

Workshop Title:

Forage Mixtures & Species

Speakers:

John Duynisveld M.Sc. AAFC Nappan / Owner and operator of Holdanca Farms

Executive Summary:

John Duynisveld presented on his experience with forage mixture and management. He highlighted his farm and the changes that have happened since he started farming there. He also presented on the findings of research he is involved with regarding pasture productivity under various systems. Another major focus was methods to extend the grazing season through winter bale grazing and the benefits those systems.

Main Notes:

Beef nutrition and pasture management research program.

Focus: sustainable beef production systems for Eastern Canada.

Research interest - Forage mixture for long-term pasture productivity, management strategies to lower beef production costs by extending the grazing season, and the role of forage bio-active components in livestock production.

Forage breeding and agronomy.

New alfalfa cultivar CRS 1001

Holdanca Farms

Based in Wallace Bay, NS

Meat cows, pasture chickens, sheep, turkeys, pastured pigs.

Initially beef was lacking in marbling.

After pasture management now there is good marbling, improved beef.

Pasture

Goals for pasture need to be low cost. Low input and labour. Productive = good perennial pasture in speaker's opinion.

Why raise animals on pasture? Environmental benefits, natural for ruminants. Part of mono-gastric diets. Healthier for us. Tastes better!

Health benefits of grass-fed meat and eggs: higher in vitamin E and A, lower saturated fats, higher levels of "good" fats including omega-3 fats and conjugated linoleic acid, fewer pathogenic bacteria.

Environmental benefits of well managed perennial pasture: resilient to climate change, builds soil, diversity (plants, soil life, wildlife), reduce GHG emissions by consuming methane, carbon sequestration.

Diverse forage mixtures yield better than simple mixtures.

Why do mixtures grow more feed?

When well managed, there are a variety of leaf structures. Won't get trampled. Deep roots get deeper nutrients and moisture. Optimal use of resources in the field.

There may be synergies with some combinations.

Resilience for weather differences from year to year.

Value of legume in pasture.

Natural source of nitrogen.

They are high in protein.

Maintain digestibility in summer. Other types of pasture do not.

Liked by livestock.

20-25% legume is ideal. 30-40% by some is recommended.

Beef cluster research

Simple forage mixture.

Forage yield, seasonality, persistence, and forage quality under rotational grazing by cattle or simulated grazing.

Four grass mixtures - complex mixtures.

Results: forage yield. Estimated milk production.

Frequent clipping vs. grazing.

Over time, grasses stay around well, legumes did not stick around well.

Cultivar results.

Some grasses stood out as being very good or very poor.

There were some combinations that stood out as being very well producers.

Mid and late season is where a slump happens in pasture productivity. For grasses.

Long-term agronomic performance.

See slide

Grass mixtures

20 second summary of beef cluster research to date * see slides.

Finishing program: timothy meadow fescue, / bluegrass pasture

We need to reseed legumes ever 2-3 years to maintain them in sward.

Rotational grazing - cattle moved every 2.5-3 days.

Red clover has potential for livestock pasture. Did not see bloating in animals.

Extending the grazing season

Goals of extending the grazing season.

Reduce the feeding costs.

Hauling costs. Harvesting costs. Manure removal costs.

Winter grazing. Lower demands on animal are better for them to perform well in their system. * See rankings on slides.

Environmental effects on animal energy needs.

Temperature, rain or snow, wind, mud, walking distance to necessities.

Coping with the environment.

Good condition going into the fall.

Fat and hair are great insulators.

Lice program is important to maintain hair.

Mud is a big consideration for animals to not waste energy.

Feed gets trampled into the mud and is not eaten by animal.

Avoiding mud in the Maritimes.

Move cattle to new ground as often as possible.

Grazing management affects the entire grazing ecosystem.

Bale grazing.

Uses bales very efficiently. Very little gets left behind.

Swath grazing.

Winter swath grazing.

After day 3 and 4 they are not getting the energy and protein that they need because the feed is getting hard for cattle to reach.

Rumen is an ecosystem. We are changing the make up of the ecosystem when we do not provide a uniform diet.

Recommend that you make the switch more frequently so that there is not a large period between the changes in their diet.

Clover/fescue fall grazing.

Atlantic Canada challenges.

Variable fall weather.

Freeze thaw action.

We have a lot of fall grass growth potential.

To minimize risks, stockpiled pasture before freeze-up. Bale grazing through to spring.

Economics study winter grazing in Maritimes.

Study is currently being done.

Conclusion

When seeding pastures, some grass and legume species (and cultivars) are more suitable than others for pasture.

Consider winter grazing to reduce costs.

Let your animals graze.

Questions

What is the benefit for bale grazing?

Does not need to be stored.

Savings are through less moving cost.

Less bedding costs.

Less manure moving costs.

Oats stockpiling, is that an option?

Concerns would be it getting incorporated into mud and get lost.

Corn?

Cob is a big benefit. Birds and other animals ate these.

Hardening off area for spring.

Mud is a definite issue in the spring.

Carbon sequestration.

Witnessing higher rates in changes in soil organic matter over time.

2-3 tons / acre / year.

There is much more grass produced in our area.

Volume grown around here is much higher than in western situations where some studies have been done.