

Suffolk and Southdown rams as

Sires of Market Lambs

compared in long-term study

A three-year experiment at the Hopland Field Station compared lambs sired by rams of a large breed with those sired by rams of a smaller, earlier-maturing breed. The lambs compared were sired by Suffolk and Southdown rams, and were out of range ewes.

Suffolk rams are used for crossing for market lamb production in many parts of the state, including the North Coast area. Southdowns are not extensively used in commercial operations but are the most common breed in fat lamb classes at livestock shows because of their compact conformation and ability to put on finish at light weights. Since fat lambs bring a substantially higher price than lambs which are not ready for slaughter at weaning, it was of interest to determine the extent to which finishing ability of lambs of the smaller breed would compensate for their lighter weights. This problem is of particular importance to areas such as the North Coast area since, in an average year, lambs of the larger breeds do not reach market finish by the time the feed dries and they must be weaned.

Three or four rams of each breed were bred each year to approximately 100

grade Corriedale ewes. Equal numbers of yearling, two-year-old, and three-year-old ewes were in the groups bred to each breed of ram each year.

The lambs were weighed at birth, and grazed with the ewes on either native or improved pastures from birth until weaning, which occurred when the feed had dried, or about June 1 each year. Equal numbers of Suffolk and Southdown crosses grazed on each kind of pasture. The improved pasture was seeded to a mixture of hardinggrass, tall fescue, rose, subterranean, and crimson clovers, narrowleaf trefoil, burnet, and alfalfa.

Lambs were weighed at weaning, and independently graded by three experienced graders—two of them commercial lamb buyers—into fat and feeder groups. Lambs graded as fat by two or by three of the graders were killed on consignment at a commercial plant in Dixon, and information was obtained on yield, number of carcasses in each federal grade, and price per pound received by the packer when carcasses were sold in regular commercial channels. The remaining feeder lambs were fed for 60 days on irrigated pasture in the Dixon area and were then slaughtered. The

same information was obtained as for the lambs slaughtered at weaning.

Average results for the three years are shown in the accompanying table. Although there were differences in average lamb weight among the three years, the difference between breed groups was very consistent. The weight and grades of lambs for the two kinds of pastures were also similar, and are combined in the table. There was a large difference in number of sheep per acre on the two kinds of pastures.

Approximately the same proportion of ewes in both groups lambed, but ewes bred to Suffolks raised fewer lambs to weaning because of greater lamb mortality. Southdown lambs also showed an advantage in percentage of lambs fat—30% against the 24% of the Suffolks—but this difference was not so large as expected. Suffolk-sired lambs weighed 12 pounds more than the Southdowns, by four months of age each year, and since the difference in carcass grade in favor of the Southdowns was not large enough to make much difference in price, the Suffolks consistently returned more money per lamb. Income per ewe in the Southdown-sired group was relatively better than income per lamb because of the higher weaning percentage, but was still \$1.77 less per head than for ewes bred to Suffolks.

The income figures shown in the table are larger than would be received by a producer who did not have irrigated pasture, since the cost of pasture was not deducted. As rented pasture is usually contracted on a per head per day basis, this would mean the same cost for lambs of both groups. Deducting a fixed amount from the returns from the two kinds of lambs would increase the relative advantage of the Suffolks.

If a value of 20¢ per pound is assigned to the lambs fat at weaning, and 18¢ per pound to feeders, the lamb income per ewe at the ranch at weaning time would be \$11.62 for ewes bred to Suffolk rams and \$10.23 for ewes bred to Southdowns. Or, if the Suffolk cross lambs in this ex-

Three-Year Average Results of Comparison of Suffolk- and Southdown-Sired Lambs at the Hopland Field Station

Comparison	Suffolk	Southdown
Ewes, No.	294	287
Ewes lambing per 100 ewes bred, No.	91	89
Lambs weaned per 100 ewes bred	85	91
Lamb survival rate, %	81	89
Average weight of lambs at 4 months, lbs.	71.3	59.3
Lambs fat at weaning, %	24	30
Lambs fat at weaning:		
Average carcass weight, lbs.	42.8	35.8
Dressing, %*	50.7	51.7
Carcasses Choice and Prime, %	83	90
Average price per lb., carcass	\$ 0.42	\$ 0.42
Average return per lamb†	\$16.03	\$13.17
Lambs fed for 60 days after weaning:		
Average daily gain, lbs.	0.31	0.23
Average carcass weight, lbs.	43.8	35.6
Dressing, %*	47.6	48.0
Carcasses Choice and Prime, %	52	75
Average price per lb., carcass	\$ 0.40	\$ 0.41
Average return per lamb†	\$15.62	\$12.70
Total returns per ewe—fats + feeders†	\$13.15	\$11.38

* Based on unshrunk live weights.

