

Cold Soils Cause Slow Seedling Growth

It's been a frustrating spring for anyone who has made new plantings of pasture or hay. Oats, turnips, and pasture grasses are barely growing and new alfalfa plants struggle to even emerge. Most pastures also seem to be just sitting there. Even gardens are growing slowly.

I think the main culprit is cold soil. April and very early May were relatively cold and cloudy, and when rain occurred it generally was a cold rain. Fortunately, soil temperatures started to increase over the past weekend. For seeds, the physiological processes that activate germination and control emergence are very temperature dependent. Seedlings that burst out of the ground at 50 degrees may barely grow at 45 degrees.

Established plants may not have exactly the same problems, but cold soils release nitrogen very slowly, thus failing to stimulate plant growth. You can see this readily if you look around at hay and pasture fields. Brome pastures might be growing slowly, but urine spots often are deep green and twice as tall. Why? Plenty of extra nitrogen. We also see less stress on pastures fertilized heavily early or pastures with lots of legumes. Why? Again, more nitrogen. And this nitrogen link becomes even more clear when you see that alfalfa, which produces its own nitrogen, is growing quite normally.

Sunny warm days last week and hopefully more to come should speed growth dramatically. Timely rains wouldn't hurt, either.

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