

The 2017 season at Hart

Early seeded crops were sown into good soil moisture, with 62.2 mm recorded for April (Figure 1). The site's soil moisture probe indicated the 'bucket' was 60 - 70% full (total PAWC 206 mm) in early May.

Time of sowing research trials required irrigation to achieve early sowing (mid-March) and establishment at Hart. Rainfall was patchy and lower than expected early in the growing season, with well below rainfall in May, June and June (combined 93 mm less than the long-term average).

Much needed rainfall (44 mm) occurred in early August however, September and October rainfall was below average, recording 36 mm in total (Figure 1). There were few frost and heat events at Hart in 2017. However, they still caused significant damage to crops at susceptible growth stages. To see the maximum and minimum daily temperatures to Hart, refer to page 20 of this manual (Figure 1). Care should be taken when interpreting variety and time of sowing trials due to differences in varietal maturities and therefore possible frost / heat incidence this season.

Overall the 2017 growing season rainfall at Hart was 191 mm compared to the long-term average of 300 mm (Table 1). Without stored soil moisture pre-seeding the yields harvested would not have been achievable. In general yields across the Mid-North were variable this season with majority producing average or slightly above average yields. Majority of Hart's trials were harvested in late November, prior to the 40 mm which fell in early December.

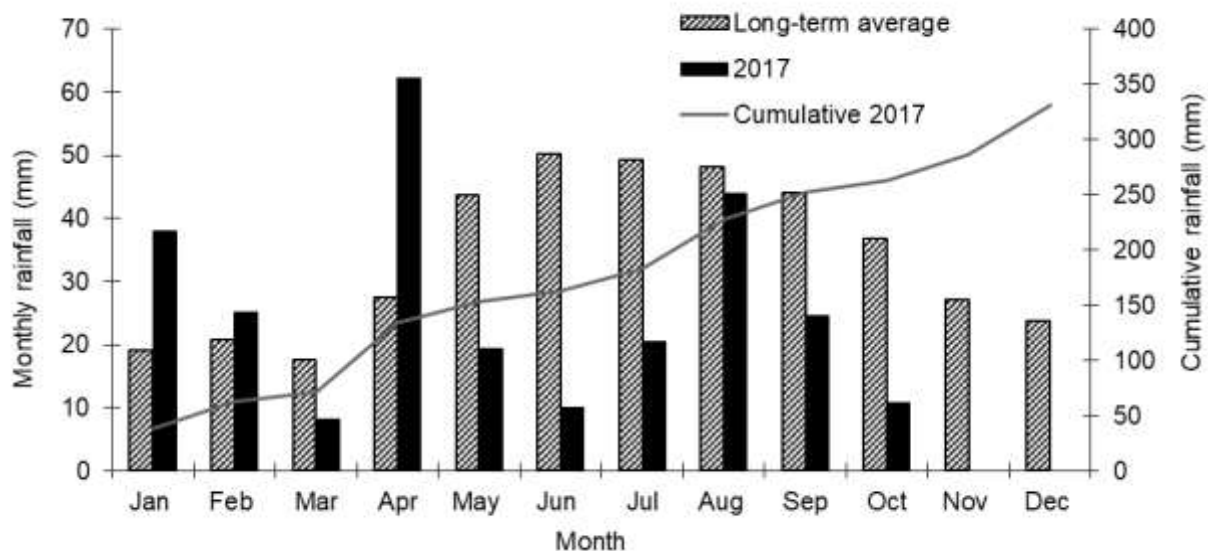


Figure 1. Hart rainfall graph for 2017 and long-term (100 year) average. The grey line indicates cumulative rainfall for 2017.

Table 1. Hart rainfall chart 2017

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1					3.2				0.4			9.8
2								2.6	1			19.6
3							2.2	2.8	3.4		0.8	1.8
4		1.8					6.2	1.4	5.6			
5		7					0.2	1.2	6.8			
6		16.4				0.4	0.2	8.6	0.2			
7			1				0.6	1.6	0.6	0.2		11
8							0.2					
9	12.8			1.4								
10												
11										4.2		
12			6.6									1
13	10.2		0.4						3.8			
14							0.8	0.6				
15								17			2.6	
16						1.2	2.8				0.2	
17					1.2		1	0.2				
18						0.2	0.6	0.2	1.6			0.2
19	11			0.4	4.2				0.4			0.2
20	1			47.6				5.2				
21				0.4				1.8				
22					1.2						4.2	
23	1.6			0.2	0.8			0.2			7.4	
24	1.4			9.6						0.4	1	
25						0.4	2.6					
26				2.6		0	0.2					
27					0.2	0.6	0.4	0.6				
28					2.8	6.8			0.8			0.2
29					1.6	0.2				0.8		0.2
30			0.2		4.2	0.2				5.2	7.6	
31							2.4					
Montly total	38.0	25.2	8.2	62.2	19.4	10.0	20.4	44.0	24.6	10.8	23.8	44.0
GSR rainfall				62.2	81.6	91.6	112.0	156.0	180.6	191.4		
Total rainfall	38.0	63.2	71.4	133.6	153.0	163.0	183.4	227.4	252.0	262.8	286.6	330.6

Hart trial site – soil analysis

General soil physical and chemical properties for the Hart field site. Sampled on 10th May, 2017.

	Sampling depth (cm)			
	0 - 10	10 - 30	30 - 60	Total profile
Texture	sandy loam - loam			
Gravel %	5	5	5	
Phosphorus Colwell mg/Kg	25	39	4	
Potassium Colwell mg/Kg	397	155	117	
Available soil nitrogen kg/ha	15	25	17	57
Sulphur mg/Kg	5.1	4.5	6.2	
Organic Carbon %	1.2	0.8	0.4	
Conductivity dS/m	0.1	0.1	0.1	
pH Level (CaCl ₂) pH	7.8	7.9	8.4	