	15th June	0.210 c	0.083	18.13 b	11.40 c	126.17 c
	30th June	0.197 cd	0.113	9.91 b-e	10.34 d	118.50 d
NARC-II	15th May	0.226 b-d	0.052	12.11 cd	11.44 c	135.83 b-d
	1st June	0.245 bc	0.058	21.30 a	10.83 d	147.00 bc
	15th June	0.179 b-d	0.080	17.51 b	10.63 d	107.33 e
	30th June	0.172c	0.104	9.11de	10.27 d	103.33 f
SE		0.0011	0.0106	0.1049	0.5291	0.8216
LSD (5%)		0.0015	-	0.1609	0.8119	1.261

Discussion

Oil seed production in the world play vital role for fulfillment of food requirement for humankind. The worlds increasing population is a major constrain so it is need of time to produce more edible food agriculture produce for fulfilling the food requirement. Oil seed crops specially soybean produce more percentage of edible oil in Pakistan soybean cultivated at very small scale due to lack of knowledge and proper production technology for growers in this study almost all aspects related to soybean covered including "sowing times, seed rates, deed depth, spacing's, nutrients fertilizers, irrigations, seed storage etc. This study is helpful for future edible oil production specially soybean oil production and also helpful for solving edible oil production shortage in the country and saving of foreign exchange at large scale.

Planting date is an important factor influencing soybean growth and yield (Samia et al., 2013). Later plantings is likely to incur significant reductions in yield all aspects of soybean development including length of vegetative growth, timing of flowering, and maturity date are greatly influenced by photoperiod and temperature (Wiebold, 2002). The growth and yield responses of soybean to planting date depend on the environment, variety and production practice. If planted too early, soybean may have poor emergence or limited growth because of hot temperature when soybeans are exposed to day shorter than critical length they progress rapidly to maturing. If this occurs before the plant reaches an adequate size, the soybean is stunted and give low yield, Boquet and Clawson (2007 Purcell et al., 2002). Sowing dates play vital role to crop response for its growth and yield. It seems that different soybean traits vary to sowing dates. In sowing dates connection the agronomic, physiological and nutrients traits showed variations. It is also seems that higher NPK content in plants was found at 15th May of crop sowing. Similarly Samia et al. (2013) worked on soybean sowing dates in Sudan the results of season 2010/11 showed significant differences for number of pods plant-1, number of seeds pods-1 and highly significant difference was obtained in weight of pods plant-1, weight of seeds plant^{-1}, seed index (1000 seed wt. g) yield and harvest index. The S3 (16th June) mid-June, obtained the highest values and S5 (30th June) gave the lowest values of the above parameters. Salem (2004) pointed out that sowing date plays an important role in soybean productivity.

In this study agronomic traits showed significant differences among traits and soybean seed production also vary between varieties clearly observed the variability of agronomic traits among soybean genotypes observed in this study corroborate with those reported by Malik et al. (2006).

It seems that that vary for their agronomic traits similarly researchers worked on agronomic traits which our results are in close conformity to those of previous investigators who also found plant height, number of leaves per plant (Malik et al., 2007), number of pods and seeds (Liu et al., 2005; Arshad et al., 2006) to be the most important plant agronomic traits contributing to improved varietals economic yield in soybean crop and hence suggested that these traits should be given more information about cultivars furthermore, it was also observed by Liu et al. (2005) that harvest index had no relationship with seed yield among varieties and plant height also had no direct influence on final seed yield even tall statured soybean varieties produced larger number of leaves which in turn supplied greater amounts of assimilates for seed growth resulting in higher seed yield finally the findings of above researchers showed variation in traits variety to variety. Physiological and nutrients traits significantly affected among varieties. Some soybean traits showed non-significant response to verities.

The response of varieties and sowing dates showed significant response for various soybean traits. Among various traits and their interaction variety Bossier perform better at 15th May, 1st June and 15th July and 30th June sowing traits but increased seed yield was found at 15th May sowing 4145 kg ha-1 in variety Bossier our findings confirmed by Samia et al. (2013) it can be reported that the two soybean cultivars can be planted during early to mid-June to avoid drastic reduction in yields. Similarly our observations confirmed results also illustrated by Ibrahim (2012, Billore et al., 2009, Kumar et al., 2005,) who reported the importance of early sowing for maximizing the yield potential of irrigated soybean. Also Zhang, et al. (2002) proved that the optimum sowing date for irrigated soybean is mid-June. Varieties reduce yield and yield components due to late sowing of crop our these findings confirmed by Samia et al. (2013) late sowing dates (30th June) may lead to a lack of sufficient vegetative growth, low number of pods plant^{-1} and reduced seed weight and ultimately lower seed yields. Genotypes of soybean do differ in seed yields (Veni et al., 2003; Billore et al., 2009; De Bruin and Pedersen, 2008). The results were in agreement with (Arshad, 2006).