† Killing charge of \$2.00 per lamb deducted.

Management of

Weeder Geese

in commercial fields

Weeding with geese has proved to be an effective and cheap means of controlling grassy annual and perennial weeds when combined with other good farming practices. From 175,000 to 200,000 geese are being used in crops in California each year; the practice has been widely accepted and has spread rapidly since geese were first used for weeding commercial fields about seven years ago.

The disadvantages of using weeder geese are that fields have to be fenced, and the geese have to be fed, watered and protected against weather, dogs and chemical treatments of crops.

The greatest number of geese are used in cotton but they are used also in vineyards, sugar beets and castor beans, strawberries, melons, seed alfalfa, nursery crops, beans, hops, asparagus, potatoes, onions, and for controlling weeds in irrigation ditches.

All breeds of geese make good weeders, but the White Chinese have been found to be most effective. They are lightweight, grow rapidly, are good egg layers, and appear to be more active than other breeds. Their light color may make them more adaptable to hot weather.

Young geese are better weeders than old or mature birds. Old geese require feed only for body maintenance, but young geese need feed for growth. Observations have shown that geese should be at least six weeks of age and well feathered before they are placed in fields.

In very weedy fields, three to five geese per acre may be needed to keep ahead of weeds. The number required depends on the relative weed infestation

and on the effectiveness of other weed-control practices. Usually, after the first year, the number can be reduced to one or two birds per acre. It has been proved better to have more than enough geese and provide supplemental feed than to have too few.

Geese are grass feeders. They prefer Johnson grass and Bermuda, but will eat seedlings of nut grass, water grass, puncture vine, crab grass, tickle grass, and almost all other grasses. They will not eat pigweed, lamb's-quarters, cocklebur, or most broadleaf weeds or broadleaf crop plants. They will nip at cotton when hungry or until they become accustomed to eating grass, but seldom do any damage to the crops except where they congregate around watering troughs, shade or feeding areas.

As geese prefer young tender seedling weeds, they should be in the field when the weed seeds begin to sprout—usually about the same time the cotton comes up. When the weeds are several inches high and the field has begun to show much green color, most of the advantage of using geese has already been lost. Geese can be left in the field until after the last irrigation and until the crop begins to mature.

Provision of extra feed has been found useful to keep geese healthy and growing. Poultry or rabbit pellets, or grain are satisfactory feeds at rates of about 1.0 pound daily per 10 birds. When geese are confined over night, some feed should be provided before they go into the field because they do not have a crop for storing food as do most other birds.

When very hungry, geese may develop digestive troubles by gorging themselves on grass.

Geese need clean fresh drinking water at all times and shade for protection from the hot sun and soil during mid-day. One or two drinking troughs in 20 acres, filled daily, are adequate. Where no natural shade is present artificial shade should be provided. Moving watering troughs, shade and feed to different locations encourages the geese to cover a field more thoroughly.

Chicken wire fence, at least 2½' high and supported by light stakes or laths, is needed to confine the geese to a field.

Losses from dogs constitute the greatest hazard to weeder geese. Probably more geese are run to death than are actually killed by dogs.

Sulfur, DDT and Aramite applied to crop plants usually have no effect on geese, but toxaphene, demeton, aldrin, dieldrin and parathion are hazardous.

Very few diseases affect geese when they are not confined to small areas. Gorging from being hungry, and malnutrition resulting in lameness and death—the only abnormal conditions of concern—can be avoided by adequate and timely supplemental feeding.

When compared to hand labor or chemical methods in controlling weeds effectively, the saving in weeding with geese can amount to as much as \$50 per acre. Future savings may also be as important in reducing weed seed production and in eradicating perennial grasses.

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periment had been sold at 18.5¢ per pound straight across—fats and feeders combined—the Southdowns, because of their lighter weights, would have had to sell for 21.3¢ in order to realize the same income per ewe. Except for a limited number of lambs sold for show purposes, this premium is not likely to be obtained. Southdown feeder lambs are likely to

bring less because of their slower gains on pasture or in the feedlot.

The results indicate that, under the marketing conditions existing in California—and probably over most of the country—the importance of weight in determining returns is such that only small weight differences are necessary to compensate for rather wide differences

in conformation and earliness of maturity.

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