Seed Mix Trial 2019 Harvest Three and Four

Trial Update

This growing season has been very dry, and the annual rainfall has been around decile one to three. Rainfall recorded at Dardanup was approximately 122 mm in August and only 36 mm in September (Figure 1). Harvest three of the Seed Mix trial took place on the 5th of September, which was 28 days after harvest two. Harvest four was carried out on the 1st of October, which was 26 days after harvest three. However, with most of the September rainfall occurred at the start of the month, pasture growth for harvest four relied heavily on soil moisture retained.

Pasture growth for harvest three was affected by a broadleaf selective herbicide applied after harvest two (5 L/ha Kamba M and Ravage). Also, forage plants other than the ryegrass dropped out of the mixed swards after harvest two, and ryegrass became the dominant species in the plots. That said, it should be noted that the forage brassica (Buster) in the plots from IH Seeds formed tubers and this potentially contributed to the yields of harvest two and three.

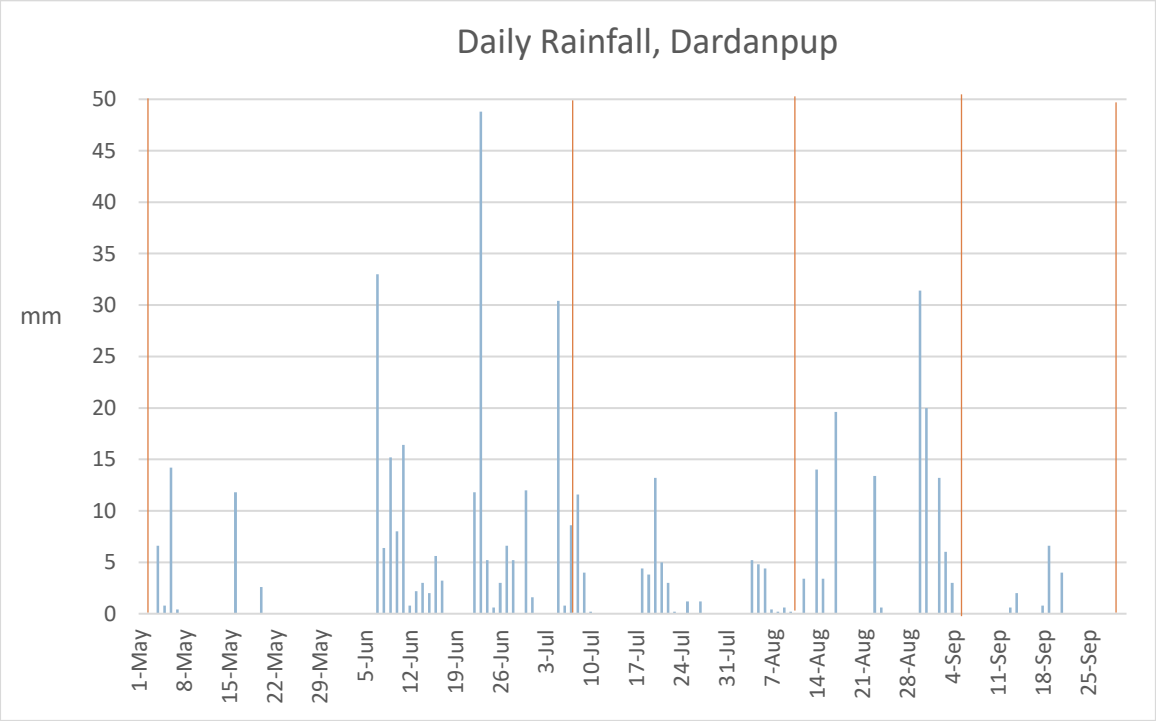

Figure 1. Daily rainfall recorded between May and September 2019 at Dardanup, Western Australia. Data source: Dardanup East (9527), Australian Bureau of Meteorology. Blue bars represent daily rainfall (mm), orange bars indicate seeding day and Harvest 1 to 4 (left to right), respectively.

Results

Dry matter (DM) yield of harvest three was low for early spring, with an average of 1.3 t DM/ha (Figure 2). However, the pasture recovered and produced about 2 t DM/ha on average at harvest four (Figure 3). The DM yield of harvest four was mainly from the ryegrass, as it had become the dominant species in the sward in mid-spring. Treatment groups from IH Seeds, Control, and PGG Wrightson Seeds yielded similarly well and performed statistically better than treatment groups from Heritage Seeds and Landmark (Figure 3; see harvest one and two report for treatment details).

