

## Effect of Sowing dates on Growth and Seed Yield of Chickpea in Nandyal zone

**Key words :** Chickpea, Date of sowing, Varieties, Yield, Yield attributes.

Chickpea (*Cicer arietinum L.*) is one of the major pulse crop through out the world. In world it is cultivated in 13.2 M ha with a production of 11.6 m tons. In India chickpea is grown in 9.21 M ha with the production of 8.88 M tones with a productivity of 995 kg ha<sup>-1</sup> (DAC Statistics, 2013). In Andhra Pradesh chickpea is grown in an area of 7.36 lakh ha with the production of 7.7 lakh tons and a productivity of 1050 kg/ha (Directorate of Economic and Statistics, 2013). Chickpea is cultivated as post rainy season crop in Andhra Pradesh. The crop is grown either on receding soil moisture conditions or with irrigation. Productivity of chickpea is directly associated with available moisture in the soil. The date of sowing has a

profound influence on crop performance because it determines the kind of environmental conditions to which the various phenological stages of the crop are exposed. A significant yield variation in gram varieties due to variation in sowing date was recorded. Therefore an experiment was taken up to study influence of different dates of sowing on growth and yield of chickpea.

An experiment was conducted in split plot design with three replications having six chickpea genotypes during *rabi*, 2007-08 at Regional Agricultural Research Station, Nandyal. The main treatments were viz., D1: October first fortnight sowing, D2: October second fortnight sowing and D3: November first fortnight sowing. Sub

Table.1: Yield attributes and yield of chickpea as influenced by different dates of sowing during Rabi 2007-08.

Treatments	Total biomass Kg/ha	Seed yield kg/ha	Haulm yield kg/ha	Harvest index %	No. of pods / Plant	100 seed weight (g)
D1:15-10-07	2259	1174	1081	51.1	29.8	24.2
D2:30-10-07	2168	1116	1052	51.7	23.3	25.3
D3:15-11-07	1956	1073	883	53.4	37.6	22.0
SEm±	56.4	22.5	40.8	0.4	1.2	0.10
CD at 5%	221.3	88.3	NS	1.6	4.9	0.40
V1: Annegiri	2421	1287	1134	53.0	39.5	20.2
V2: JG 11	2471	1389	1086	56.0	33.3	23.1
V3: ICCV 10	1812	947	866	52.0	25.7	17.2
V4 :ICCV 37	2471	1242	1237	51.4	35.1	19.8
V5: PKV2 (KAK2)	1856	934	913	50.5	23.2	32.9
T6 : LBeG 7	1735	927	796	53.7	24.8	29.8
SEm±	145.5	91.3	80.0	1.9	3.8	0.44
CD at 5%	420.3	263.6	231.0	5.4	11.2	1.28
CV (%)	20.5	24.4	23.8	10.7	38.5	5.6
Interaction D x V	NS	NS	Sig	Sig	NS	Sig

D: Date of sowing, V: variety

treatments were varieties ( 1) Annegiri (2) JG-11 (3) ICCV-10 (4) ICCV-37 (5) PKV-2 (6) LBeG-7. The genotypes were sown with a spacing of 30x10 cm and a fertilizer dose of 20 kg N and 50 kg P<sub>2</sub>O<sub>5</sub> /ha was applied as basal. The data was analyzed ( Panse and Sukhatme,1978)

Seed yield was significantly influenced by the different dates of sowing . October I<sup>st</sup> fortnight sown crop was significantly superior (yield of 1174 kg/ha) when compared with November. I<sup>st</sup> fortnight sown crop (yield of 1073 kg/ha) but it was on par with October II<sup>nd</sup> fortnight sown crop. Both October II<sup>nd</sup> fortnight and November, I<sup>st</sup> fortnight sown crops were also on par with each other. The interaction effect of dates of sowing was non significant. Both October I<sup>st</sup> and II<sup>nd</sup> fortnight sown crops recorded significantly superior 100 seed weight of 24.2g and 25.3 g respectively when compared with November I<sup>st</sup> fortnight sowing (22g)

(Table-1). Among desi varieties, JG- 11 recorded significantly superior 100 seed weight (23.1g) when compared with Annegiri, ICCV- 37 and ICCV-10. Among Kabuli varieties, PKV2(KAK-2) recorded significantly superior 100 seed weight of 32.9 g when compared with LBeG -7 (29.8g)

The yield of october I<sup>st</sup> fortnight sown crop was significantly superior ,irrespective of varieties.

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