

**Table 1. The main effects of planting dates (D), genotypes (C) and nitrogen fertilizer levels (N) on plant height (cm), yield and its components in 2015/2016 and 2016/2017 seasons**

Characters Treatments		Plant height(cm)		Spike length (cm)		1000-grain weight (g)		Grain yield (ardab/fed.)		Biological yield (ton/fed.)		Straw yield (ton/fed.)		Harvest index (%)	
		2015/ 2016	2016/ 2017	2015/ 2016	2016/ 2017	2015/ 2016	2016/ 2017	2015/ 2016	2016/ 2017	2015/ 2016	2016/ 2017	2015/ 2016	2016/ 2017	2015/ 2016	2016/ 2017
Planting Dates	D1	87.08	91.70	10.69	12.04	45.23	46.03	16.07	16.96	5.19	5.55	2.78	3.01	46.83	46.12
	D2	92.19	97.67	10.80	12.51	46.99	48.18	17.03	17.95	5.36	5.76	2.81	3.08	48.10	47.06
F-test		**	**	ns	ns	**	**	**	**	**	**	ns	ns	**	**
Genotypes	G1	83.58	88.37	10.79	12.40	45.49	46.51	18.38	19.17	6.06	6.41	3.30	3.53	45.79	45.10
	G2	97.88	102.32	9.11	10.55	42.69	43.15	13.10	14.04	3.93	4.32	1.97	2.21	49.93	48.71
	G3	94.71	100.15	12.77	14.14	52.17	53.36	17.81	18.74	5.69	6.10	3.02	3.28	47.25	46.43
	G4	82.37	87.89	10.29	11.99	44.08	45.41	16.90	17.87	5.44	5.83	2.90	3.16	46.91	46.12
F-test		**	**	**	**	**	**	**	**	**	**	**	**	**	**
LSD 5%		1.76	2.46	0.81	1.06	2.22	1.25	0.87	1.14	0.75	2.02	0.65	0.23	2.40	1.62
Nitrogen fertilizer levels	N1	87.34	92.15	10.02	11.58	43.75	44.60	14.49	15.29	4.39	4.78	2.23	2.49	49.24	47.89
	N2	90.83	96.00	11.31	12.77	46.73	47.96	17.35	18.32	5.61	5.98	3.01	3.23	46.63	46.17
	N3	90.73	95.90	10.90	12.47	47.85	48.75	17.81	18.76	5.83	6.23	3.16	3.42	46.54	45.71
F-test		**	**	**	**	**	**	**	**	**	**	**	**	**	**
LSD 5%		2.36	2.12	1.09	1.50	0.46	0.35	1.36	1.16	0.62	0.71	0.52	0.32	0.29	0.47

D1=15 November

D2=10 December

G1=Sids12.

G2 = NGB 6404.

G3= NGB 10893.

G4= Giza 168.

N1=50 kg N/fed.

N2=75kg N/fed.

N3=100kg N/fed.

\*, \*\*, indicated to highly significantly at 5% and 1% levels of probability, respectively..

LSD=Least significant difference.

ns= Non-significant.

**Table 2. Interaction effect of planting dates x genotypes (DxG), planting dates x nitrogen fertilizer levels (DxN) and genotypes x nitrogen fertilizer levels (GxN) on the plant height (cm), yield and its components in 2015/2016 and 2016/2017 seasons.**