Seed mixes from IH Seeds, Control, PGG Wrightson Seeds, and Landmark produced similar tonnes of DM from four harvests in this growing season (Figure 4). It is notable that seed mixes from Landmark, PGG Wrightson Seeds, and Heritage Seeds yielded significantly higher than Control group at harvest one. Furthermore, the yield increased greatly from harvest one to harvest two, due to sufficient soil moisture and the warmer weather supporting optimal plant growth. Yields dropped at harvest three due to the herbicide application (see above), and it recovered at harvest four with the growth of ryegrass. Further analysis of the feed quality of these mixed swards will help producers identify which seed mix has the best economical return for their system.

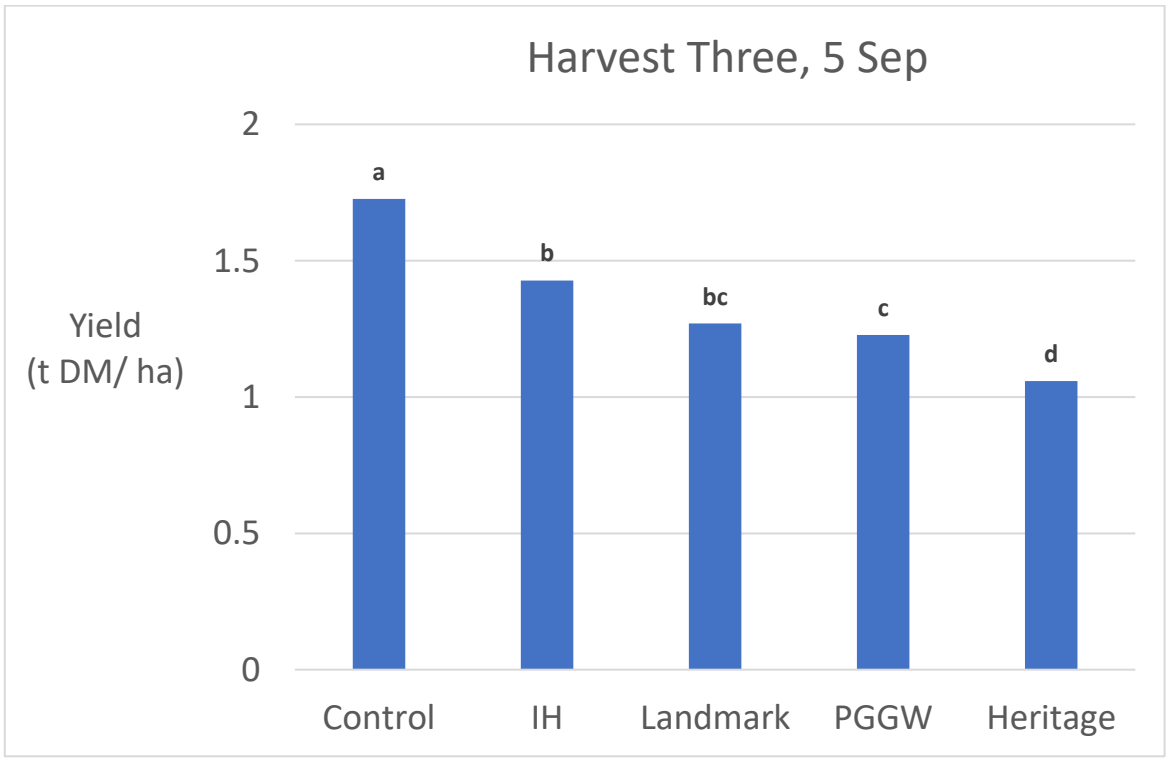

Figure 2. Harvest three DM yield of Seed Mix Trial 2019 at Dardanup site, Western Australia.

