

Supplementary material

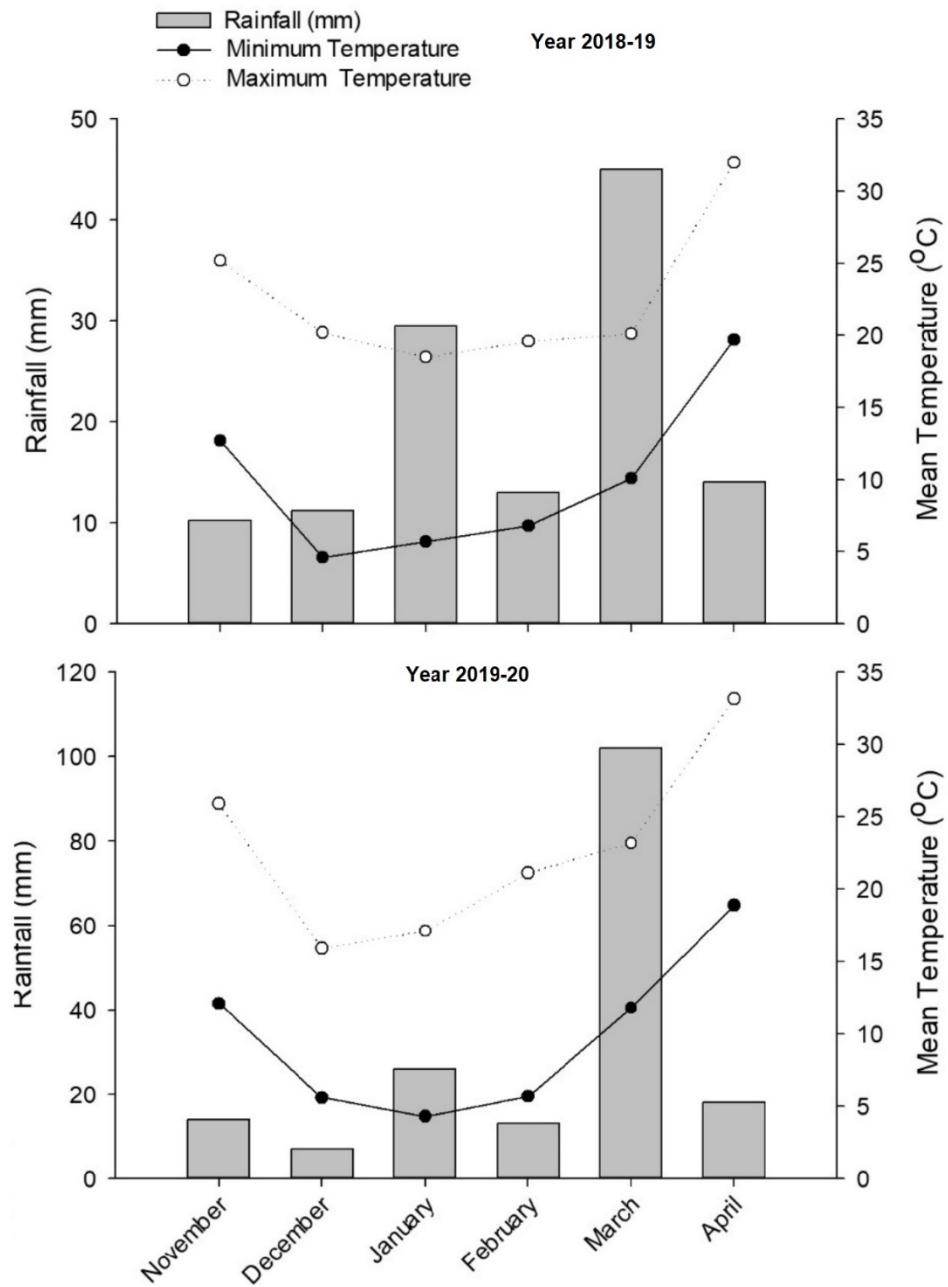


Fig. S1: Weather data of experimental location for the year 2018-19 and 2019-20.

**Table S1:** Genotypes used in the experiment with their source and main characteristics

Genotype	Source/origin	Major characteristics
9868	Department of Plant Breeding and Genetics, University of Agriculture, Faisalabad	Normal maturity duration, adoptable to normal sowing
9782	Department of Plant Breeding and Genetics, University of Agriculture, Faisalabad	Normal maturity duration, adoptable to normal and late sowing
9779	Department of Plant Breeding and Genetics, University of Agriculture, Faisalabad	Normal maturity duration, adoptable to normal sowing
9774	Department of Plant Breeding and Genetics, University of Agriculture, Faisalabad	Normal maturity duration, adoptable to normal sowing
9733	Department of Plant Breeding and Genetics, University of Agriculture, Faisalabad	Normal maturity duration, adoptable to normal sowing
9725	Department of Plant Breeding and Genetics, University of Agriculture, Faisalabad	Normal maturity duration, adoptable to normal and late sowing
9618	Department of Plant Breeding and Genetics, University of Agriculture, Faisalabad	Normal maturity duration, adoptable to normal and late sowing
AYUB-2000	Ayyub Agricultural Research Institute, Faisalabad, Pakistan (Release year 2000)	Normal maturity duration, adoptable to normal sowing
Miraj-2008	Ayyub Agricultural Research Institute, Faisalabad, Pakistan (Release year 2008)	Normal maturity duration, adoptable to normal and late sowing
AS2002	Ayyub Agricultural Research Institute, Faisalabad, Pakistan (Release year 2002)	Normal maturity duration, adoptable to normal and late sowing
Bhakkar 2002	Arid Zone Research Institute, Bhakkar, Pakistan (Release year 2002)	Normal maturity duration, adoptable to normal sowing
SYN-31	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal and late sowing
SYN-32	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal sowing
SYN-33	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal sowing
SYN-37	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal and late sowing
SYN-40	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal sowing
SYN-42	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal sowing
SYN-46	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal and late sowing
SYN-50	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal sowing
SYN-83	Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan	Normal maturity duration, adoptable to normal sowing