Conclusion

The early days to nodule formation was observed in variety NARC-I under the sowing dates of 15th May, days to leghae moglobium in nodules in varieties NARC-I under the sowing date of 30th June, more days to due disappearance leghae moglobium in nodule in Bragg variety under sowing of 15th June and highest numbers of nodules plant-1 were recorded in variety Bossier under the sowing date of 30th June. The maximum plant height was recorded in variety Bossier under the sowing date of 30th June, early days to flowering sown on 15th May in variety Bragg and early days to maturity under sowing date of 15th May in variety Bragg. The maximum numbers of branches plant-1 in variety NARC-I under sowing date of 15th May and maximum number of pods plant^{-1} were observed in variety Bragg under sowing date of 15th May. The highest seed index was observed in Bossier under sowing date of 15th May, seed yield in variety Bossier under sowing date of 15th May and highest oil content was observed in variety Bragg under sowing date of 30th June. The highest leaf area index was recorded in variety Bragg under sowing date of 1st June, crop growth rate in variety Bragg under sowing date of 30th June, net assimilation rate in variety Bossier under sowing date of 1st June, dry weight plant^{-1} in variety Bossier under sowing date of 15th May and highest leaf area were observed in variety Bossier under sowing date of 1th June.

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Design and treatments

The experiment was laid out in split plot design with three replications. The sowing dates (15th March, 25th March and 04th April) were considered as main factors and soybean varieties (Malakand-96 and Kharif-93) as sub factors. The net plot size was 6.0 m x 1.8 m.

Crop husbandry

Seed bed Preparation

Seed bed was prepared by applying soaking irrigation (rouni). After that the field was cultivated two times with the help of cultivator followed by the same number of planking.

Sowing date and Seed rate

The crop was sown at respective dates each of 10 days interval with the help of hand drill at 30 cm spaced rows with seed rate of 100 kg ha-1.

Fertilizer application

Fertilizer was applied at the rate of 25 kg N, 50 kg P and 50 kg K ha-1. All nutrients were applied at the time of sowing in the form of urea, diammonium phosphate and sulfate of potash respectively.

Irrigation

Total six irrigations were applied during the whole growth period of crop till maturity. 1st irrigation was applied 7 days after emergence, 2nd at three to four leaf stages, 3rd after thinning, 4th during flower initiation, 5th during pod formation and 6th during seed development.

Intercultural practices

Hoeing was done by manual method. Two hoeing were given to ensure optimum control of weeds in crop 20 and 40 days after sowing.

Harvesting

Harvesting was done manually with the help of sickle.

Harvested crop was tied into bundles and allowed to dry in the field for 10 days to lower the moisture level up to 12%.

Data collection

In this experiment, the parameters of seed yield and its components, the qualitative parameters such as seed protein and oil contents were recorded.

At the end of growth season, ten randomly sampled plants were taken from the central rows of each plot and measured yield attributes and morphological characteristics. The weight of 100 seeds was recorded as the average of three 100-seed samples and calculated 1000-seeds weight by unit method. Also, to determine biological yield, whole plant dry weight was considered as biological yield. Harvest index was calculated by following formula; $Harvest\ index{=}Grain\ YieldBiological\ YieldX$ 100

Oil content was determined by Soxhlet Fat Extraction method (A.O.A.C., 1990).Percent oil content was calculated using the following equation; $Oil\ Contents$ (%)$=Weight\ of\ flask{+}oil{-}Weight\ of\ flaskWeight\ of\ flask{+}seed{-}Weight\ of\ flaskX$100

Protein in seed was determined according to Kjeldhal method (Bremner, 1964). Percent crude protein was calculated using the formula; $(Crude\ Protein\%){=}(V1{-}V2)N100\ WX\ 14X\ 6.25X$ 100

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