READ THE WEED
with Nicole Masters
What is a weed?
Weeds: doctors of the soil
Read your weeds:

• 1. Quickly protect bare/disturbed soil
• 2. Low organic matter
• 3. Balance minerals
• 4. Microbial imbalances and
• 5. As a safety valve for toxins.
Disturbance events

• Due to natural events or human impacts
Plant: Biology Relationships

Bacterial Dominated

Annual grasses

Bact:Fungal 1:1

Fungal 1000:1
Weeds as indicators

• Many weed species are indicating low available Ca and low humus
• Foxtail barley grass (primitive grasses): low Ca, nitrates, compaction
• Broadleaf weeds often prefer low P or high K
Low fertility “weeds”

- Wheat grass
- Moss/liverworts
- Rushes
- Onion weed
- Foxtail barley grass
- Bent grass
- Sweet vernal
- Crab grass
What are they indicating?

- Low fertility
- Low P
- Low Ca
- Low fungi
- Low biological activity
- Check structure/compaction
- Overgrazing
Medium fertility ‘weeds’

- Annual ryegrass
- Barnyard grass
- Tall wheat grass
- Red/curled dock
- Tall fescue
- Common burdock (AA)

- May need Ca
- Check for soil compaction/crusting
- Bacterial dominance
High fertility ‘weeds’

- Prairie grass
- Cocksfoot
- Dandelions
- Lamb’s quarters, pigweed, nettles

- May indicate as before, plus excess of some nutrients, eg Mg, K, N
- Balance Ca:Mg
Weeds of excess

- Amaranthus (pigweed)
- Black Nightshade
- Marshmallow
- Lambsquarters
- Barley Grass
- Stinging nettle
Weeds of excess

• Excess nutrients
• N, K
• Very high biological activity
• Imbalance in N cycle
• Low protozoa
• Low carbohydrates
Balance excess weeds

• Balance soil minerals
• Feed fungi
• Humates
• Innoculate with protozoa
• Smaller paddocks- move stock more often, with longer recoveries
Non-mycorrhizal weeds

- Fanweed
- Pigweed
- Lambsquarters
- Sedges and rushes
- Brassica- mustard weed
- Lupin
Release valve weeds

- Kochia
- Knapweed
- Rats tail/barley grass
- Russian thistles
Actions for release valve weeds

• Test pastures with refractometer
• Avoid grazing
• Soil test for possible contamination

• Humates, BioChar, milk, milk thistle
Test your weeds:

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Units</th>
<th>Rye</th>
<th>Capeweed</th>
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<tr>
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<td>Phosphorus</td>
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<tr>
<td>Nutrient</td>
<td>Units</td>
<td>Rye</td>
<td>Capeweed</td>
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<tr>
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Soil Health Regeneration

1. Harness sunlight capture
2. Always keep soil covered (armour)
3. Optimal grazing timing/recovery
4. Feed the soil
5. Diversity/diversity/diversity
6. Identify/take action on limiting factors
What signal are you sending to soil?

Weeds I have:

What they’re telling me:
Transition tips