Characters		Plant height (cm)		Spike length (cm)		1000-grain weight (g)		Grain yield (ardab/fed.)		Biological yield (ton/fed.)		Straw yield (ton/fed.)		Harvest index (%)	
		2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017
<b>DxG</b>	<b>D1G1</b>	84.16	89.23	11.03	12.62	44.10	44.36	17.64	18.29	5.93	6.22	3.28	3.48	44.87	44.26
	<b>D1G2</b>	91.77	94.88	8.89	9.81	41.87	42.24	12.79	13.79	3.85	4.23	1.93	2.16	49.74	48.82
	<b>D1G3</b>	89.36	94.74	12.19	13.52	51.66	52.98	17.27	18.21	5.59	5.98	3.00	3.25	46.48	45.71
	<b>D1G4</b>	83.04	87.96	10.63	12.20	43.28	44.54	16.58	17.54	5.41	5.78	2.92	3.15	46.24	45.69
	<b>D2G1</b>	83.01	87.51	10.54	12.18	46.89	48.67	19.12	20.05	6.19	6.59	3.32	3.58	46.70	45.94
	<b>D2G2</b>	103.99	109.77	9.33	11.29	43.51	44.06	13.42	14.30	4.01	4.41	2.00	2.27	50.13	48.60
	<b>D2G3</b>	100.06	105.56	13.36	14.77	52.68	53.73	18.36	19.28	5.79	6.21	3.05	3.32	48.01	47.14
	<b>D2G4</b>	81.69	87.83	9.96	11.79	44.89	46.28	17.23	18.19	5.46	5.89	2.88	3.16	47.57	46.54
<b>F-test</b>		**	**	**	**	**	**	**	**	ns	ns	ns	ns	**	**
<b>LSD 5%</b>		3.18	2.65	0.96	1.09	1.13	1.35	2.19	2.02	-	-	-	-	1.06	1.07
<b>DxN</b>	<b>D1N1</b>	84.82	89.71	9.89	11.24	42.83	43.55	13.72	14.49	4.33	4.69	2.27	2.51	47.50	46.35
	<b>D1N2</b>	88.64	92.99	11.23	12.52	45.98	46.86	16.95	17.84	5.53	5.87	2.99	3.19	46.29	45.88
	<b>D1N3</b>	87.78	92.41	10.94	12.36	46.88	47.68	17.55	18.55	5.7	6.10	3.09	3.32	46.71	46.14
	<b>D2N1</b>	89.86	94.58	10.14	11.92	44.68	45.66	15.26	16.10	4.46	4.88	2.18	2.46	50.97	49.43
	<b>D2N2</b>	93.01	99.02	11.40	13.02	47.48	49.07	17.76	18.80	5.69	6.09	3.03	3.27	46.97	46.47
	<b>D2N3</b>	93.69	99.40	10.85	12.58	48.83	49.83	18.07	18.97	5.94	6.37	3.23	3.52	46.37	45.28
<b>F-test</b>		ns	ns	ns	ns	**	**	**	**	ns	ns	ns	ns	ns	ns
<b>LSD 5%</b>		-	-	-	-	1.12	1.08	2.17	2.13	-	-	-	-	-	-
<b>GxN</b>	<b>G1N1</b>	80.85	85.28	10.10	11.58	43.03	43.95	16.18	16.88	4.9	5.32	2.54	2.79	48.82	47.51
	<b>G1N2</b>	83.72	88.68	10.92	12.42	45.58	46.22	18.82	19.59	6.2	6.55	3.41	3.61	45.26	44.85
	<b>G1N3</b>	86.18	91.15	11.35	13.20	47.87	49.37	20.14	21.04	6.9	7.35	3.96	4.19	43.28	42.95
	<b>G2N1</b>	96.00	100.63	8.48	10.13	40.95	41.05	11.53	12.38	3.6	4.03	1.91	2.17	47.41	46.14
	<b>G2N2</b>	100.02	104.37	9.73	11.02	43.15	44.52	14.16	15.16	4.26	4.64	2.14	2.36	49.84	49.04
	<b>G2N3</b>	97.62	101.97	9.12	10.50	43.97	43.88	13.62	14.59	3.89	4.29	1.84	2.10	52.56	50.96
	<b>G3N1</b>	92.78	98.43	11.88	13.40	49.20	50.68	15.76	16.54	4.57	4.99	2.23	2.51	51.16	49.71
	<b>G3N2</b>	97.18	102.45	13.87	15.20	54.00	55.30	19.45	20.57	6.39	6.78	3.48	3.70	45.63	45.48
	<b>G3N3</b>	94.15	99.57	12.57	13.83	53.30	54.08	18.24	19.12	6.09	6.51	3.36	3.65	44.96	44.09
	<b>G4N1</b>	79.73	84.23	9.60	11.20	41.82	42.73	14.49	15.38	4.39	4.78	2.21	2.48	49.56	48.20
	<b>G4N2</b>	82.38	88.52	10.73	12.43	44.17	45.82	16.99	17.95	5.56	5.94	3.01	3.25	45.80	45.32
	<b>G4N3</b>	84.98	90.93	10.55	12.35	46.27	47.68	19.23	20.28	6.36	6.78	3.47	3.74	45.35	44.84
<b>F-test</b>		**	**	ns	ns	**	**	**	**	**	**	**	**	**	**
<b>LSD 5%</b>		2.72	3.04	-	-	3.25	3.26	2.14	2.03	1.13	18.1	0.71	82.0	3.16	2.88

