

## Have I Got a Breed for You? Sheep Types and Breeds for Commercial Production

by Dr. Debra K. Aaron, Professor

**H**ampshire, Polypay, Dorper, Merino or Lincoln? Could one of these be the “best” sheep breed for you? Or, is it one of the other 50 or so recognized breeds of sheep in the United States? The fact is no one breed of sheep is “best” for all traits. This may come as a surprise because most of us have our favorite breeds, but all of them have strengths and weaknesses. The goal is to find the breed (or breeds) that best suits a producer’s particular marketing objectives and production system. If the sale of high quality, lean lamb is going to provide the majority of the income from your sheep enterprise, your breed choice(s) will be much different than if wool is your primary product to sell. Production resources, such as labor, facilities, land and feed availability, will also influence your breed choice.

The purpose of this article is to describe how sheep breeds are classified according to type and then to describe some of the more common breeds within each type. That way, you can choose the breed that’s “best” for your marketing objectives and production system.

### Classification of Sheep Breeds

Classification of sheep breeds can be confusing because it is done by several different methods. A common method of classifying sheep breeds is by **primary purpose** (wool, meat, dairy or dual purpose breeds). While most sheep breeds are dual purpose (for example, they produce both wool and meat or both wool and milk for marketing), most excel in the production of just one marketable commodity:

wool or meat or milk. Another method of classification is according to **type of fiber** produced: wool breeds versus hair breeds. Wool breeds are then further classified according to fineness of wool (fine, medium and long wool breeds).

Even **face color** (typically, white face versus black or dark face breeds) has been used to classify sheep. Black (or dark) face breeds tend to excel in growth and carcass traits while white face breeds tend to have superior maternal

**Table 1. Classification of Some Common Sheep Breeds Using Various Methods.**

| Breed                      | Primary Purpose | Method of Classification |                           | Primary Role in Crossbreeding Systems |
|----------------------------|-----------------|--------------------------|---------------------------|---------------------------------------|
|                            |                 | Fiber or Coat Type       | Face Color*               |                                       |
| <b>Border Leicester</b>    | Wool            | Long Wool                | White                     | Specialized Dam                       |
| <b>Cheviot</b>             | Meat            | Medium Wool              | White                     | General Purpose, Specialized Sire     |
| <b>Columbia</b>            | Dual            | Medium Wool              | White                     | General Purpose, Specialized Dam      |
| <b>Corriedale</b>          | Dual            | Medium Wool              | White                     | General Purpose, Specialized Dam      |
| <b>Dorper/White Dorper</b> | Meat            | Hair                     | N/A                       | General Purpose, Specialized Ram      |
| <b>Dorset</b>              | Meat            | Medium Wool              | White                     | General Purpose                       |
| <b>Finn</b>                | Dual            | Medium Wool              | White                     | Specialized Dam                       |
| <b>Hampshire</b>           | Meat            | Medium Wool              | Black                     | Specialized Sire                      |
| <b>Katahdin</b>            | Meat            | Hair                     | N/A                       | Specialized Dam                       |
| <b>Lincoln</b>             | Wool            | Long Wool                | White                     | Specialized Sire                      |
| <b>Merino</b>              | Wool            | Fine Wool                | White                     | Specialized Dam                       |
| <b>Montadale</b>           | Meat            | Medium Wool              | White                     | General Purpose                       |
| <b>Oxford</b>              | Meat            | Medium Wool              | Black                     | General Purpose                       |
| <b>Polypay</b>             | Dual            | Medium Wool              | White                     | General Purpose, Specialized Dam      |
| <b>Rambouillet</b>         | Wool            | Fine Wool                | White                     | Specialized Dam                       |
| <b>Romanov</b>             | Meat            | Long Wool                | Black and White (Spotted) | Specialized Dam                       |
| <b>Romney</b>              | Dual            | Long Wool                | White                     | Specialized Dam                       |
| <b>Shropshire</b>          | Meat            | Medium Wool              | Brown                     | Specialized Sire                      |
| <b>Southdown</b>           | Meat            | Medium Wool              | Gray                      | Specialized Sire                      |
| <b>Suffolk</b>             | Meat            | Medium Wool              | Black                     | Specialized Sire                      |
| <b>Targhee</b>             | Dual            | Medium Wool              | White                     | Specialized Dam                       |
| <b>Texel</b>               | Meat            | Medium Wool              | White                     | Specialized Sire                      |

\*Classification by face color is only used for wool breeds.





**Cheviot**



**Corriedale** (Photo from Phillippi Corriedales)



**Columbia**

and wool traits. Lastly, classification is often based on the breed's **primary role in crossbreeding systems**, that is, as general purpose breeds, specialized dam (or ewe) breeds and specialized sire (or ram) breeds.

Some common breeds are classified according to each of these methods in **Table 1**; however, the remainder of this article is devoted to a discussion of breeds classified according to the latter method, their primary role in crossbreeding systems. This is the most useful means of classifying sheep breeds when the marketing objective is the sale of slaughter lambs.

## Primary Roles of Breeds in Crossbreeding Systems

Key characteristics used for classifying breeds according to their primary role in crossbreeding systems (that is, **general purpose**, **specialized dam**, and **specialized sire** breeds) include seasonality, age at puberty, prolificacy, lambing ease, mothering ability, lamb survival, longevity, hardiness, mature size, growth rate, feed efficiency, muscling and leanness.

