

## Short communication

### Growth and yield response of Kenaf (*Hibiscus cannabinus* L.) seed production to different sowing times

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#### ABSTRACT

An experiment was conducted during 2020-21 at Jute Research Substation, Jashore, to study growth and seed yield response of kenaf to different sowing times. Seeds were sown from 15 July to 1 October, an interval of 15 days, as treatment variables under RCBD design with three replications. Greater seed yield was obtained from the 1<sup>st</sup> September sowing, which was at par with 15 September and 15 August sowings values. So, maximum seed production of kenaf may be ensured with optimum seed sowing between the 1<sup>st</sup> and 15<sup>th</sup> of September.

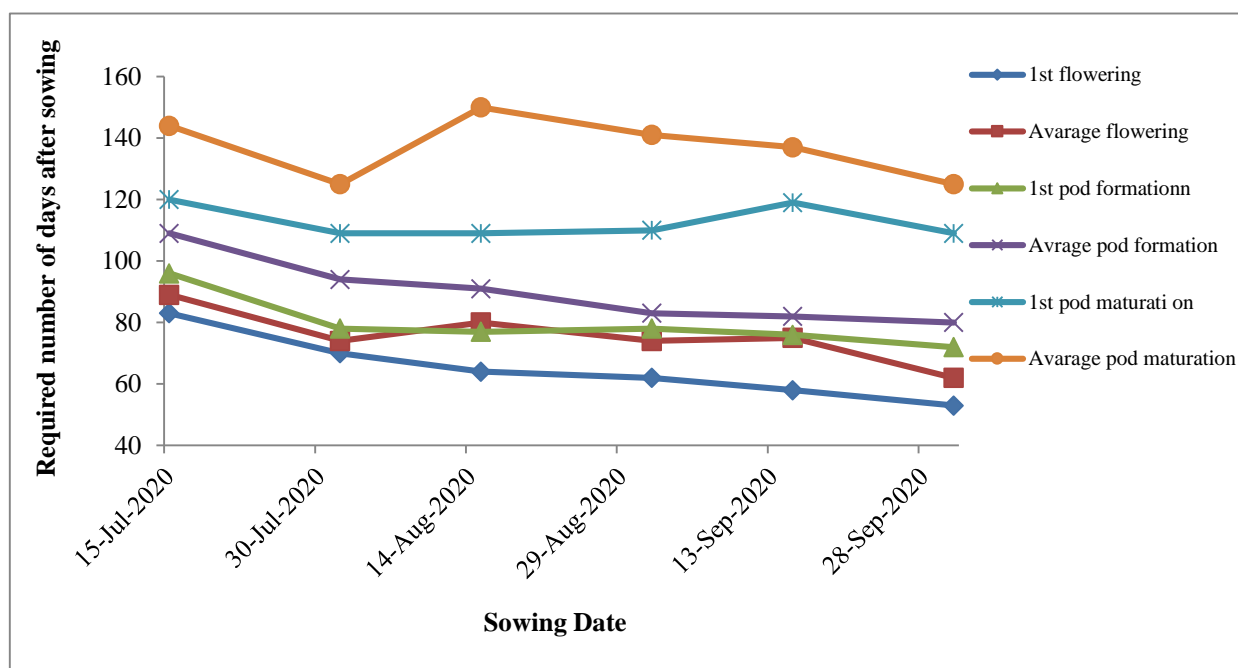
Kenaf (*Hibiscus cannabinus* L) is an important fibre crop with many medicinal values (Cheng, 2001). Kenaf seed contains dietary fibre, oil, and proteins. Anti-oxidant rich oil of kenaf seed has been emerging as an edible oil in recent times (Chan and Ismail, 2009) with high anti-cancer properties (Foo et al., 2011; Ghafar et al., 2012).

It is mainly cultivated for fibre production in our country. We need about 1500 tons of kenaf seed per year for fibre production, of which a major portion is imported from a foreign country.

Results revealed that the ranges of 1<sup>st</sup> flowering and fruiting were observed between 53 to 83 and 72 to 96 days, respectively, across the sowing dates (Fig. 1). The highest plant height was observed at 15 July 2020 sowing (2.65m), which was statistically identical with 1 September sowing (2.46m) and lowest plant height was observed (1.71m) during 1 October sowing (Table 1). Agbaje et al. (2011) notice such a plant height trend. The highest pod plant<sup>-1</sup> was observed at 1 September

sowing (32.77) and statistically at par with 15 September, 15 August, and 1 August sowings. The lowest value (21.03) was observed at 1 October 2020 sowing, similar to 15 July sowing. Different time sowings had maximum seeds plant<sup>-1</sup> (17.83-19.70) except lowest value with sowing 15 August. But a maximum 1000-seeds weight was recorded from 1 August sowing. Elevated seed yield was noted on 1 September (1897.20 kg ha<sup>-1</sup>), which was statistically identical to its 15 days earlier and 15 days late sowing still, the maximum yield values were very closer with 1 September and 15 September sowings. A similar finding was noted by Muchow (1980) with kenaf. Radiation during the reproductive stage was significant from a yield point of view for the mungbean crop (Rachaputi et al., 2015), which can be optimally captured by the plants when they are timely sown. Thus dry matter content of the plant becomes higher to partition it into reproductive units, especially the number of pods obtained in kenaf plants (Muchow and Wood, 1983).

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**Fig. 1. Timeline for reproductive phenology of kenaf seed production**

**Table 1. Growth and seed yield-related parameters of Kenaf at different sowing times**

Sowing Date ( in 2020)	Plant Height(m)	Pods Plant <sup>-1</sup> (No.)	Seeds Pod <sup>-1</sup> (No.)	TSW(g)	Seed Yield (kg/ha)
<b>15 July</b>	2.65	24.13	19.70	25.44	1511.10
<b>1 August</b>	2.32	28.80	18.20	26.07	1277.80
<b>15 August</b>	2.34	31.00	14.20	24.50	1775.00
<b>1 September</b>	2.46	32.77	17.83	23.31	1897.20
<b>15 September</b>	2.22	31.93	18.27	22.39	1847.20
<b>1 October</b>	1.71	21.03	18.20	22.90	1619.40
<b>LSD 0.05</b>	0.22	5.70	2.25	0.50	200.17
<b>CV (%)</b>	5.47	11.09	8.50	1.12	6.65

TSW= Thousand seed weight

It may be concluded that the first fortnight (1 to 15) of September sowing is optimum for the maximum seed yield of the kenaf crop.

#### Authors contribution

MRD designed and executed the experiment, analyzed data statistically, and wrote the manuscript. MMR helped to get support for conducting the experiment. SKB helped with writing the manuscript. All the authors read the article carefully.

#### Conflict of Interests

The authors declare that there is no conflict of interest.

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