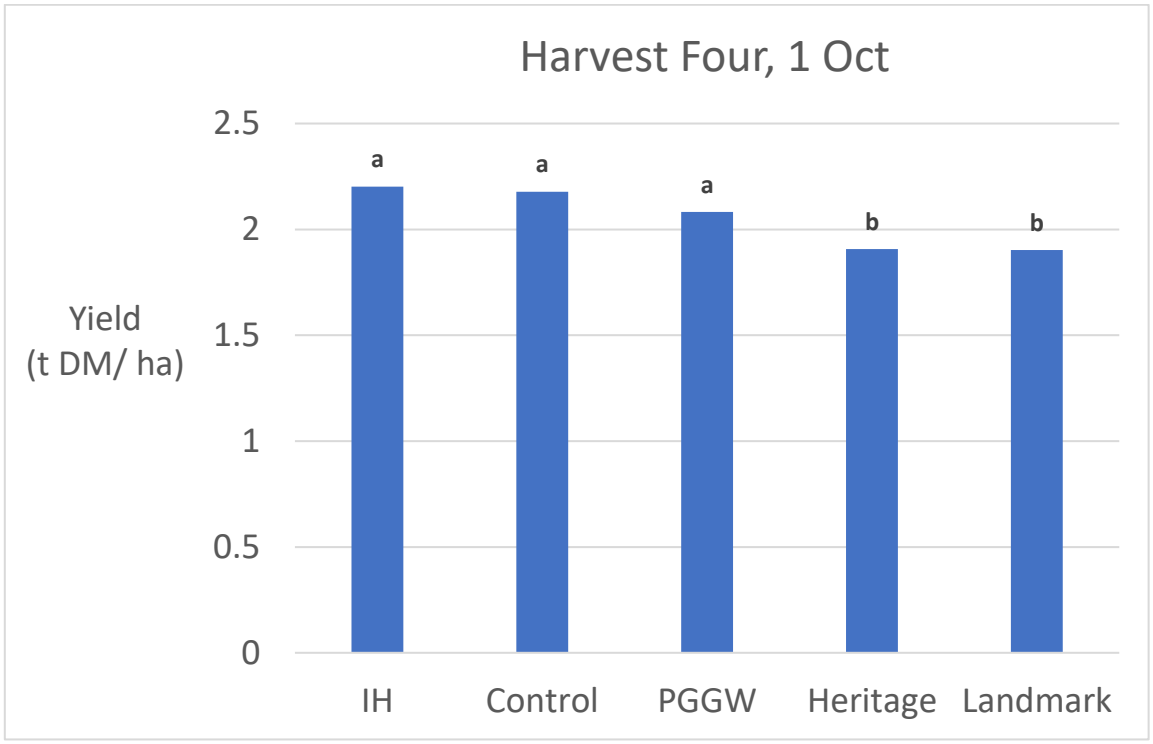

Figure 3. Harvest four DM yield of Seed Mix Trial 2019 at Dardanup site, Western Australia.

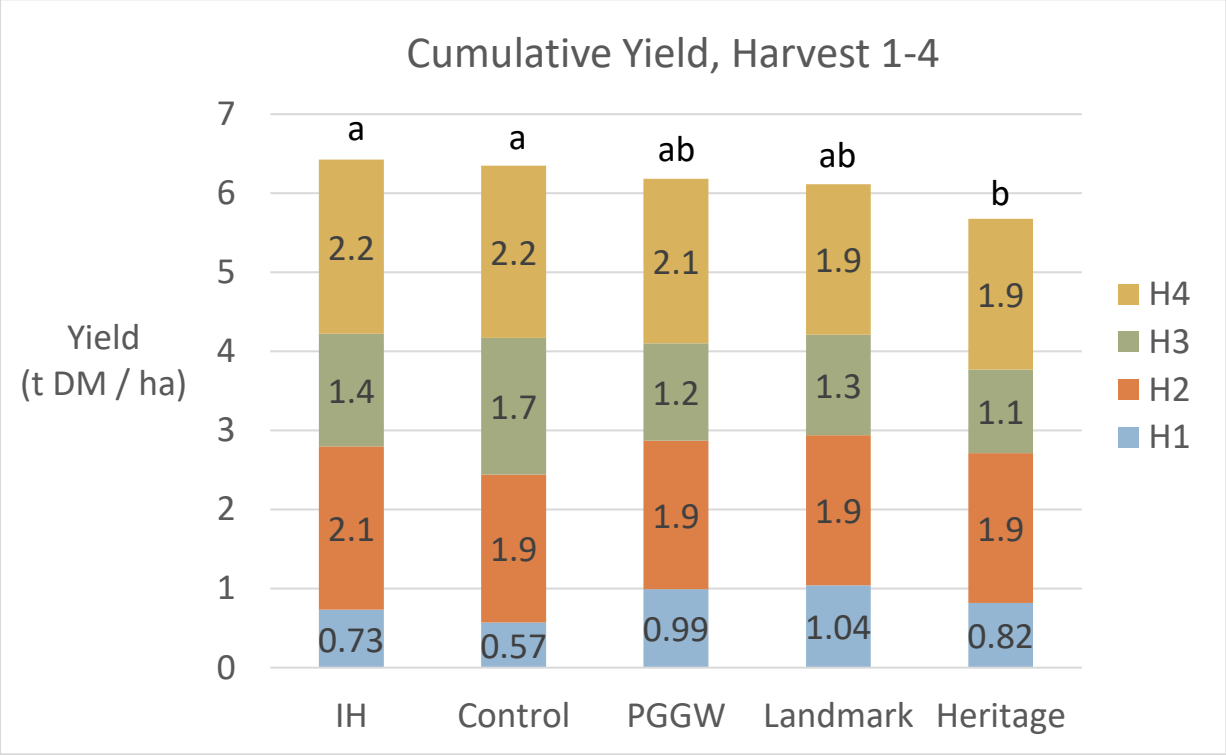

Figure 4. Cumulative DM yield from harvest one to four of Seed Mix Trial 2019 at Dardanup site, Western Australia. Legend: H1 to H4 represents harvest one to harvest four, respectively.