**Table 3. Interaction effect of planting dates genotypes x nitrogen fertilizer levels(DxGxN) on plant height(cm),yield and its components in 2015/2016 and 2016/2017 seasons.**

Characters			Plant height (cm)		Spike length (cm)		1000-grain weight (g)		Grain yield (ardab/fed.)		Biological yield (ton/fed.)		Straw yield (ton/fed.)		Harvest index (%)		
			2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	2015/2016	2016/2017	
DxGxN	D1	G1	N1	81.33	85.73	10.37	11.87	41.53	42.03	15.11	15.52	4.81	5.10	2.54	2.77	47.14	45.69
			N2	84.27	89.87	11.20	12.73	43.97	44.03	18.21	18.88	6.15	6.40	3.41	3.57	44.48	44.23
			N3	86.87	92.10	11.53	13.27	46.80	47.00	19.60	20.48	6.84	7.17	3.90	4.10	42.99	42.86
		G2	N1	90.43	94.87	8.23	9.20	40.17	39.87	11.02	11.95	3.56	3.92	1.91	2.13	46.45	45.70
			N2	94.03	95.60	9.60	10.30	42.93	43.77	13.87	14.80	4.11	4.47	2.03	2.25	50.55	49.64
			N3	90.83	94.17	8.83	9.93	42.50	43.10	13.49	14.62	3.88	4.29	1.85	2.10	52.21	51.12
		G3	N1	87.20	93.40	11.20	12.70	48.63	50.43	14.54	15.53	4.58	5.01	2.40	2.68	47.58	46.48
			N2	93.00	97.60	13.13	14.40	53.53	54.73	19.11	20.11	6.35	6.71	3.48	3.69	45.17	44.97
			N3	87.87	93.23	12.23	13.47	52.80	53.77	18.16	18.99	5.83	6.23	3.11	3.38	46.70	45.69
		G4	N1	80.33	84.83	9.77	11.20	40.97	41.87	14.21	14.97	4.36	4.72	2.23	2.48	48.84	47.54
			N2	83.27	88.90	10.97	12.63	43.47	44.90	16.59	17.57	5.53	5.90	3.04	3.26	44.97	44.66
			N3	85.53	90.13	11.17	12.77	45.40	46.87	18.94	20.10	6.32	6.71	3.48	3.70	44.93	44.89
	D2	G1	N1	80.37	84.83	9.83	11.30	44.53	45.87	17.25	18.24	5.13	5.54	2.54	2.81	50.49	49.33
			N2	83.17	87.50	10.63	12.10	47.20	48.40	19.42	20.30	6.33	6.70	3.41	3.65	46.05	45.46
			N3	85.50	90.20	11.17	13.13	48.93	51.73	20.68	21.59	7.12	7.53	4.02	4.29	43.57	43.04
		G2	N1	101.57	106.40	8.73	11.07	41.73	42.23	12.04	12.82	3.73	4.13	1.93	2.20	48.37	46.57
			N2	106.00	113.13	9.87	11.73	43.37	45.27	14.46	15.53	4.41	4.81	2.25	2.48	49.13	48.44
			N3	104.40	109.77	9.40	11.07	45.43	44.67	13.75	14.56	3.90	4.30	1.83	2.11	52.91	50.80
		G3	N1	98.37	103.47	12.57	14.10	49.77	50.93	16.97	17.55	4.56	4.97	2.06	2.34	54.73	52.95
			N2	101.37	107.30	14.60	16.00	54.47	55.87	19.79	21.04	6.44	6.86	3.47	3.70	46.08	45.99
			N3	100.43	105.90	12.90	14.20	53.80	54.40	18.32	19.25	6.36	6.80	3.61	3.91	43.22	42.49
		G4	N1	79.13	83.63	9.43	11.20	42.67	43.60	14.78	15.78	4.41	4.84	2.19	2.48	50.29	48.86
			N2	81.50	88.13	10.50	12.23	44.87	46.73	17.39	18.33	5.59	5.98	2.98	3.23	46.64	45.98
			N3	84.43	91.73	9.93	11.93	47.13	48.50	19.51	20.46	6.40	6.85	3.47	3.78	45.77	44.79
F-test			**	**	ns	ns	**	**	**	**	ns	ns	ns	ns	**	**	
LSD 5%			6.02	5.21	-	-	3.15	3.14	1.89	1.27	-	-	-	-	1.28	1.26	