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**R&J Dairy Seminar: Get dual benefits: cover and forage****Useful insights on winter forages offered**By **MICHELLE KUNJAPPU**  
Special for Farmshine

EAST EARL, Pa. — “Why use winter annual forages?” asked speaker David Hunsberger during the recent R&J Dairy Consulting meeting for dairy farmers here at Shady Maple. The answer comes down to the dual benefits of forage for the herd and healthier soils.

Hunsberger is the regional coordinator for Kings AgriSeeds Inc. He talked about winter forages — including annuals such as triticale, wheat, spelt, barley, rye, legumes such as crimson clover, or mixes — and how they work to maximize land productivity.

For example, he said, “you can get many of the soil health benefits of an over-winter cover crop even if you graze the winter annual.”

Small grains, he continued, can serve the roles of both cover crops and forage, said Hunsberger. They “protect the soil from erosion, build soil organic matter and feed microbes, providing a living root to host rhizosphere-based organisms over winter. If we don’t have a living root for them to colonize it’s not going to be as robust.

He explained that, “if we can raise the actual percentage of organic matter by one percent, we can hold about the equivalent of an inch of rain, or approximately 27,000 gallons of water per acre,” plus less loss of water through erosion, he pointed out.

Hunsberger encouraged producers to think ahead about getting soil testing done. “We want to have 30 units equivalent from manure of commercial nitrogen at planting. In the spring green up 70 to 100 pounds,” he said.

Additionally, sulfur, the main component of amino acids, needs to be added if it’s not in adequate levels in the soil. “Without it, we would have high levels of non-protein nitrogen,” he explained, encouraging producers to apply 10 to 20 pounds of liquid sulfur at planting.

Hunsberger touched on “planting green,” a term that refers to a no-till planting of a crop such as corn or soybeans into an already-growing cover crop. This helps prevent runoff and keeps nutrients for the crop that would otherwise go into groundwater.

However, that technique needs to be

planned, ahead of time, since “if we know we’re going to plant green, we want to only sow 30 to 50 pounds,” said Hunsberger. “We have to be careful with 150-pound rye seeding because the equipment must go down through it and fledgling corn be able to come up through.

“Make sure your existing stand is sparse enough to be closely grazed or that the plants are small enough so that there is plenty of bare ground exposed to the new seeds,” he said. The reason being that the new seeds are no-tilled into that crop.

Another facet of winter forage planting that Hunsberger covered is frost-seeding. This allows producers to seed acreage while it’s frozen, avoiding rutting and compaction. Legumes in a pasture, for example, could provide renovation without tillage with this technique.

“The freeze-thaw cycles of the soil surface create cracking and heaving, which actually helps work seeds into the soil,” he said. Small clover seeds, for example, are a good pick since they disperse easily and reach bare soil for seed to soil contact.

There is an art to the timing, he reminded producers. “Don’t frost seed March 15, the very last day it’s frozen,” said Hunsberger. In fact, “it’s not too early at Christmas, because we need that active freezing and thawing to drive that seed down.”

Treat newly established seedlings with care, advised Hunsberger, who cautioned producers to avoid overgrazing or cutting the stand too short. In fact, he suggested the snap/pull test: when the grass snaps off when it’s pulled on, it’s fine to graze on. However, “if you pull up a couple roots, soil conditions are not right to allow grazing — that mimics what a cow will do to your new stand,” he said.

For fall seedings, he advised seeding early enough for the onset of winter and have cereal grains well enough covered to resist frost-heaving of the plant over winter. For legumes, plenty of potassium is needed, which acts as a sort of antifreeze in the plant.

Hunsberger ran through a list of winter annual forages, and he noted that the small grains traditionally have a low establishment cost, are easy to manage and control, are



David Hunsberger, regional coordinator for Kings AgriSeeds Inc., talked about the dual benefits of winter forages and some of the growing tips. Photo by Michelle Kunjappu

good at nutrient uptake, and can be mixed well with winter annual legumes and brassicas. They begin growth quickly in the fall and fill out rapidly, he said, which helps them to buffer soil against temperature extremes and to out-compete weeds.

**OATS**, he said, are one of the fastest things out of the ground in the fall, do not overwinter, pair well with spring peas, smother out some of the chickweeds, allow you to get in and get an alfalfa crop established.

**BARLEY**, noted Hunsberger, has the best fiber digestibility in a small grain. It is soft enough to harvest as dairy quality, energy-dense feed, is faster growing than other winter annuals in the fall, and does one of the best jobs of drowning out weeds by quick canopy closure.

**WHEAT**, he noted, is among the latest heading in spring, but with great digestibility. He suggested frost-seeding clovers into

wheat in late winter.

**RYE**, said Hunsberger, is a great soil builder, will grow at really low temperatures, and even if it looks barely green will still come out. Rye may be a little higher in lignin than triticale, and it will be green by springtime.

**ANNUAL RYEGRASS**, he noted, can become a weed and grows in the same window as small grains. “If you leave a little stripe of green in the spring, you’ll have a river of grief in summertime,” said Hunsberger. “It has a very dense root system, so what makes it really good for soil building is also the difficulty of terminating it. You really have to turn it all the way over.”

Ryegrass has a fibrous root system that protects and builds soil and scavenges nitrogen, but it needs to be fully controlled before the next crop is seeded. Italian ryegrass is a little different from the annual ryegrass. When planting Italian ryegrass in the spring, said Hunsberger, it will resist heading because our summers here get too warm. It will not put a head on, if it doesn’t get the cold snap.” This is not a problem when fall planting.

**CRIMSON CLOVER**, according to Hunsberger, is “super” for this area, where it will do really well. “Don’t let those beautiful crimson flowers come, because when the flower comes all the way out and gets to maturity, it has a little barb on it so if you’re going to use crimson, get it early because when it is really red, it’s too late for good feed.”

**HAIRY VETCH**, he said, is very high in protein and its dense growth suppresses weeds. It is good for use with a crimper roller to green-plant the corn. As a forage, it is high protein but runs the risk of toxicity in a straight stand.

**WINTER PEAS**, said Hunsberger, are very high protein, can boost yields in a cereal planting, but planting date is critical. They can’t be put in late November.

**BRASSICAS**, he noted, are also high protein, very rich and should be combined with a grass species or other high-fiber feedstuff.



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