

Table 1S. Irrigation scheduling of winter wheat in 2014-2015 and 2015-2016. D0 – surface irrigation; D60, D75 and D90 – same amount of water was applied at 60%, 75% and 90% of the depth of the root distribution; the irrigation pipe interval such as 30 – the vertical distance between surface soil and pipes.

Growth stages	Treatment	Average maximum root depth [cm]	Plan irrigation depth [cm]	Irrigation pipe interval [cm]	Irrigation amount for each pipe [mL]
2015	D0		0	0	1,833
	Green - jointing (3/8)	120	72	0/30/60	1,469/309/55
	D75		90	0/30/50/80	1,371/140/218/104
	D90		108	0/30/50/70/90	967/207/210/188/261
	D0	178	0	0	1,833
	Jointing-heading (4/11)	192	115	0/30/60/90	890/409/148/386
	D75	197	147	0/30/50/80/120	755/220/222/472/164
	D90	200	180	0/30/50/70/90/120/150	525/315/225/149/318/203/98
	D0	219	0	0	1,883
	Filling (5/4)	250	150	0/30/60/90/120	767/367/224/289/186
	D75	250	188	0/30/50/80/120/150	635/212/270/470/140/106
	D90	258	221	0/30/50/70/90/120/150/180	569/218/228/131/358/193/86/50
2016	D0		0	0	2,036
	Green - jointing (3/18)	120	72	0/30/50	1,557/224/255
	D75		90	0/30/50/70	1,212/266/290/268
	D90		108	0/30/50/70/90	855/260/276/374/271
	D0	172	0	0	2,036
	Jointing-heading (4/18)	199	119.4	0/30/50/70/90/110	519/330/337/377/351/122
	D75	211	158.3	0/30/50/70/90/110/130	412/337/281/263/297/209/237
	D90	227	204.3	0/30/50/70/90/110/130/150/170	361/313/244/259/285/115/73/138/248
	D0	207	0	0	2,036
	Heading-filling (4/28)	252	151.2	0/30/50/70/90/110/130	483/313/287/330/264/239/118
	D75	253	189.8	0/30/50/70/90/110/130/150/170	445/289/243/263/227/211/121/129/108
	D90	259	233.1	0/30/50/70/90/110/130/150/170/190	413/263/256/268/184/189/128/126/110/99
	D0	211	0	0	2,036
	Filling – maturity (5/9)	255	153	0/30/50/70/90/110/130	515/286/260/303/237/212/223
	D75	260	195	0/30/50/70/90/110/130/150/170	484/262/229/295/214/164/111/134/143
	D90	278	250	0/30/50/70/90/110/130/150/170/190/210	373/252/225/234/194/134/104/77/130/137/176