

Burning black soil grasses to protect productive country

To reduce the risks of fire in the Downs country in the Kimberley, the fire-management plan on Flora Valley Station is to regularly burn all the black soil grasses on a two to three-year rotational basis.

Rachel and Wayne Bean, Managers, Flora Valley Station, Kimberley region, WA

Flora Valley Station, in the Kimberley region of Western Australia, is located 120 km east of Halls Creek. Flora Valley is owned by the Heytsbury Beef Company and the station covers an area of 6500 km² running 10,000 breeders.

Rainfall is variable across the property, with an average of 22 inches (560 mm) around the homestead, and only 14 inches (355 mm) in the southern region of the station near Gordon Downs.

Heytsbury purchased Flora Valley in September 1989 and Rachel and Wayne Bean have managed the station since 1995. Ian Hoare is the head stockman and together they are actively involved in burning black soil country to remove old rank growth and promote healthier pastures.

The soil on Flora Valley is variable with approximately half being basalt, red hill and creek country (mostly dominated by spinifex), and the other half being Downs country with Mitchell grass (*Astrebla spp*), Silky Browntop (*Eulalia aurea*) and Feathertop grasses (*Chloris virgata*).

Fire history

Wildfires are a major threat every year at Flora Valley, mostly threatening from the south. The greatest wild-fire risk occurs from July onwards when strong south-easterly winds can prevail putting the Downs country at most risk. If the Downs country were to burn at this time of the year, Flora Valley would lose the majority of its productivity.

To reduce the risks of fire in the Downs country, Wayne and Ian regularly burn all the black soil grasses on a two to three-year rotational basis. Because of relatively reliable rainfall at Flora Valley, this sort of fire regime is easily implemented without risking lost feed.

Fire management

Burning the black soil country is carried out opportunistically where possible, and many fires are lit during first-round mustering, which usually occurs in late April to May. Wayne and Ian attempt to burn in a rotational pattern producing a natural firebreak. Areas burnt in one year will not be burnt again the following year.

The preferred type of fire for the Downs country is a total and complete burn, which can be best achieved in warm and windy conditions. The best fires are lit early in the day and previously burnt areas act as a break to prevent fires from travelling too far. The red hilly country on Flora is also burnt regularly to prevent wildfire,

and to keep the country healthy. Regularly burning the spinifex promotes fresh new growth, which is a good food reserve for cattle. Burning also keeps the country open and reduces prolific growth of woody species, making mustering easier. The onset of steady rainfall in November initiates regrowth of the Mitchell grass in freshly burnt areas. This regrowth is of a high quality and produces better pick and feed.

Benefits of burning black soil country

The benefits of burning black soil country far outweigh the costs. As burning is carried out opportunistically and incorporated in with other station jobs, there are very few costs at all. Burning requires only minimal manpower.

Some of the major benefits include:

- **Reducing stocking pressure within paddocks**

Burning different areas of the paddock and promoting fresh growth encourages stock to use the whole paddock, rather than over-grazing the same areas, particularly around the major watering points.

- **Increased economic returns**

Before fire was used on Flora Valley, the station was one of the poorest performing properties of Heytsbury Beef in the Top End. Since Wayne has incorporated burning and grazing, Flora Valley now experiences very high weight gains.

Conclusions

Burning black soil should not be a task taken lightly, and other good management practices should also be in place for the effective regrowth of healthy grass systems. The stocking of burnt areas should be carefully managed, as intensive grazing on fresh regrowth may permanently damage perennial tussocks.

With sound knowledge of the country and the right management practices, burning black soil grasses benefits both the country and the cattle.

Visit the Tropical Savannas CRC website for more information on land-management issues: <http://savanna.ntu.edu.au/>

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