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USE BALANCED FERTILITY IN ALFALFA TO MANAGE WEATHER EXTREMES

With varying weather conditions from one growing season to the next, farmers are wise to concentrate their efforts on factors they can control, like soil fertility.

Maintaining adequate fertility levels helps alfalfa reach yield potential attainable in any given season, says Ray Novak, director of domestic market development for IMC Global. Yield responses can be just as significant to nutrient additions in dry years as those applied under more optimum conditions.

"Putting a balanced fertility program in place improves crop performance and reduces the risk of yield loss in unfavorable growing seasons," he says. "When soil nutrient levels are not adequate to meet plant growth demands, they add more stress to plants already struggling."

Each ton of alfalfa dry matter harvested removes an average of 60 pounds of potash per acre and up to 15 pounds of phosphate, Novak says. If yield at harvest were six tons per acre, then about 360 pounds of potash and 90 pounds of phosphate would be needed to keep the system in balance.

He recommends building soil fertility levels prior to seeding and topdressing nutrients immediately after harvest before regrowth resumes when necessary.

To best determine alfalfa nutrient requirements, Novak suggests using a combination of soil testing, crop nutrient removal information and tissue analysis before applying spring fertilizer. On acidic, sandy soils or other soils low in organic matter where repeated high amounts of potassium and calcitic liming materials have been applied, tests may indicate magnesium and sulfur deficiencies.

"A proper potassium level promotes quality root systems that best enhance water use efficiency by the forage crop," he says. "Potassium also remains key in allowing rapid re-growth of roots and shoots after harvest."

Novak reminds growers that plants take up more potassium than magnesium, but these two nutrients need to be kept in proportionate balance.

"A potassium to magnesium uptake ratio ranging from about 10:1 to 12:1 is common for alfalfa," he says. "Sulfur is an important component in the fertilizer mix too as it is an integral constituent of plant proteins."

As part of the fertilizer program, producers can provide alfalfa with several necessary crop nutrients in the form of potassium magnesium sulfate (K-Mag®, also known as Sul-Po-Mag®), according to Dr. Ray Hoyum, Vice President of Market Development and Communications at IMC Global.

"Growers need to team individual nutrients, like potash, magnesium and sulfur with nitrogen and phosphorus for a balanced fertility program - a prerequisite for a healthy, profitable crop," he says. "K-Mag provides the proper balance of these nutrients needed to produce a high quality, yielding alfalfa crop." Mined and processed by IMC Global, K-Mag is a 3-in-1 fertilizer combination that consists of 21-22 percent potash, 10.5-11 percent magnesium and 21-22 percent sulfur.

"Since K-Mag contains potassium magnesium and sulfur, growers may be able to reduce the amount of these nutrients from other sources in the overall mix," Hoyum says. "A low salt index, low chloride content and the fact that K-Mag is 100 percent water-soluble are additional product features that are attractive to alfalfa producers."



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