculated that buyers

were holding back, waiting on the Australian market, which opened the next day. The prices buyers were willing to pay were reflective of the worldwide market for finer wools. The demand for medium wools was stronger with fewer lots withheld.

Some producers thought they deserved a better price for the quality of their wool. As a result most lots of finer wool were held back and declared a no sale. Campbell estimated that 75 percent of the finer wools did not sell because buyers did not bid high enough to meet the floor price set by warehousemen and growers.

As one Texas consignor put it, "These buyers want to hold the wools prepared in the WQIP to prices outside the program, but warehousemen aren't going to stand for it."

Forte, Dupee, Sawyer was the high volume buyer in Artesia. The company purchased 347,225 pounds of wool, followed by Standard Wool, which purchased 300,889 pounds. Burlington was third on the volume buyer list, taking home 241,096 pounds of wool. Thirty-three percent, 565,704 pounds, of all the wool consigned did not sell.

Many of the volume purchasers were buying for foreign companies and