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Prolific Breeds of the World: VI. THE POLYPAY

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Success in sheep farming nowadays may be determined by making the right choice of a breed from those available presently in the world. The wide variety of breeds demonstrate the vitality of the research world in a general effort to provide the sheep farmers with animals that are adapted to different environments, management techniques, as well as, consumers' and processors' changes in preference. Providing the ovine industry with prolific and more productive sheep by improving the existing breeds is an extremely arduous process. On the other hand, with discerning choice of subjects and a carefully planned breeding program, the outstanding qualities of several breeds can be combined into one new breed. The Polypay is one on the list of new breeds known as the "synthetic breeds".

The Polypay story began in 1969, at the U.S. Sheep Experimental Station in Dubois, Idaho. In preliminary stages, the American researchers produced two flocks of crossbred-ewes: one flock of Dorset x Targhee (D x T) and the other of Finnsheep x Rambouillet (F x R). Reciprocal crossing between these two flocks were then made i.e., (D x T) x (F x R) and (F x R) x (D x T). Rams and ewes from this four-breed combination were allowed to mate at random to produce the first generation of Polypay. As can be seen, each of the four foundation breeds contributed 25% of the total genetic background of this synthetic breed. The care taken in the selection of the breeds involved in the crossing contributed to the success of the Polypay. The Rambouillet and Targhee breeds contributed to the hardiness, the herding instinct, the size, the long breeding season and the fleece characteristics; Dorset breeding provided the carcass traits, the milking ability and also a long breeding season; finally the use of Finn ewes promoted early puberty, prolificacy, as well as rapid postpartum fertility. When the American researchers initiated the Polypay program, they had a distinct goal in mind: to create a ewe which can, from 12 months of age, produce two sets of twins per year with excellent carcass traits. In effect, they were looking for a possible substitute for Finn crossbred ewes which, although very prolific, do not have a desirable type of carcass.

In order to properly prepare the Polypay for a modern system of production, the researchers selected four different lines of



ewes. The first two were chosen in order to perform well in an extensive system of production while the other two were evaluated to meet the requirements of an intensive management program.

The three most popular breeds of sheep used in Western ranches, Rambouillet, Targhee and Columbia, as well as 1/2 and 1/4 crossed Finn ewes, were used in order to evaluate the performance of the two lines of Polypay selected for extensive purposes. In a study, the Polypay ewe proved to perform better than the Rambouillet, Targhee and Columbia, as well as the 1/4 Finn cross ewes in:

- the percentage of ewe lambing per ewe bred;
- the percentage of lambs born per ewe lambing and;
- the percentage of lambs weaned per ewe bred.

The performance of the Polypay ewes was however slightly inferior to the 1/2 Finn cross ewe.

Ewes from the Polypay lines selected for intensive production purposes were regularly better in spring mating and fall lambing, over a period of 5 years, as compared to: Targhee, Rambouillet, Dorset x Targhee and Finnsheep x Rambouillet ewes. The Polypay also produced the most pounds of weaned lambs (120 days) per ewe but was the second best after the Finnsheep x Rambouillet in the percentage of weaned lambs per ewe. The experiment also dem-

onstrated that the Polypay lambs grew faster and reached higher weights than the Finnsheep x Rambouillet, but couldn't compete quite as well with the Dorset x Targhee, Targhee or Rambouillet lambs. Even though the Polypay sheep shows numerous positive attributes it does however, have several weaknesses. For example, the growth rate and the post-weaning gain are inferior to breeds such as Suffolk, Dorset or Oxford. The animal produces a carcass that can be graded as "acceptable" although it does have a little tendency to put on a rather thick layer of fat. Finally, the wool production which is of good quality, remains some two pounds per ewe per year inferior to the quantity produced by either Rambouillet or Targhee ewes, two of the foundation breeds.

Looking closely at what the Polypay breed has to offer, the serious breeder will recognize a great maternal breed and therefore the Polypay constitutes an excellent alternative to most of the present options. The Polypay sheep can play an important role in the future, by providing in crosses, part of its best elements, which when combined with those contributed by a meat-type breed of sheep, would give the producer a sure way to increase the productivity of his flock quantitatively and qualitatively.

