

## ***Assessing new varieties and mixes to increase pasture production in the West Midlands Region: Part 1- Dry matter production***

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### *Key Messages*

- Cereal based pasture mixes provided the greatest dry matter production
- Oats/vetch and forage ryecorn show promise for increased winter production

### *Background*

A wide window of pasture production can give producers greater opportunity to maximise livestock production during the year. By using a diverse range of pasture species and varieties throughout the farm, peaks in pasture production can be spread throughout the season to meet the needs of varying classes of livestock. For example, high winter producing pastures can support winter lambing twin lambing ewes, or late season pasture mixes can be used for growing out lambs to maximise production/head. Matching pasture production and livestock requirements can dramatically improve animal production while reducing the cost of supplementary feeding. The aim of this trial was to evaluate a range of pasture mixes that have the potential to fill niche pasture production windows in the West Midlands region.

This pasture demonstration site was located at the 2019 Spring Field Day site near Dandaragan on a sandy loam soil type. The site was established on the 5<sup>th</sup> May using a plot seeder to dry seed 12 pasture mixes (Table 1), with a volunteer pasture adjacent to the site as comparison. Up to 3 pasture cuts were taken from each plot during the season to assess pasture production. The site was mown in August to simulate grazing, and NKS21 fertiliser was broadcast to each treatment on the 25/6/19 and 5/8/19.

Table 1: Pasture mixes demonstrated at the Spring Field day site at Dandaragan in 2019.

<b>Plot</b>	<b>Treatment</b>	<b>Supplier</b>	<b>Rate kg/ha</b>	<b>Total Rate kg/ha</b>
<b>1</b>	Forbes Sub-Clover	Seed Force		10
<b>2</b>	Tammin Sub-Clover	Seed Force		10
<b>3</b>	Dalkeith & Izmir sub-clover mix		Dalkeith @ 6.6 Izmir @ 3.3	10
<b>4</b>	Margurita Serradella			8
<b>5</b>	Margurita serradella/ Spartacus Barley			38
<b>6</b>	Express Oats, Vortex Ryegrass, Nitro Persian Clover mix	Heritage Seeds	Oats @ 60 Ryegrass @ 10 Clover @ 2	72
<b>7</b>	Express oats/ Volga vetch mix	Heritage Seeds	Oats @ 60 Vetch @ 25	85
<b>8</b>	Dictator II Forage Barley	Heritage Seeds		100
<b>9</b>	Ascend Ryegrass	PGG Wrightson Seeds		25
<b>10</b>	Cooee Forage Oats	PGG Wrightson Seeds		100
<b>11</b>	Southern Green Forage Ryecorn	PGG Wrightson Seeds		60
<b>12</b>	Appid Leafy Turnip	PGG Wrightson Seeds		4
<b>13</b>	Volunteer Pasture (capeweed, ryegrass, clover)			

## Results

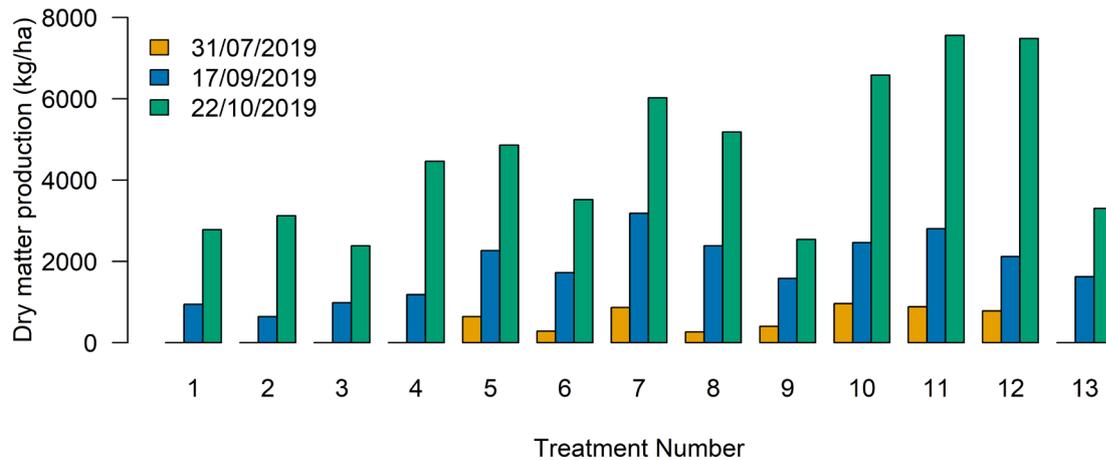


Figure 1. Dry matter production of each pasture mix evaluated at the Dandaragan site in 2019. Dry matter production is cumulative between each of the three measurement dates to show the total amount of pasture production by 22/10/19. Some treatments were not sampled at the first sample date as there was insufficient dry matter available.

The sub clover and serradella treatments were very slow growing for the winter period, and produced approximately 3000 and 4000 total kg DM/ha (respectively, Figure 1), with much of this growth occurring during between the 17/9 and 22/10. The highest winter producing pasture mix was the Express oats/Volga vetch mix and closely behind this was the forage ryecorn. Pasture mixes that had a component of cereal species in them (treatments 5,7,8,10,11) produced a large amount of dry matter production in the period up until 22/10. Mixes that contained tetraploid ryegrass had comparatively lower dry matter production.

The break to the season occurred on the 7<sup>th</sup> of June; there was 100mm of rainfall for June; and 266mm for the growing season (data not presented).

## Discussion

From the pasture mixes evaluated in 2019, the cereal based mixes produced significantly higher dry matter production compared to the legume based mixes. All pasture mixes tended to their most dry matter during spring between the 17/9 and 22/10. The oats/vetch mix and forage ryecorn show promise to be able to grow a greater amount of dry matter in the winter period. The use of Appin Turnips or cereal based pasture mixes show promise to produce a bulk of feed for late season use.

Further evaluation of pasture mixes will continue in 2020.

## Acknowledgements

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