



LP CONSULTING

Healthy Soils, Healthy Herd

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Pastures are often taken for granted. Every spring it seems without much effort, the grass turns green, we open the gates to the pasture and the cattle feast. But poor soil health is quickly evident after the spring flush is over.

The goal of every beef farmer is to pasture cattle as long as possible and achieve as much gain as possible without supplemental feed. Pasture is the cheapest source of feed there is. Unfortunately, the majority of pastures in the Maritimes have poor soil health – low pH, low nutrient levels, poor grass species and plenty of weeds.

Beef can gain 2-3 lbs/day on properly managed pastures. The key to high gains is animal intake. The amount of grass cattle can consume is directly related to plant growth and regrowth after grazing. Cattle need 70 kg of fresh grass per day and will only graze 8-10 hrs per day regardless of intake, so every bite counts. If plant height is less than 3 inches cattle can only eat 15-20 kg during grazing time. Poor pastures have spotty areas of grass species, which cattle will selectively over graze allowing weeds to take over. Cattle will seldom graze more than 2.5 kms from the water source. It is easy to see how cattle can have low rates of gain on poor pastures.

Improving pH will improve the resilience of grass species. Grasses grow best at a neutral pH, where nutrients are more available in the soil for uptake. The goal should be to have pH near 6.5. Most locations in the Maritimes require a calcitic liming source. Increasing the pH will increase calcium. Calcium is the plant engine, responsible for uptake of nutrients, resilience to stress and cell strength. It helps loosen soils allowing better root growth and water infiltration, reducing compaction and drought stress. Lime, wood ash and N-Rich are all options to improve pH and add calcium.

The grass consumed contains nutrients that need to be replaced in the soil. Yes, cattle deposit manure, but it only contains 75% of the nutrients they remove, and it is usually deposited in concentrated areas. If no additional nutrients are applied, soil nutrients will be depleted. To improve soil nutrient levels, more than what is removed (30 kg/ha P₂O₅ and 70 kg/ha of K₂O) needs to be applied. Meeting nutrient removal rates will only maintain current levels. Chemical fertilizers are not the only solution. At the correct application rates, manure, wood ash and N-Rich can also apply the required nutrients to improve soils.

Nitrogen is essential for volume however the trick is to have it when it's needed throughout the season. Products such as N-Rich and ESN can provide slow release nitrogen for the season in one application. Applying fall manure, then nitrogen after each grazing rotation to promote regrowth is another solution.

There are management practices such as rotational grazing that can improve pasture longevity, but soil health is fundamental. Do not reseed pastures without plans to first address low pH and fertility. Improving soil health may even eliminate the need to reseed.

Most farmers will ask me what will this cost? Instead, ask what investing in your pastures will save you? Poor soil health pastures usually last 89 grazing days (June 1st to Aug 28th) with a stocking rate of 1 cow/calf pair per acre. Moderate soil fertility can last 106 days (June 1st to mid September). Good soil fertility can last 184 days (May 1st to October 31st) with a higher stocking rate!

If a round bale of haylage is \$60, weighs 900 kg and a cow eats one every 12 days, the good pasture will save \$390 per head over the moderate pasture. It will save \$475 per head over poor pasture! A herd of 20 head of cattle could save \$9,500 in round bales.

If you need help on how to build healthy soils for a healthy herd, contact me: mistycroney@eastlink.ca or 902-256-2636.

Keep an eye out for more about soil health from LP Consulting in upcoming newsletters.