

3 CROSSBREEDING PROGRAMS

for commercial
lamb production
in Michigan

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CROSSBREEDING SHEEP for commercial lamb production is a highly recommended practice for Michigan sheep raisers. Recent studies by the U. S. Department of Agriculture show that purebred ewes crossed with purebred rams of another breed raised two more lambs per 100 ewes than purebred ewes bred to rams of the same breed. The lambs averaged 6 pounds heavier at weaning.

From the above cross, the first cross ewe lambs bred to purebred rams of a third breed raised 14 more lambs per 100 ewes that were 10 pounds heavier at weaning than those of the purebred breeds in the cross.

The ewe lambs from the above (containing blood of three breeds) crossed with a purebred ram of a fourth breed raised 27 more lambs per 100 ewes that were 7 pounds heavier at weaning than those of the purebred breeds in the cross.

Result of using Suffolk ram on Western type ewe. Note size and thickness of crossbred lamb at 4 months of age.



RAMS	EWES	LAMBS (Crossbred vs. Purebred)
BREED B	BREED A	2% More Lambs, 6 lbs Heavier at Weaning
BREED C	BREEDS A+B	14% More Lambs, 10 lbs Heavier at Weaning
BREED D	BREEDS A+B+C	27% More Lambs, 7 lbs Heavier at Weaning

In addition to more and heavier lambs per ewe, crossbreeding enables the commercial sheep raiser to benefit from the desirable characteristics of the one breed—such as long life, flocking instinct, and wool production—and excellent body conformation and rapid growth of another breed.

Some benefits would result from crossing any of the purebred breeds found in Michigan. However, maximum benefits will result from selecting breeds noted especially for a certain characteristic, such as wool production or rapid growth. Choice of breed will also depend on: (1) whether or not ewe lambs are saved for replacements, and (2) size of flock.

Tables I below and II on page 2 illustrate crossbreeding programs to follow to secure maximum market lamb production: (1) when all lambs are sold or (2) when replacements are being saved and then bred to the most desirable breeds for market lamb production.

I. No Ewe Lambs to be Saved (All Replacements Purchased)

EWES

- Western type ewes, preferably *Columbia* or *Corriedale* breeding, to get as much wool as possible of the medium grade ($\frac{1}{8}$, $\frac{1}{4}$ or low $\frac{1}{8}$).
- Native type ewes: generally this type will carry *Oxford*, *Hampshire*, *Shropshire* or *Corriedale* breeding.

RAMS

- Suffolk*, *Hampshire*, or large type *Shropshire* with excellent mutton-type conformation.
- Suffolk* for maximum hybrid vigor.

II. Ewe Lambs to be Saved for Replacement (Flock of 60 or more ewes and 2 rams)

EWES

RAMS

Native or western

X *Columbia*. A *Corriedale* or *Dorset* could be used in place of *Columbia*. Save ewe lambs as long as there are sufficient native ewes for this ram's use. Other rams in flock should be *Suffolk*, *Hampshire*, or *Shropshire* with no lambs saved from these rams.

Replacements: $\frac{1}{2}$ native — $\frac{1}{2}$ *Columbia*

X *Suffolk* and *Hampshire* can be used interchangeably. Large, growthy, open faced *Shropshires* are also regaining favor. Sell all lambs from this cross until there are no longer any native or western ewes from which to save replacements from the rams recommended in the first cross above. Then save ewe lambs from *Suffolk* or *Hampshire*.

Replacements: $\frac{1}{2}$ native; $\frac{1}{2}$ *Columbia*; $\frac{1}{2}$ *Suffolk* or *Hampshire*

X *Columbia* ram and repeat as first cross above.

The example shown in No. II above is primarily for flocks requiring two or more rams. In this case only enough ewes to save for replacements should be bred to the *Columbia*, *Corriedale*, or *Dorset* ram. All others should be bred to the mutton-type ram.

This program allows for a production-testing program to improve both wool and lamb production. Actually the cross-breeding program requires no more, and possibly even fewer, rams than a non-crossbreeding program.

III. Ewe Lambs to be Saved for Replacements From a One-Ram Flock

Since only a few lambs are saved for replacements each year, they generally are not bred as ewe lambs. But if they are, they may be bred to their own sire the first year. This eliminates the need of buying a different ram each year instead of every two years. All lambs from this mating should be sold.

EWES	RAMS
(1) Native ewes	X <i>Columbia</i> or <i>Corriedale</i> ram
Replacements and remaining native ewes	X <i>Suffolk</i>
Replacements and remaining native ewes	X <i>Hampshire</i>
Replacements and remaining native ewes	X <i>Columbia</i> or <i>Corriedale</i> and program repeated
(2) Native ewes	X <i>Dorset</i> or <i>Montadale</i>
Replacements and remaining native ewes	X <i>Suffolk</i>
Replacements and remaining native ewes	X <i>Hampshire</i>
Replacements and remaining native ewes	X <i>Dorset</i> or <i>Montadale</i> and repeat
(3) Native ewes	X <i>Oxford</i>
Replacements and remaining native ewes	X <i>Hampshire</i>

Replacements and remaining native ewes

X *Oxford* and repeat

(4) *Shropshire* ewes

X *Suffolk*

Replacements and remaining *Shropshire* ewes

X *Shropshire*

Replacements and remaining *Shropshire* ewes

X *Suffolk* and repeat

(5) *Oxford* ewes

X *Hampshire* or *Suffolk*

Replacements and remaining *Oxford* ewes

X *Oxford*

Replacements and remaining *Oxford* ewes

X *Hampshire* or *Suffolk* and repeat

If the original flock was made up chiefly of Western ewes, the III (1) program would be recommended, in which case a *Dorset* could also be used as a first cross ram.

Crossbreeding will yield maximum benefits only when using *purebred* rams of excellent type and quality. Crossbred rams will not give the same results as *purebred* rams on crossbred ewes.

When ewe lambs are saved for replacements, some readily recognizable identification will help in dividing the flock at breeding time. Brightly colored plastic ear tags are recommended. A different color can be used each year and to identify the lambs from certain rams. These tags are available from most livestock supply houses.