Hair Sheep and Research in the Dominican Republic

Helmut Bethancourt
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Dominican Republic, general info

Sheep Situation

Research
Dominican Republic
About Sheep in the Dominican Republic

Total population:
500,000 Official Unpublished Data
300,000 Most Conservative Estimate

Predominant Breeds (all hair sheep):
• BlackBelly
• Pelibuey
• Katahdin
• Dorper
• Local crossbreds

Source: IDIAF/DIGEGA, 2004
Katahdin Breed

Imported from the U.S.A. in 1990s.
Imported registered Katahdins increased after year 2000.

Later “downgraded” to local Katahdin.

Most recent import by Fernando Hued, registered Katahdins from Mexico.

There is a clear preference for Katahdin rams “White Sheep”
Considered the best all-around hair breed.
The Breeders Need...

A strong association that keeps pedigree data and promotes conservation of the breed characteristics.

(wish we had NSIP in D.R.)

Although there are many associations of sheep and goat breeders...

More trustworthy local data is needed to achieve selection and genetic improvement.
Hurdles to Overcome

- Record keeping - not enough breeders interested
- Profitability - some breeders not willing to invest

Possible benefits

- Local genetic improvement - selection based on genetic merit
- Purebred-based business - should grow
- Exports - currently very limited
Local Research with Sheep

UNIVERSIDAD NACIONAL EVANGELICA (UNEV)

Introduction of FecB (Booroola) gene and its effect in prolificacy and productivity of Katahdin ewes.

With a grant from FONDOCYT / MESCOYT
Because semi-intensive system is commonly used
Interest in more Prolificacy (maternal line)

- Because local husbandry practices allow it
- Profitability for commercial breeders
- "under similar and appropriate management, more prolificacy is more profitable" Dr. Amable Vásquez

Strategy:
Imported a ram with FecB gene from Canada
Crossed with local ewes (many of them local Katahdin)
Measure prolificacy in F1 ewes and breed with local Katahdin again
Preliminary Results

- F1 ewes with FecB have had twins on first lambing
- F1 ewes without FecB have had single lambs on first lambing
Preliminary results

- Backcross ewes to local Katahdin... just starting to Lamb
- Looks like same tendency.
- Currently FecB rams (heterozygous) in 6 farms
Contribution on Nutrition Aspects

Successful development of vitamin and mineral profile for feed for local conditions

Considering diet with local forage

Current feeding trial: Ground seaweed (Sargassum) mixed with grain feed
Feeding Trials

Requires teamwork

Current feeding trial:
Ground seaweed (Sargassum) mixed with grain feed
Maternal Performance

Formula:

\[
\text{Average prolificacy} \div \text{Average Interval between lambings (months)} \times 10 = \text{MP Number}
\]

Ex.: \[\frac{1.7}{9} \times 10 = 1.89\]
Maternal Performance

- 8% or less lamb mortality assumed
- Range typically between 1.0 and 2.5
- In favor of twin and triple lambing
- We need to lower the Interval between lambings
- EBVs would be “better”
THANKYOU!!

Hope to see you some day in the D.R.!

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