

New Sorghum Seed Parents

Early (60-65 days to bloom)



KS133A/B



KS134A/B



KS135A/B



KS136A/B



KS137A/B

The Kansas Agricultural Experiment Station released nine (KS133A/B to KS141A/B) grain sorghum seed parent lines in 2014 from the Agricultural Research Center, Hays, Kansas. These nine lines were developed from random mating between the selected germplasm (PI550610B, IS2692R, IS9454R, IS9335R) and different genetic male-sterile (GMS) ms3 populations like KP8B, B51-B (plant, purple; seed white; glume, black), ms3 tan, and white tan B06-41701-313 with different combinations using a recurrent selection followed by pedigree and back cross breeding methods. All nine seed parent lines are in the A1 cytoplasmic male-sterility system. Maintainer (B) lines of all nine seed parents were included in this new release. The lines KS133A/B to KS137A/B are early in maturity and come to flowering in 60 to 65 days.

whereas, the lines KS138A/B to KS141A/B are medium in maturity and come to flowering in 65 to 70 days. In general, these A/B lines are short to average in plant height and ranged from 98-118 cm. All nine seed parent lines are tannin free, short in peduncle length, panicles with good exertion and good combining ability for yield and standability. The other traits associated with each A/B line is listed hereunder:

KS133A/B – semi-compact and long panicle

KS134A/B – semi-compact and long panicle; high protein digestibility and starch content

KS135A/B – Semi-compact panicle, awned with resistance and tolerance to charcoal rot

KS136A/B - compact panicle with more seed weight

KS137A/B - short plant, awned with resistance and tolerance to Fusarium stalk rot

KS138A/B - short plant, long and compact panicle

KS139A/B - short plant, compact panicle and dry midrib

KS140A/B - short plant, awned, compact panicle

KS141A/B - long and semi-compact panicle with more seed weight, awned with resistance and tolerance to Fusarium stalk rot

The performance of seed parents in hybrid combinations were tested along with early to mid-medium maturing commercial hybrids (Pioneer 84Y34, Pioneer 86G08, Sorghum Partner NK5418 and Richardson Seeds 47493) as checks at six environments in summer 2013 under irrigated and dryland conditions (Hays and Liberal, Kansas – irrigated; Hays, Manhattan and Colby, Kansas and at Vega, Texas - dryland). The results clearly showed that all nine seed parents have proved as potential sources as these lines with different hybrid combinations of known pollinators exceeded the yield performance of the commercial hybrids under drought stress condition. All nine seed parent lines associated with aforesaid specific traits should be of value to the sorghum industry.

Medium (65-70 days to bloom)



KS138A/B



KS139A/B



KS140A/B



KS141A/B