

# Prolific Breeds of the World:

## V. THE BARBADOS BLACKBELLY

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To increase the productivity of a flock of ewes, several options can be considered by the breeder. One sure, fast and easy way, is to take advantage of the natural high prolificacy of certain breeds of sheep. Among this group, several breeds have been already reported in Sheep Canada Magazine, for example, the Romanov, the Booroola Merino etc. Other prolific breeds which exist but are less popular, include the Barbados Blackbelly.

The Blackbelly breed was introduced into Barbados by the Spanish and Portuguese merchants some 300 years ago, but they are thought to have originated in the Cameroon and/or Guinea (West Africa). Nowadays their geographical distribution has widened, it includes the Caribbean islands of Trinidad and Tobago, Jamaica, Leeward, Windward, Bahamas and Guyana, the French West Indies (Guadeloupe and Martinique) as well as the Netherland

Antilles (Curacao and Aruba). Several shipments were made to Mexico, Taiwan, Panama and Venezuela. Three flocks are now found in U.S.A.: in Texas, California and North Carolina. Canada imported a few specimens in the early seventies but they had to be slaughtered upon arrival as they were found to be positive to blue-tongue antibodies, even though the disease has not been seen clinically in Barbados up to now.

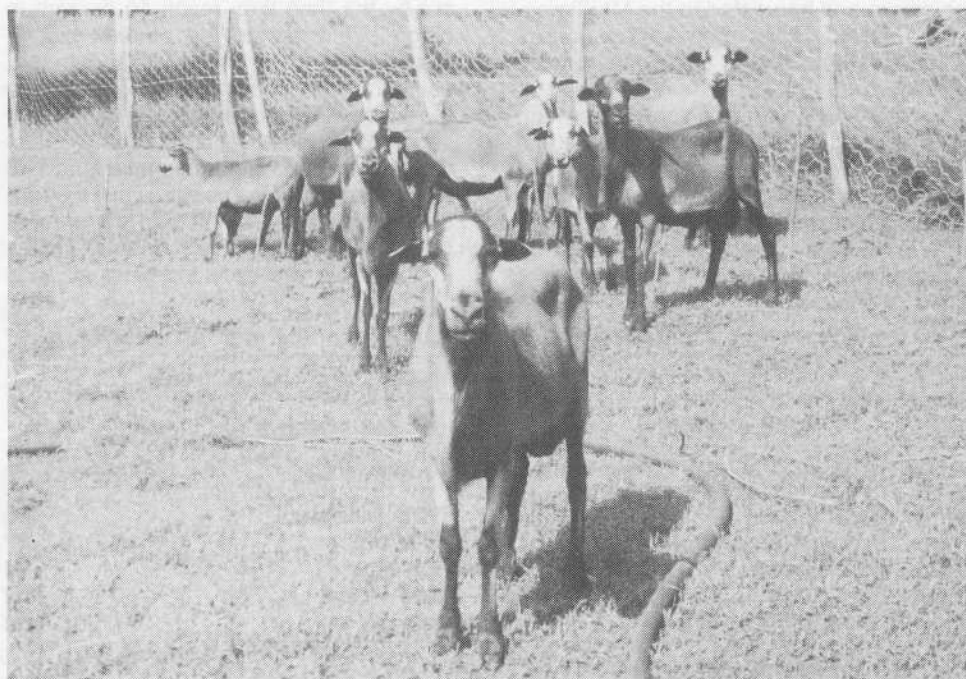
The color coat of the Blackbelly is usually reddish brown but it can vary from dark to light brown. The underside of the belly and the lower parts of the legs are entirely black as well as several spots around the eyes, mouth and neck. Rams can be identified easily by their mane extending from the neck to the brisket and both, males and females, are polled. With an average withers height varying from 60 to 70 cm in the ewes, and between 75 to 81 cm for the ram, and adult weight ranging from 32 to 43 kg in the ewe and 50 to 70 kg in the ram, the Barbados can thus be considered as a medium size sheep. The hair coat of the Blackbelly resembles that of a domestic goat and measures an average of two and

a half cm in length. A study revealed that with a mean hair fiber diameter of 49.0 microns, the Barbados Blackbelly is classified as coarse wool type.

The Blackbelly sheep are very hardy and extremely well adapted to tropical environment, as well as being able to tolerate and adapt to moderate variations in the environmental temperatures. But perhaps the most outstanding quality of the Blackbelly remains in its prolificacy. The ewes can be bred throughout the year (as can other tropical sheep) or at least, it can have more than one breeding season per year. The frequency of multiple birth is very high compared to other tropical breeds, as twin and triplet litters are a common sight in a flock. Larger litters have been recorded (up to 8 lambs) but on the average, one can expect to have twins 49% of the time, a 10% probability of triplets, i.e. 169 lambs per 100 ewe lambing. The size of the litter seems to be affected by the type of management. Thus, on an intensive system of management (three lamb crops in two years), the average litter size is from 1.45 to 1.75 lambs per crop, whereas when raised and bred in smaller group (as it is the case in Barbados where the farms average five to ten ewes per flock), the sheep produce an average of two lambs per litter. Other reproductive performances include: length of oestrus varying from 24 to 34 hours, age at puberty extending from four to seven months, gestation period of about 150 days and age at first lambing ranging between 12 and 15 months.

The high prolificacy of the Blackbelly like in other prolific breeds can create however certain problems since the larger litters are more susceptible to lamb mortality than smaller ones. An earlier study showed that lamb losses could reach 37% among triplets compared to 22% for single lambs.