Note that some breeds are identified in **Table 1** as serving more than one role in crossbreeding systems. Sometimes this is a result of differences of opinions among breeders as to how breeds are classified. Other times it has more to do with the type of mating system being used by the producer. Thus, in the following discussion, assignment to a particular category should be considered only a general guideline.



**Horned Dorset**



**Polypay**



**Texel**

## General Purpose Breeds

General purpose breeds may be thought of as “middle of the road” breeds. These breeds tend to have acceptable, average levels of production for most of the traits listed above but are generally not superior in any one trait. Therefore, they are suitable either as sire or dam breeds in the mating system. Most general purpose breeds provide a balance between meat and wool. Furthermore, they are adaptable to a range of environmental conditions. Examples of general purpose breeds include **Cheviot**, **Columbia**, **Corriedale**, **Dorset**, **Montadale**, **Polypay** and **Texel**. These are wool sheep. The **Dorper/White Dorper**, hair sheep, are also classified as general purpose.

General purpose breeds are often the best choice for small flocks where crossbreeding programs are not feasible. Likewise, rotational crossbreeding systems necessitate use of general purpose breeds. For example, the Polypay is classified as both a general purpose and a specialized dam breed (**Table 1**). In a rotational cross, the Polypay would be used as a general purpose breed; that is, as a dam (ewe) breed and a sire (ram) breed, on a rotating basis. In a terminal cross, however, the Polypay would always be used on the ewe side.

## Specialized Dam Breeds

In contrast to general purpose breeds, specialized dam breeds excel in fitness characteristics, that is, those traits that influence the ewe's ability to produce offspring in the flock (for example, survival traits, reproductive

*Genetically Speaking continues on pg. 20*





**Border Leicester**

*Genetically Speaking continued from pg. 19* traits, such as early puberty, fertility and prolificacy, and maternal traits, such as milk production and mothering ability), reproductive traits. Most dam breeds are white faced. They are adaptable to difficult environments. In addition, specialized dam breeds tend to have above average fleece weight and quality; thus, many of them are classified as dual purpose breeds. These breeds are not as well known for carcass traits and, with regard to mature size, they need only be of adequate size to produce lambs of desired carcass weights. Specialized dam breeds are used predominantly in terminal crossbreeding systems as the breeding flock; they are mated to terminal sires to produce fast-growing slaughter lambs.

Specialized dam breeds include **Merino**, **Rambouillet** and **Targhee**, which are fine wool breeds; **Columbia**, **Corriedale** and **Polypay**, which are medium wool breeds; and **Border Leicester**, **Romney**, **Finn** and **Romanov**, which are long wool breeds. Because of their excellence in the traits listed above, Merino, Polypay, Rambouillet and Targhee have contributed greatly to commercial flocks in the United States. The Finn and Romanov breeds are used exclusively as dam breeds, primarily due to their young age at puberty and high prolificacy (number of lambs born per ewe lambing). The **Katahdin**, a hair breed, is also classified as a specialized dam breed because of its adaptability, parasite resistance, early puberty, prolificacy and strong mothering ability.

### **Specialized Sire Breeds**

Specialized sire (or ram) breeds excel in early growth, muscularity and carcass quality. They are typically classified as meat-type breeds and most are black (or dark) faced. Selection pressure on growth and carcass traits has resulted



**Lincoln** (Photo from Larson Lincoln Longwools)

in less focus on wool production (in wool breeds); thus, these sheep have lower quality wool and receive lower premiums for their fleeces. Most wooled sire breeds produce wool of medium fineness.

Rams from specialized sire breeds are mated to purebred or crossbred ewes of specialized dam breeds to produce slaughter lambs. They are often referred to as “terminal sires” because all offspring are marketed (terminated), whereas lambs sired by rams from specialized ewe breeds, such as the Polypay, are usually kept in the flock as replacement ewes. Rams of specialized sire breeds should excel in fertility and longevity. In addition, survivability of crossbred lambs is expected to be high.

Specialized sire breeds include heavy weight breeds such as the **Hampshire**, **Oxford**, and **Suffolk**, medium weight breeds such as the **Shropshire** and **Texel**, and light weight breeds such as the **Cheviot** and **Southdown**. The **Dorper** and **White Dorper**, which are hair sheep, are also used as specialized ram breeds.

### **Summary**

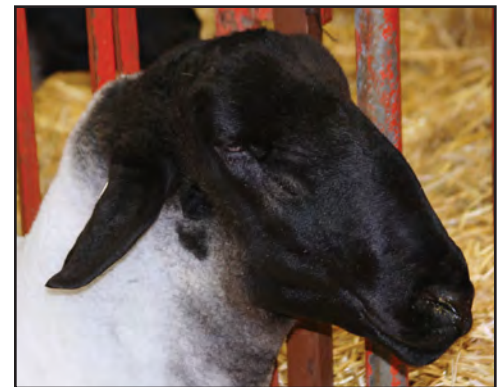
The answer to the question, “What is the best breed?” depends on the producer’s specific marketing objectives and production system. No one breed of sheep will satisfy every producer’s needs. But, recognizing the different types and breeds of sheep will help you choose the breed that will best meet the demands of your sheep enterprise. Furthermore, understanding the roles of sheep breeds in crossbreeding systems is important for additional reasons. First, it will direct the selection toward traits within breeds that are relevant for both purebred (seedstock) and commercial sheep producers. Second, it will allow the sheep industry to use available breed diversity to improve market lamb production.



**Hampshire**



**Dorper and White Dorper**



**Suffolk**



**Southdown**

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