

**Table 1.** Sowing, the lengths of growth stages and the irrigations dates for the studied fields during 2002/2003 and 2015/2016 growing seasons.

	Field	Sowing date	Lengths of growth stages (days) ( $l_{ini}$ , $l_{dev}$ , $l_{mid}$ , $l_{late}$ )*	Irrigation dates										
				1 <sup>st</sup> IR	2 <sup>nd</sup> IR	3 <sup>rd</sup> IR	4 <sup>th</sup> IR	5 <sup>th</sup> IR	6 <sup>th</sup> IR	7 <sup>th</sup> IR	8 <sup>th</sup> IR	9 <sup>th</sup> IR	10 <sup>th</sup> IR	11 <sup>th</sup> IR
2002/2003	F1	14-Jan-03	(42/32/36/24)	4-Feb-03	20-Mar-03	13-Apr-03	21-Apr-03							
	F2	17-Dec-02	(25/54/43/33)	28-Jan-03	22-Feb-03	10-Apr-03								
	F3	11-Jan-03	(42/24/38/33)	1-Feb-03	21-Feb-03	14-Mar-03	24-Mar-03	7-Apr-03	24-Apr-03					
2015/2016	F4	22-Dec-15	(25/58/52/28)	28-Dec-15	17-Jan-16	06-Feb-16	19-Feb-16	12-Mar-16	22-Mar-16	10-Apr-16	27-Apr-16			
	F5	13-Dec-15	(22/62/65/25)	27-Dec-15	17-Jan-16	18-Jan-16	31-Jan-16	25-Feb-16	11-Mar-16	18-Mar-16	10-Apr-16	20-Apr-16	27-Apr-16	06-May-16

*IR means irrigation. \* ( $l_{ini}$ ,  $l_{dev}$ ,  $l_{mid}$ ,  $l_{late}$ ) are the lengths of four crop growth stages (initial, development, mid-season and maturity, respectively).*

**Table 2.** Calibrated soil hydraulic parameters used in the HYDRUS-1D model.

Soil layer	$\theta_r(\text{cm}^3/\text{cm}^3)$	$\theta_s(\text{cm}^3/\text{cm}^3)$	$\alpha (\text{cm}^{-1})$	n(-)	Ks(cm/day)	l(-)
1 (0-5 cm)	0.0945	0.35	0.0094	2.06	2.5	0.5
2 (5-10 cm)	0.0945	0.38	0.0078	1.53	14.40	0.5
3 (10-20 cm)	0.0945	0.41	0.0079	1.45	14.40	0.5
4 (20-30 cm)	0.0945	0.41	0.0088	1.39	14.40	0.5
5 (30-50 cm)	0.0945	0.42	0.0090	1.36	8.71	0.5