Thus only 65% of the lambs born are expected to be reared up to 6 months of age. But one should not jump to conclusions too quickly as lamb viability is dependent on several other factors such as: environmental conditions, management, nutrition, the health status of the flock etc. When all those factors were carefully controlled, in subsequent trials, the lamb mortality rate dropped drastically to levels that are more



readily acceptable. For instance, a flock was managed to maintain a 5 to 10% mortality rate and several others showed levels inferior to 20%).

Blackbelly ewes are excellent mothers and show a good maternal behaviour. Milk production is usually plentiful and with proper nutrition the ewe can easily rear up to three lambs. Like many other sheep breeds, the ewes do not accept orphan lambs easily, accordingly cross-fostering is not possible and in instances when a litter exceeds 3 lambs, artificial rearing must be considered.

Since the Barbados Blackbelly sheep are narrow-bodied, long necked and angular, they are not considered as desirable mutton type sheep. But compared to other tropical breeds, the Blackbelly grows just as well and requires the same amount of feed per kg of gain. A lamb sold at 12 months of age would weigh around 90 lbs and would dress-out around 50%. Fat is found in lesser amounts in Blackbelly carcasses, than in other similar breeds. The amount of fat over the rib-eye is approximately, one third the amount found in improved meat breeds such as the Suffolk and Dorset. Marbling in the rib-eye muscle, as well as the muscling, are not as well developed as in the Suffolk or Dorset. The flavour of the meat is considered excellent, being milder than our usual market lamb probably due to the lesser amount of fat found in the carcass.

Since these animals have always been reared in small groups, in close contact with man, they have turned out to be docile, gentle and intelligent. However, they may react rather nervously when placed in a new surrounding or in front of new faces. They do adjust after a short while and will even make excellent pets.

Health wise the Blackbelly sheep show a higher resistance to gastro-intestinal parasites as compared to Dorset and Suffolk. Despite this, gastro-intestinal parasites constitute their major health hazard. Other diseases that are likely to be encountered are: footrot, pink eye, tick fever, pneumonia, mastitis and metritis.

In conclusion, the Barbados Blackbelly is an animal that is very hardy and performs well under a tropical climate such as the one found in Barbados. They are very prolific as compared to other tropical breeds and show all year round fertility. They produce a carcass that is reasonable though below the North American Standard. Growth rate needs much improvement. However, up to now, there is relatively little information available on the breed and more research is needed to truly evaluate the full potential of the Blackbelly. One should expect to hear more about the Barbados Blackbelly, in the near future, as they could play an important role in improving the mutton production in the tropical and subtropical countries.



# Managing Forage Quality

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Forage quality is becoming more important to successful beef, dairy and sheep farming. Economic pressures from the rising costs of concentrate feeds and grain and of machinery, fertilizer, labour, and loans, to name a few, mean that profit margins are small. One way that many livestock producers are reducing expenses is by obtaining the maximum nutritional benefit from every crop they grow.

Managing forage crops for optimum nutritional quality is possible without additional expense. It is profitable because the amount of grain and protein supplement that must be purchased and fed to obtain milk production and growth is reduced as the quality of forage is improved. Economic pressure will be even greater in the future for producing meat and milk from forage crops rather than cereal grains.

Good nutritional quality in forages is synonymous with high levels of energy digestibility, protein content and palatability or consumption by livestock. Entries in forage competitions this spring showed that feed of excellent nutritional value can be grown and harvested in the Maritimes. High quality forages approach the energy value of cereal grains and contain more protein.

The current value of forage crops grown on 320,000 hectares in the Maritimes is about 63 million dollars. I think this value could be relatively easily increased by 6 million dollars if most producers strived to improve forage quality using well established management practices.

The nutritional quality of any forage crop depends mainly on its stage of maturity when it is cut or grazed. The total yield, on the other hand, is affected mostly by fertility, pH, drainage and other soil characteristics. As the crop matures, its nutritional quality declines faster than the growth of more material.

The traditional practice of cutting in mid July has two consequences. It gives a slightly greater yield of more mature material but the quality is inferior and it ruins the chances of getting a second crop which will yield 50 to 75 percent more forage.

In central and southern New Brunswick, the first cut of forage should be taken between the middle of June and the first week of July.

In recent years some farmers have already taken their first cut before the middle of June and this trend is growing. Some caution is necessary because some crops may be damaged by cutting too early.

## LEGUMES

The maximum consumption and yield of digestible nutrients of legumes is obtained if harvesting is done when most plants are in the bud stage; legumes should be cut by the time they reach 10 percent in bloom. To estimate the percent bloom, select a few major stems at random and count the number of them with one or more blossoms. For example, if 8 out of 100 stems have one or more blossoms, it is at 8 percent bloom. Legumes take longer to recover and produce new growth if they are cut before they are at 5 to 10 percent bloom. This is because nutrient reserves in the roots are only marginal at early

**Digestibility at different maturity stages of timothy and red clover**

Climax timothy		Ottawa red clover*	
Growth stage	Digestibility, %	Growth stage	Digestibility, %
June 12 Early boot	70	Early bloom	72
June 19 Heads emerging	64	70% bloom	67
June 26 Full head	60	Full bloom	64
July 2 Early bloom	53	Late bloom	62
July 10 Late bloom	45	Late bloom	59

\* Alfalfa is very similar to red clover.