

also depends on the banding equipment. A “hoe drill” type implement damages forage stands, causing injury to the superficial roots and loss of moisture by opening the soil, particularly in a dry year or in a relatively dry soil-climatic zone. In the present study, the P fertilizer was banded with a special coulter-type disc drill, which apparently does not cause disturbance to soil or plant roots.

Summary

There was a marked increase in forage yield from P applications in all the five years and excellent residual effects from the single P application. Disc-banding at 6-inch spacing produced greater forage yield than surface-broadcasting, whether P was applied annually or as

a single initial application.

Forage productivity can be increased by improving effectiveness of P fertilizer using disc-banding openers on established stands. And, the subsurface banding may reduce the potential for P loss due to surface runoff. However, growers need to balance the potential benefits versus the cost of the banding operation. Banding, especially with narrowly spaced openers, is more expensive than broadcast application so growers are cautioned to ensure the yield increases from the banding offset the additional cost under their soil conditions. [BC](#)

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Oregon: Residue and Fertility Effects on Yield of No-Till Wheat

Researchers found that straw residues had an adverse effect on winter wheat yield and, to a lesser extent, on spring wheat yield when cropped no-till following a cereal. Increasing nitrogen (N), phosphorus (P) and potassium (K) fertility increased grain yield substantially, but did little to alter the adverse effects of the stubble. Relative yields for none, low, moderate and high NPK fertility were 22, 59, 94 and 100 percent, respectively, for winter wheat and 36, 82, 99 and 100 percent for spring wheat.

Much of the effect appeared to be the result of standing residue because fine chopping during one year of the study increased yield in a manner similar to elimination of residue by burning in later years. Researchers concluded that results suggest that light quality, lower soil temperature, or increased soil pathogen activity is the likely source of reduced yield. [BC](#)

Source: Paul E. Rasmussen, Ron W. Rickman, and Betty L. Klepper. 1997. Agron.J. 89:563-567.