Organic Dairying: Role of Grazing

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Certified organic and many conventional dairy farmers are using grazing techniques for a number of reasons, including building better soil, reducing feed costs, improving milk quality, and enhancing herd health. Additionally, certified organic farmers must utilize their pastures because the United States Department of Agriculture’s (USDA) organic rule requires organic cows to graze. Both the farmer and the USDA are working hard to ensure that “organic dairy” is synonymous with “grazing cows,” because the organic consumer vehemently demands dairy products from pasture-grazed livestock.

The USDA National Organic Program (NOP) is the agency that regulates all organic production, processing, and handling. The NOP recently redefine what “access to pasture” meant. The NOP originally stated that “ruminants must have access to pasture.” It defines pasture as land used for livestock grazing that is managed to provide feed value and maintain or improve soil, water, and vegetative resources. However, “access to pasture” was not well defined, so, in years past, the rule was manipulated to justify confinement operations that were not meeting the spirit of the rule. That spirit is to have animals living in a system that mimics nature, and for a cow, that means grazing on pasture during the grazing season.

Consumers became furious when a few confinement style, organic dairies were discovered by organic consumer watchdog groups to be violating the spirit of the NOP. In order to correct the confusion, the USDA asked for and received significant public input about the original pasture rule. Over 80,500 comments were given in support for strict standards and greater detail on the role of pasture in organic livestock production. Only 28 comments opposed closing the loopholes of the old rule. The USDA listened to the overall consensus and wrote a more stringent rule, which requires cows to have access to pasture throughout the grazing season, as appropriate for each farm’s specific environmental and climatic conditions. The new rule also requires a diet consisting of at least 30% dry matter intake (DMI) from pasture, grazed during the farm’s grazing season. That grazing season must be at least 120 days of each year.

Regulation by the USDA, however, is not at all the reason why organic dairy farmers graze. This is evident by the amount of DMI most organic farmers achieve from their cows, which is above and beyond the USDA’s requirement of 30% for 120 days. Organic farmers tend to double the DMI and their cows spend about 50% more than the minimum number of days required on pasture.
However, there are some very good grazers who are working with less than desirable land that may be just above the minimum. Therefore, access to pasture must be, as the USDA says, “site specific.” Many things can change the length of a grazing season such as aspect, canopy cover, topography, geology, soil depth, precipitation, pasture management, and organic matter in the soil.

Like many grazing farmers, certified organic farmers are exploring ways to extend their grazing seasons and maximize DMI from pasture. In Northern Indiana, many of the organic cows are grazing until late December and into January. Farmers are grazing their herds on turnips, oats, peas, and other creative crops to lengthen the grazing season. Many also graze cover crops in early spring, while their permanent pastures approach the proper grazing height. The summer slump in Southern Kentucky is managed with organic farmers turning their cows out onto sorghum-sudangrass, alfalfa, and hayfields. Farmers that are blessed with acreage, allow the fescue to grow in late summer and early fall, in order to have some overwinter stockpile.

It is common practice through the “Heart of America” region for farmers to graze their permanent pastures around the dairy barn during spring, cutting some of their permanent pastures and all their hay fields while the grass is lush. When summer slump arrives and the grass growth slows, the hay fields are then grazed along with the permanent pasture to give more area to accommodate the herd.

Organic farmers also use grazing for weed control. Dr. Paul Dettloff, the staff veterinarian for CROPP Cooperative/Organic Valley, says a cow should eat 100 different types of plants, once every 3 days. This means that some plants often considered weeds are actually good pasture plants, which I call “Change of perspective” weed control. Some of these plants provide trace minerals that are accumulated by their long tap roots, like the dandelion. Others have tannins that kill parasites, like chicory. But for noxious weeds that must be eradicated, such as Himalayan blackberry, tall grass grazing, overgrazing, and trampling are often chosen techniques for elimination. Non-grazing techniques can also be used, like clipping or plowing. For example, weeds can be tilled under the soil for a corn crop in order to break the weeds’ growing pattern, especially since corn ground is cultivated several times throughout spring.

Manure and urine supply a nutrient boost to the biota in the soil, which secretes and decomposes, providing nutrients which grow the grass that the cow ruminates into milk. This nutrient cycle has other benefits, beyond top-quality milk. It also provides conditions for good herd health, clean air and water, a reduction in methane production, and root surge. Root surge is the root growth that is equal to the vegetative growth above-ground. When the vegetation is grazed, the root dies back in an equal amount to that which the animal took. Root surge is an effective way to increase soil organic matter, being the literal, “grass roots” method to sequester carbon.
There are a few differences that can exist between organic grazing and conventional grazing practices. Since biological processes in the soil are essential to making the entire organic system work, the NOP requires that no input or process may degrade the health of the soil or water. For instance, parasiticides can kill dung beetles, earthworms, and microbes. Therefore, parasiticides are not allowed, and alternative methods such as rotational grazing are employed instead. Another difference is feed. 100% of certified organic livestock feed must be grown on certified organic land, including the feed from pasture. Organic farmers are limited on nitrogen sources where conventional farms have a few synthetic options. However, poultry manure is a popular source, along with a yearly frost-seeding of inoculated clover, for the organic farmer. As mentioned earlier, weed control can be different too. Herbicides have a negative effect to soil life, so they are also prohibited too.

After doing pasture audits and farm visits over the last 6 years on over 300 certified organic farms, I can see benefits of grazing on certified organic land. This is especially true when these organic practices are continued over a few years, giving time for microbial life to thrive. For instance, the active soils decompose manure patties within a couple weeks. Urine and manure spots level out due to the microbes in the soil spreading the nutrients beyond where they drop. These little things all add up to give farmers better bottom lines and healthier cows. The role of grazing in organic dairy is a solid cornerstone for farmers, consumers, regulators, the farm’s ecosystem, and cows. Consensus is a good thing!