

In search of the best crop combo to anchor sandy soils

Nature abhors a vacuum. She just isn't happy with unoccupied space, and the same applies to soil.

Plough up a field or dig up a patch of lawn and, before long, something will be growing on the bare earth. And it's a good thing, too. A carpet of plants acts like a blanket holding the soil in place before it dries out and blows away. It's the best counter to wind erosion.

With this in mind, the Assiniboine Hills Conservation District (AHCD) and local producers have been trying out different combinations of cover crops to conserve their land. The demonstration project has been funded through *Growing Forward*.

Neil Zalluski of the AHCD says the objective is to find out which combinations of seeds provide the best cover for the lowest cost. "A diverse mixture works better than a monoculture because if one variety struggles the other ones will take over," he explains.

Cover crops are particularly important on the sandy soils of south central Manitoba, where AHCD carries out its work in co-operation with Manitoba Agriculture, Food and Rural Initiatives.

Roads through here wander among the rolling hills of fine sand, covered over with waves of green plants and scrub trees. This is the old delta where the once mighty Assiniboine River poured endless tons of sand into the flank of glacial Lake Agassiz. What remains of that delta is a legacy of light, sandy soil – and although it's ideal for potatoes, it's vulnerable to wind erosion.

Besides keeping these soils in place, AHCD is concerned about long term sustainability. That means different plants with different characteristics are blended in the mix. Some are legumes for fixing nitrogen. Others are grasses, both annual and perennial, for holding soil in place. Still others are root crops such as turnips.

The mixed stands of plants raise the soil organic matter content over time, and the resulting hay is good for feeding livestock.



Photo by Assiniboine Hills Conservation District.

Polycropping draws on the benefits of several types of plants to discourage erosion and enrich soil.

"The guys that we've found really like it," Zalluski says. "The feed value is quite high with the mixture we've been using, and it gives producers another opportunity to graze their cattle or provide some bales for them."

At the moment, this is an academic exercise to find suitable combinations for all the different zones within the AHCD. Zalluski says he calls a number of landowners every year to see if they might set up a ten acre test plot on their property.

"We do five sites of ten acre plots every year so we can glean the data from the areas that we want to target," he says.

At each site, AHCD compares five acres of polycrop to five acres of a monocrop seed that is popular in the area.

Call the conservation district toll-free at 1-877-535-2139 or your local MAFRI GO Office if you are interested in participating. ■

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