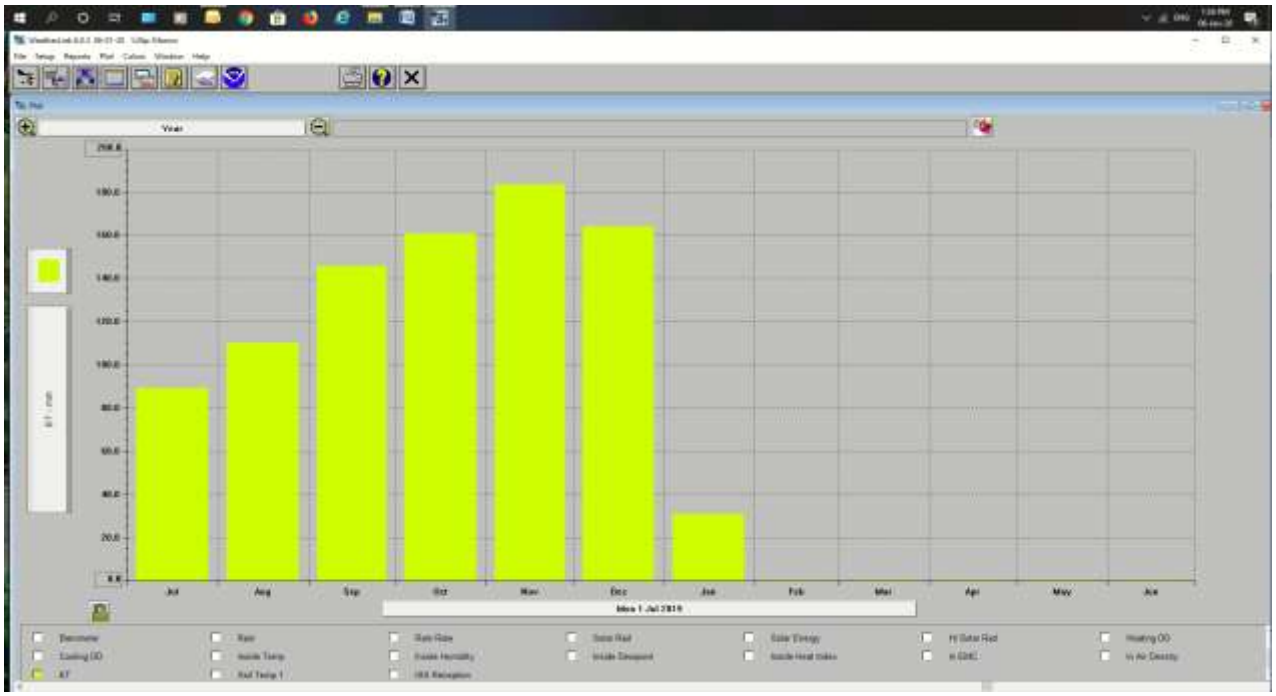
Milestone D 6.1: Attachment C - Crop water use

Evapotranspiration (ET_0) July – Dec 2019 recorded at Manoo trial site weather station



Irrigation Analysis

2019-2020 Potential Irrigation demand -irrigation applied

Potential crop water use July - December 2019							
	July	Aug	Sep	Oct	Nov	Dec	
Daily evapotranspiration (Recorded)	2.8	3.5	4.7	5.15	6	5.22	
Potential crop evapotranspiration based on crop factors per crop class							
Early harvest ratoon (mm/ha)	0.27	0.58	1.6	2.52	4.8	5.4	
Mid harvest ratoon (mm/ha)	0.0	0.0	0.4	1.26	3.6	4	
20% late harvest ratoon (mm/ha)	0.0	0.0	0.0	0.42	2.4	3	
Per day (av) mm/ha	0.1	0.2	0.7	1.4	3.6	4.1	
Average farm monthly crop moisture demand	July	Aug	Sept	Oct	Nov	Dec	Total
Days per mth	31	31	30	31	30	31	184
Daily demand (mm/day/ha)	0.1	0.2	0.7	1.4	3.6	4.1	
Monthly demand (mm/mth/ha)	3	6	20	43	108	128	308
2018-19 Rainfall (Manoo site weather station)							
2018-19 monthly (mm/mth) no effective rain calc due to low volumes	6.0	14.8	1.0	30.4	31.2	19.6	103
2018-19 crop water balance and irrigation requirement							
Potential monthly crop water balance (deficit - mm/mnth)	0	0	19	13	77	109	205
Irrigation required (mm/mth/ha) incl 20% app efficiency allowance	0	0	23	16	92	130	246

Rainfall received = 1.03 ML/ha

July of December potential crop requirement = 2.46 ML/ha

2018 – 2019 actual irrigation applied = 1.6 ML/ha

The volume of irrigation ultilised reflects the difficulties experienced when irrigation allocation is less than the crop demand during extended drought periods. Farm allocation is195 ML for 55 ha = 3.5 ML