

HJ 541: A NEW VARIETY OF FORAGE SORGHUM FOR HIGH FODDER YIELD

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Sorghum [*Sorghum bicolor* (L.) Moench] is one of the five top cereal crops in the world. It is extremely drought tolerant, making it an excellent choice for arid and dry areas. Sorghum is a major multi-purpose crop grown for forage, grain and ethanol production. It's quick growing habit, high yield regeneration potential, better palatability, digestibility and drought tolerance makes it good choice of fodder for farming community on which the livestock industry depends. It can grow in the areas, where all other major cereal crops could not grow successfully. Development of new varieties in forage sorghum is very important activity in any crop breeding programme including forage sorghum.

The main problem in forage sorghum/jowar is the less seed production potential of existing varieties and the new variety HJ 541 overcomes this problem as it has long and semi-compact ear heads and also has shown 10.5 % increase in seed yield over the check in All India Coordinated trials. This variety of forage sorghum, HJ 541 has been released and notified by Central Sub-committee on Crop Standards, notification and release of varieties in the year 2013. This variety has been developed for all sorghum growing areas of the Haryana state. There is huge gap in demand and supply of green fodder and this variety will certainly help in bridging the existing gap to a great extent as this variety has exhibited 12.77 % increase over the best check for green fodder yield in the state trials. The variety has also given 13.08 % increase over the best check, HC 308 for green fodder per day productivity. In agronomy trials, the variety has shown response up to 120 kg N per hectare. This variety has been found to be resistant against three major foliar diseases viz., grey leaf spot, zonate leaf spot and sooty stripe. It has also shown 15% dead hearts as against 22 % dead hearts of

check, HC 308 caused by shoot fly and hence is moderately resistant against shoot fly. It has shown good early vigour, took 75 days for 50% flowering, 8.1% TSS and 0.31 leaf: stem ratio. It had 9.29 q/ha protein yield and 75.36 q/ha DDM (digestible dry matter) and hence, exhibited 5.69 and 8.46 % increase over the check for protein and DDM yield, respectively. It has less NDF (61.47%) and ADF (45.35 %) as against check HC 308 (NDF: 64.58% and ADF: 48.91%) and therefore, it is more digestible. Due to high green fodder yield and better quality, this variety has been highly liked by the farmers. In On-farm trials conducted at farmers' fields in various districts of Haryana, this variety has given 503.2 q/ha green fodder yield against the check HC 308 (438.2 q/ha) thereby exhibiting 14.8 % increase over the check (Table 1).

TABLE 1
Performance of HJ 541 at farmers' fields

S. No.	Village	Green Fodder Yield (q/ha)	
		HJ 541	HC 308
1.	Malous (Ambala)	437	408
2.	Tikri (Karnal)	420	375
3.	Pawati (Panipat)	500	410
4.	Chicken (Panchkula)	675	640
5.	Khanpura (Yamunanagar)	538	530
6.	Tabra (Kurukshetra)	440	352
7.	Baba Ladana (Kaithal)	540	420
8.	Tigaon (Faridabad)	300	250
9.	Shahpur (Faridabad)	300	280
10.	Palwal	750	600
11.	Palwal	700	580
12.	Hisar (7 trials)	439	414
	Average	503.25	438.25
	Per cent Increase	14.8	