

## Back to the Fungus

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Reviewing the cow-calf priority list (“Priorities First: Identifying Management Priorities in the Commercial Cow-calf Business”) that was summarized and authored by Tom Field, Ph.D., Fort Collins, Colo., it is very obvious that the highest priorities for cow-calf producers are directly related to the purpose of the cow.

That purpose, to annually produce a calf that will convert roughage from ruminant forage to nonruminant feed, is a very important part of the food chain. Whether food for other animals or food for humans, the conversion of forage by ruminants to protein for use in non-ruminant diets certainly is important. The production of beef for the human diet is the driving force in the commercial beef industry, which is an industry that is more and more dependent on grass.

Some would argue with that statement by noting that the cow-calf business always has been a grass-based industry. However, in the world of cheap, harvested feed, the industry has shifted at times. More manually harvested feeds have been a significant part of the cow-calf enterprise. However, the pasture and range category is No. 2 in the rankings of commercial cattle producers and the top two subcategories involve usage. That usage, as one might guess, involves stocking rate and the timing and duration of grazing.

The priority settings do provide a glimpse into how cow-calf producers view the resources around them and open the door to a discussion of missed opportunities. In the area of pasture and range, it is the plants that form the foundation of the ranch. One could even go further and note that soil health is fundamental to the plant community.

It is through monitoring and evaluation of the plants that one really learns the guts of a grass operation. The coming and going of various plants throughout a grassland community tells a lot about what is happening, not only on grazing impact, but also what one doesn't see, which is the living world beneath our feet.

This spring definitely was a mushroom spring. What is great about the world of mushrooms is that they sim-

ply are giving you a view of a world we cannot routinely see, at least not with the naked eye. Earlier, Lee Manske, Dickinson Research Extension Center range specialist, and I reported on a quick review of a few types of mushrooms evident on our walk in search of fairy rings. The mushrooms are the fruiting bodies of a fungus and the fairy rings are of the genus *Clorophyllum*.

Along the walk, we found a large number of *hyrophorus*, *amanita*, *russula*, *armillarius*, *mycena*, *panaculus* and *cortinarius* mushrooms. All these mushrooms must live on organic matter. Many of the fungi break down or decompose dead plants and animals. Furthermore, mycelium is the network of filamentous hyphae that form the typical vegetative structure of fungi and are always present in the soil.

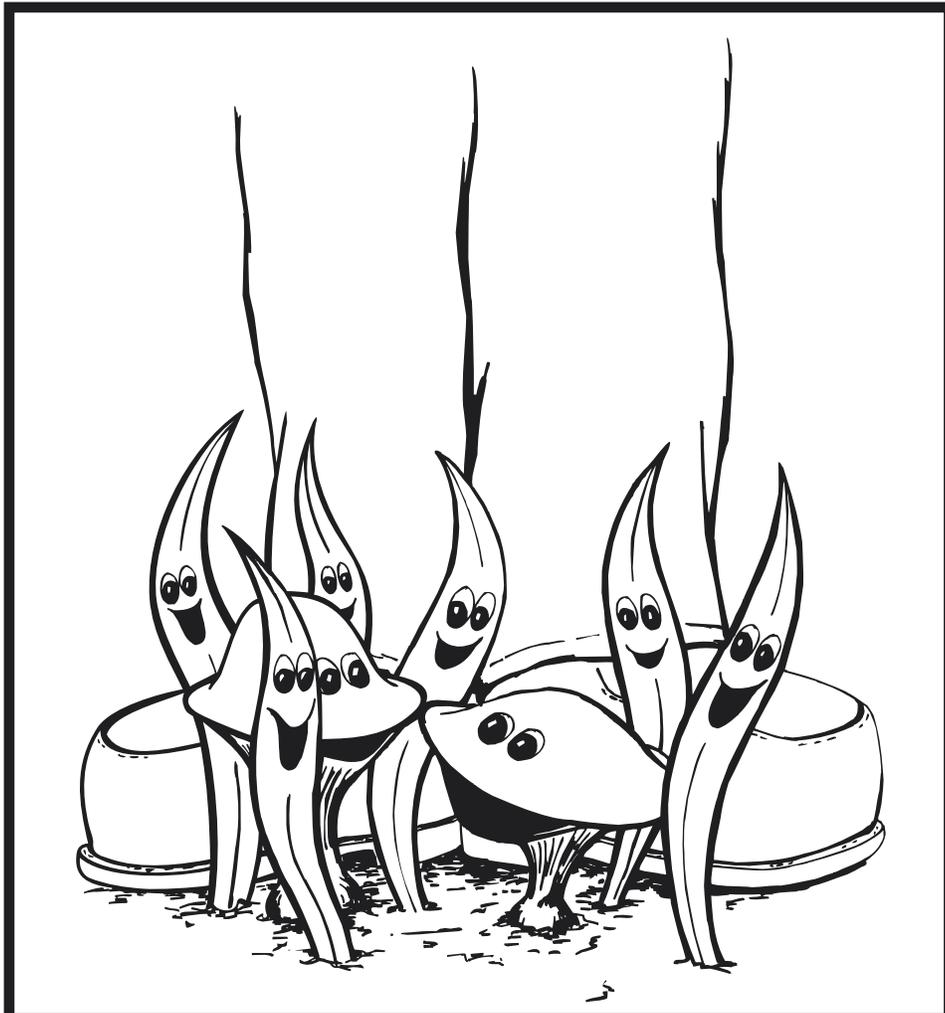
One does not need to look across the landscape to see life. All we need to do is look under our feet to find abundant life. The principle of good stewardship of the land literally starts under our feet and is the basis of the principles that establish the accepted grazing systems that producers use. In fact, according to Manske, fungi literally hold our grassland communities together.

For example, the activity levels of rhizosphere fungi have the ability to aggregate and stabilize soil particles and thereby improve the quality of the soil in grassland ecosystems. The priority ranking is right because the overall management of the pasture and range has considerable significance for the development of today's biologically effective grazing management system. However, don't just look at usage because monitoring the health of grasslands is very complicated, and don't forget to look at the plants and the soil they are growing from.

May you find all your ear tags.

Your comments are always welcome at <http://www.BeefTalk.com>. For more information, contact the NDB-CIA Office, 1041 State Ave., Dickinson, ND 58601 or go to <http://www.CHAPS2000.com> on the Internet.

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Literally Starts Under Our Feet**