HOW TO KILL A PERENNIAL GRASS

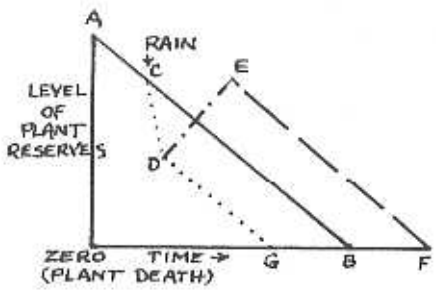
by Rob Brown
Agrostologist

From the Tropical Grassland Society of Australia comes a unique explanation of why our good native grasses are so often in the minority: This item is from The Mulga Line, QDPI, Charleville's local Extension Newsletter, Australia.

Plants don't grow out of nothing. Like you and me they need to be fed and, just as we have fat, plants have their own reserves. These reserves are used to keep the plant "ticking over" during drought. When the reserves run out the plant dies and no amount of rain will revive it. Additionally, reserves are used to make new shoots if plant tops are dead but the rest of the plant, at and below ground level, is still alive.

What is not well understood is that *new shoots are not self-supporting.* There is a net drain from the rest of the plant until such time as the shoot is big enough to repay the reserve material invested in it plus a dividend. The dividend goes to making new roots and shoots and continues until the water in the soil runs out.

As a rule of thumb, *new shoots do not start to pay their own way until they are at least 15 cm long.* If the new shoot is removed before this stage, the plant is worse off than before as it loses its investment before it gets any return. This is best illustrated by the graph below.



AB shows a plant in a prolonged drought. The reserves slowly run down until at time B they are zero and the plant dies. If rain falls at the time C, the plant is still alive (although the stems may be dead) and a new shoot will grow. Over the time from C to D the new shoot takes more from the plant than it contributes so that the reserves run down. At D it becomes big enough to support itself and supply new reserves to make more new shoots, so the overall level of reserves rises until at time E the water runs out and the plant starts to run down again. The difference is that now the plant can survive until time F instead of time B.

As long as rain keeps falling before reserves are exhausted, the plant can carry on forever. Once reserves hit zero, the game is over.

The worst thing that can happen to the plant is to have sheep or kangaroos eat its new shoot at time D. If this happens the plant is worse off than it would have been *without* rain because it has less 'fat' after the rain than it had before. Without its new shoot to top up the 'reserve tank', what is left of the reserves will run out at time G, so the plant has to have rain before then if it is going to survive.

There's no prize for working out that eating young shoots shortens the odds against a plant's survival. To make things worse, the palatable grasses are much more likely to follow the ACDG path while wiregrasses and other undesirable grasses take ACDEF. The moral of the story is that if you don't give the green pick a fair go, don't be surprised if the wiregrasses take over.

Society for Range Management Newsletter
Florida Section

CHAPTER NEWS

CORRECTIONAL INSTITUTE JOINS FNPS

The Indian River County Correctional Institute is one of the newest members of the FNPS, thanks to the efforts of Dr. Herbert W. Kale II of Pelican Island Audubon Society of Vero Beach. Herb writes:

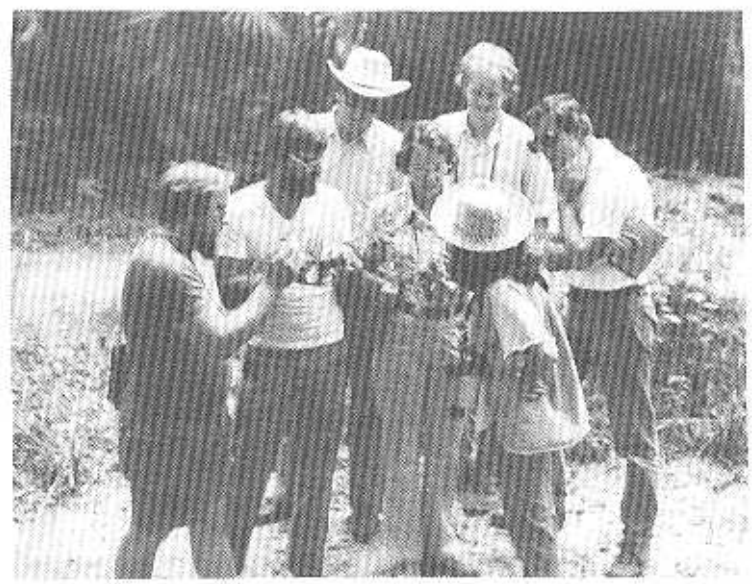
"Recently, the Indian River County Correctional Institute began a horticultural project for its inmates and stated they would grow nursery plants for civic and governmental agencies, etc. I wrote to the superintendent, Mr. Vernon Wright, and suggested that they grow native plants for this purpose, and gave him names of several knowledgeable local people who would assist with the project, and I offered — on behalf of Pelican Island Audubon — to purchase a membership in FNPS for the Institution."

Perhaps other members will consider adapting this fine example to institutions in their areas.

A Chapter is being formed in the Tampa/St. Pete area, under the sponsorship of Environmental Science and Engineering, Inc., who will foot the bills for the Chapter.

Call Tony Arcuri, the Terrestrial Ecologist for ESE, for information, at 813/886-6672.

The Palmetto is eager to publish information on the activities and meetings of all Chapters of FNPS, both in advance (announcements) and after-the-fact (write-ups). Please send information for the November issue by October 10th.



FNPS members from Central Florida on a field trip to Disney World undeveloped areas. Clockwise from left, Richard Lane, Steven Riefler, Fred Harden (whitehat), Jim McKinley, Norman Gilbert, Carol Lutspeich (hat), Pat Harden (center).