



CASE STUDY 4: Implementing partial mixed rations at Sunny Day Acres



When William and Sara Zondag started their dairy goat herd in Port Dover, Ontario, using a Partial Mixed Ration (PMR) program was an easy choice. “I’ve worked on cow dairy farms for some 10 to 15 years. Most of the farms were using a total mixed ration (TMR)-type feed. I had experience with this program and have always liked it,” explains William.

Unlike a TMR, partial mixed rations contain forage and some of the concentrates (often corn, soybeans or commercial pellets) that make up the goat’s daily intake. These components are then run through a feed mixer. The remaining concentrates are fed alongside the mixed feed, which is called top-dressing. Top-dressed feeds can be fed in the pen, or at the parlour. William and Sara feed the custom dairy pellet in the parlour to ensure that each doe is getting as close to their daily nutrient requirement as possible, and may have other benefits for their herd as well.

“Without the feed in the parlour, I think we would have a harder time getting the does into it,” explains William. The use of ‘parlour candy’, or grain fed during milking, is often part of the PMR program for dairy producers.

As Sara is milking, William prepares the feed. He puts dry hay into the mixer, then takes corn silage and haylage from bunker silos that measure 18’ x 100’ x 5’ (5.5m x 30.5m x 1.5m) and 14’ x 100’ x 6’ (4.3m x 30.5m x 1.8m) (width x length x height). Finally, he adds a custom pellet (18 per cent protein). Of the 2.2 kg (dry matter) of ration each doe is offered daily, 45 per cent is haylage, 34 per cent is commercial pellet, 18 per cent is corn silage, and 3 per cent is dry hay by weight. On top of this ration, Sara feeds an extra 250 g of commercial pellet per doe in the parlour each milking.

William says that he has been quite happy feeding PMR, and the small amount of dry hay that they use has allowed him to keep the feed bill down. “In the past few seasons, it’s been hard to produce good quality dry hay, so it would be more expensive to feed than haylage.”

Feeding lower quality dry hay may impact the does’ production, confirms William, “Their intake seems to be reduced when the dry hay is harvested too mature, or sits too long in the field before baling.”

In their 300-doe milking herd, groups are determined by breeding and kidding dates, not by lactation stage or production level. This allows William to feed the same formula to all of the does, keeping the labour cost of mixing feeds down. William suggested that would be difficult to keep silage fresh in his bunker silos if their herd size dropped below 250 milking does, but the size of the bunker will allow the herd to expand without further investments.

Besides the does, William feeds a similar mix to their replacement doelings, dry does and bucks. Beginning at four to five months old, William offers a handful of the mix to the doelings. They also have free choice dry hay. William slowly increases the amount of PMR offered to the doelings; by the time they are seven months old, they have fully transitioned to the feeding program. For the dry does, William notes that their intake declines over the transition period. Close to kidding, the does are consuming around half of the volume that the milking does consume. For the bucks, William prepares a mixture of corn silage, dry hay and the custom pellet.



From his years of experience with this feeding program, William has a few tips for producers considering changing to a PMR system:

1. Don't overfeed – it's wasteful and makes does overweight (which can cause issues for reproduction).
2. Use only high quality forages.
3. Be sure to remove any molds that you find in the bunker silo. Molds can cause health issues and production losses.

This case study is part of a series detailing different feed options in Ontario's goat industry.

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