

Farm Business Resilience Program

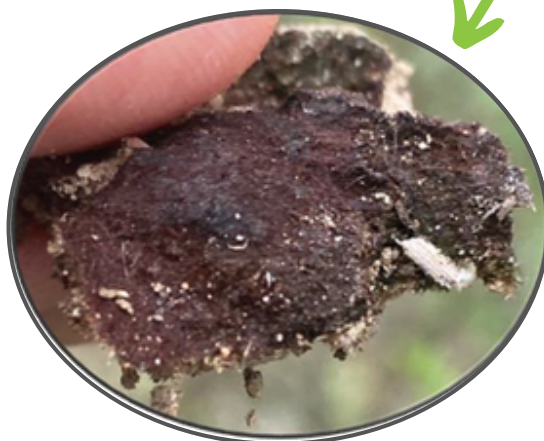


Biocrusts: Your Allies for Healthy Grazing Systems

You may have noticed these unassuming crusts on the ground, but did you know they play a crucial role in soil health? These are biocrusts! Often overlooked between grass plants but essential components of the ecosystem. Recent research highlights their benefits, especially in grazing systems. Learn how managing biocrusts can positively impact your land.

What Are Biocrusts?

- **Biological soil crusts** form a visible skin or dark 'crust' on the soil surface.
- They consist of **microorganisms** such as fungi, lichens, liverworts, mosses, cyanobacteria and bacteria.
- They thrive in the top 1 - 2 cm of soil.
- Covering approximately 12% of the Earth's ground surfaces, biocrusts are **widespread**.
- During the dry season, they become dormant, reactivating and growing in the wet season.
- Remarkably **resilient**, biocrusts withstand drought and fire, serving as **indicators of soil health**.



The Farm Business Resilience Program is jointly funded through the Australian Government's Future Drought Fund and the Queensland Government's Drought and Climate Adaptation Program.

How do biocrusts 'work' for you?

Increase carbon and nitrogen

- Photosynthesising like plants - they sequester carbon from the atmosphere.
- Fixing atmospheric nitrogen - they provide 5 kg per hectare annually.

Protect and improve soils

- Releasing nutrients into the soil - they enhance fertility.
- Stabilising soil surfaces - they prevent erosion.

Promote healthy pastures

- Acting like a sponge - they capture and retain moisture.
- Providing accessible nutrients - they fix nitrogen in plant available forms.
- Actively working in the growing season and persisting through the dry season.

How can you care for and encourage healthy biocrusts?

Do less:

- Heavy grazing and trampling of healthy biocrust areas
- Vehicle movement off-tracks causing compaction

Do more:

- Wet season spelling when they are actively growing
- Moderate stocking rates
- Rest paddocks during drought
- Include biocrusts in your monitoring program
- Tell others about biocrusts!



Learn more: Access these excellent resources below or contact wendy.williams@uq.edu.au

<https://futurebeef.com.au/resources/biocrust-project/>

<https://futurebeef.com.au/biocrusts-the-living-skin-of-rangeland-soils/>

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