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The Helping Hand to Better Agriculture in Albany, Columbia, Rensselaer & Schenectady Counties

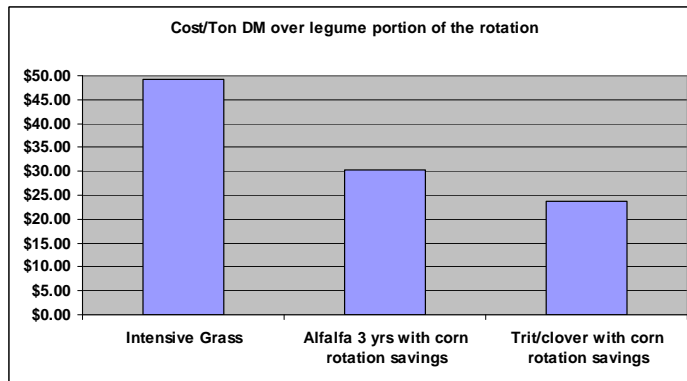
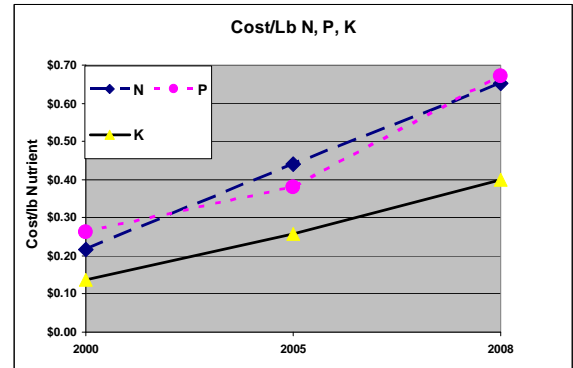
CORNELL COOPERATIVE EXTENSION

Crop Soil News

Economics of Intensive Grass Reconsidering Clover

CAUTION: Milk Line – the predictor of harvest – not this year!

Over the past decade, a number of farms have boosted yields on their poorer drained soils by using reeds canary grass, with 100 lbs of N/cutting (200 lbs/acre for the season). The stands last, the crop grows and yields well, the potentially high quality forage made milk. The rules of the game have shifted. As you can see in the graph at the right, nitrogen costs are nearly three times what they were. How does this affect the economics and what are our options for this soil type?



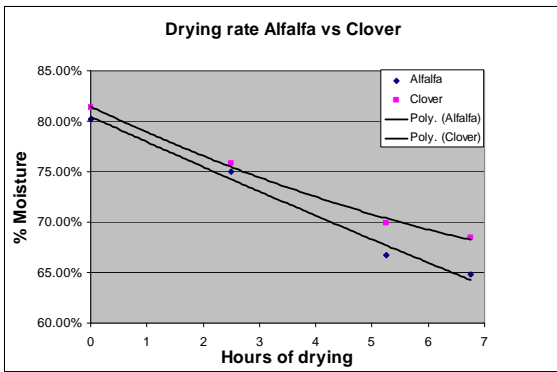
As you can see in the graph at the left, intensive managed grass costs 63% more per ton of dry matter than a short alfalfa rotation. If you factor in the 15% yield increase in the following corn crop and the elimination of additional N other than starter for first year corn, (subtracting out the additional cost tillage of reseeded the legume), you produce dry matter for your cows at half the cost/ton than intensively managed grass. For some

the stony, pain in the butt fields are still worth the extra cost of nitrogen. For most, especially utilizing minimum and no till seeding/corn systems, cutting the cost of your forage in half is an attractive choice.

There are two major options. The first is to go to a short alfalfa rotation if the soil is only marginally drained. Ken Barnett of Wisconsin found the most profitable rotation is a one corn and a three year alfalfa. That is seeding year and two production years after that. This was the most profitable over a wide range of costs. The seeding year was established with oats as a forage crop adding to the yield.

A second option is for fields that will not keep alfalfa past one winter. For these fields, a rotation of winter triticale with frost seeded clover and 2.25 years of clover (seeding year with triticale harvest plus one full harvest year plus first cutting of third year) will yield more and cost less per ton of dry matter than intensively managed grass.

Helping You Put Knowledge to Work



Clover: Isn't that the stuff we used to grow that never got dry? Yes, if you are making dry hay it is not for you. For haylage, clover has an undeserved sullied reputation. As you can see in the graph, first cut clover starts at the same moisture as alfalfa. Mowed wide swath and NOT conditioned, it dried at the same rate as alfalfa, until about 72% moisture. At this point clover slowed slightly while alfalfa continued to dry. As the alfalfa dried, the leaves curled, exposing the leaves underneath to the drying sunlight. The much bigger clover leaves on the other hand, stayed flat as they started to wilt and shaded the under leaves from the drying sun. Tedding clover an hour or two after mowing will move these upper leaves and expose the lower levels to the same sunlight- rapidly drying the crop. (Dr. Cherney at Cornell firmly believes from his research that tedding all haylage after an hour or so of drying is highly effective at accelerating the dry-

ing process and assuring haylage-in-a-day. He also sees NO reason to condition for haylage). As you can see by the graph though, even without tedding the clover, it was still ready to chop the same day, only slightly behind the alfalfa. An advantage of clover, that most farmers do not know, is that the protein in clover is protected. It is not broken down as with alfalfa, and remains in true protein form which is much more usable by the dairy cow. Thus you can feed a higher forage diet without the limits of high soluble protein.

There are excellent breeding programs for clover and improved varieties are much higher yielding than cheap "common" medium red clover. Yields are best under a 3 cut system similar to alfalfa. CP and digestible dry matter equals or exceeds that of alfalfa. No clover will last past the beginning of the third year due to the native grubs we have that decimate the root systems of clover. After the first cut on the third year, you can no-till in a short season roundup ready corn for the summer.

This option is described in detail in the February issue of the Ag News. Is this a perfect crop system? NO. The perfect crop system does not exist. This is a potential crop system that can boost your yields on these less than ideal soils without breaking the bank trying to buy nitrogen fertilizer.

Sincerely,

Thomas Kilcer
 Extension Issue Leader
 Regional Crop and Soil Educator



"It is the crops that feed the cows that make the milk which creates the money."