

**Short Communication**

**Identification of sources of resistance against *Colletotrichum graminicola* causing anthracnose of sorghum**

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**S**orghum (*Sorghum bicolor* (L.) Moench) is an important grain and fodder crop of India. Anthracnose caused by *Colletotrichum graminicola* (Ces.) Wilson is one of the most destructive diseases of the crop in India and Uttaranchal has been identified as hot spot for this disease. Reduction in grain and stover yield by 47% and 23% respectively has been reported (1). The disease also reduces the quality of forage sorghum (2). Hazardous effects of chemicals to crops, consumers and environment due to their phytotoxic, residual and pollution effect is well known, besides being not economically viable particularly for sorghum grown for fodder purpose. Resistant varieties can be the simple, practical, effective economical and ecofriendly method of plant disease

control.

One hundred ninety four sorghum genotypes including both for grain and forage sorghum were evaluated for resistance to anthracnose under artificial inoculation conditions in field during *Kharif* 2004. Genotypes were sown in paired rows, each 6 m long with a crop geometry of 45×15 cm. Three replications were maintained. Thirty days old plants of each genotype were inoculated by spraying the spore suspension of the inoculum adjusted to 5×10<sup>4</sup> spores/ml. Observations on disease incidence were recorded before boot leaf emergence and one week before harvesting in 1-5 scale (proposed by All India Coordinated Sorghum Improvement Project) where 1: no symptoms, 2: resistant

Table 1: Sources of resistance in sorghum *germplasm* against *C. graminicola*

S. No.	Trial	Resistant germplasm
Grain sorghum		
1.	AVT	SPV 1659, SPV 1643
2.	AHT	SPH 1420, SPH 1413, SPH 1410, SPH 1487, SPH 1478, SPH 1470, CSH 17, CSH 16, IS 14332
3.	IVT	SPV 1685, SPV 1686, SPV 1701
4.	IHT	SPH 1516, SPH 1517, SPH 1520, SPH 1525, SPH 1533, SPH 1538, SPH 1541, SPH 1543, SPH 1545, CSH14, CSH 16
5.	IVT (Dual purpose)	SPV 1713, SPV 1727, CSH 18
6.	PLT	C43, 7A, RS 629, MBR 75, ICSB 38, CSV 4
Forage sorghum		
1.	AVT (Single cut)	SU 1080, UTFS 43
2.	IVT (Single cut)	SU 1157, JHV 12, UTFS 45
3.	AH/VT (Multi cut)	PC 615, HH 85, UTMCH 523, HH 177, UTMCH 1301
4.	IH/VT (Multi cut)	AFC 6, PC 701, UTMCH 532, G 48, UTMCH 1302

AVT = Advanced Varietal Trial  
 AHT = Advanced Hybrid Trial  
 IVT = Initial Varietal Trial  
 IHT = Initial Hybrid Trial  
 PLT = Parental Line Trial