1980

Pasture Manipulation - Grass control the year prior to cropping

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SUMMARY OF EXPERIMENTAL RESULTS
1980

Pasture Manipulation - Grass control the year prior to cropping
PASTURE MANIPULATION - GRASS CONTROL THE YEAR PRIOR TO CROPPING

AIM
1. To measure the effects of various grass control treatments on pasture production and composition in the spraying year.
2. To measure the effects of grass control on wheat yield in the year following pasture treatment.

TREATMENTS
1. Untreated.
2. Kerb 1.5 kg ha\(^{-1}\) sprayed in early winter.
3. Paraquat 550 ml Grammoxone at the clover 6+ leaf stage.
4. Spraytop 880 ml ha\(^{-1}\) Sprayseed at 80-90% grass head emergence.

TRIAL
1. 80M041
2. 80M040
3. 80AB2

LOCATION
1. M. Nixon "Kallaroo" Moora
2. D. Lefroy "Colvin" Moora
3. AB & RI "Austinlea" Katanning

SOIL TYPE
1. Red-sandy loam, hard setting surface, red clayey sub soil neutral in reaction
2. Undulating with laterite ridges, sandy surface with yellow mottled sub soil - acidic in reaction (8.7% gravel >2mm at 0-10cm)
3. Sandy/loamy soil with patches of salt areas.

HISTORY
1. Cropped 1979
2. Pasture 1979
3. Pasture 1979

PASTURE
1. Medic/barley grass/capeweed
2. Dwalganup/barley grass/capeweed
3. Dwalganup/barley grass/capeweed
RESULTS:

Table 1: THE EFFECTS OF GRASS CONTROL TREATMENTS ON BOTANICAL COMPOSITION AND DRY MATTER PRODUCTION (cut in early September) OF THREE MIXED PASTURES

<table>
<thead>
<tr>
<th>TRIAL</th>
<th>80MO41</th>
<th>80MO40</th>
<th>80AB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>Untreated</td>
<td>Kerb</td>
<td>Paraquat</td>
</tr>
<tr>
<td>COMPOSITION (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grass</td>
<td>50</td>
<td>16</td>
<td>39</td>
</tr>
<tr>
<td>Clover</td>
<td>50</td>
<td>74</td>
<td>56</td>
</tr>
<tr>
<td>Capeweed</td>
<td>0</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>DRY MATTER PRODUCTION (kg ha$^{-1}$)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ungrazed</td>
<td>5800</td>
<td>6220</td>
<td>5830</td>
</tr>
<tr>
<td>Grazed</td>
<td>1320</td>
<td>1600</td>
<td>1410</td>
</tr>
</tbody>
</table>

* plots were ungrazed for 6 weeks prior to sampling.

Table 2: EFFECT OF GRASS CONTROL TREATMENTS ON THE NUMBER OF GRASS SEED HEADS m$^{-2}$ AT AUSTINLEA (80AB2)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Heads m$^{-2}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>316</td>
</tr>
<tr>
<td>Kerb</td>
<td>0</td>
</tr>
<tr>
<td>Paraquat</td>
<td>248</td>
</tr>
</tbody>
</table>
DISCUSSION

Excellent barley grass control was achieved with Kerb (propyzamide). At the three sites, the grass proportion in the pasture was reduced by 68% (80M041), 89% (80M040) and 100% (80AB2). Clover growth was unaffected by Kerb and the spring dry matter production was higher in the Kerb than either the paraquat or untreated plots in trials 80M040 and 80AB2.

In a paddock grazed situation sheep tended to selectively graze the clover dominant Kerb treated plots.

Paraquat had little effect in controlling barley grass, with the grass proportion in the pasture being reduced by 22% (80M041), 0% (80M040) and 9% (80AB2).

At Katanning (80AB2) paraquat reduced the number of grass heads m\(^{-2}\) by 21%, while Kerb gave 100% control.

The effectiveness of the spraytop treatment will be assessed after the break of season by counting the number of grass seedlings.

Clover seed yields, clover and grass regeneration and soil N levels will be measured prior to cropping the sites in 1981.