

Big Bluestem Inter Center Strain Trial

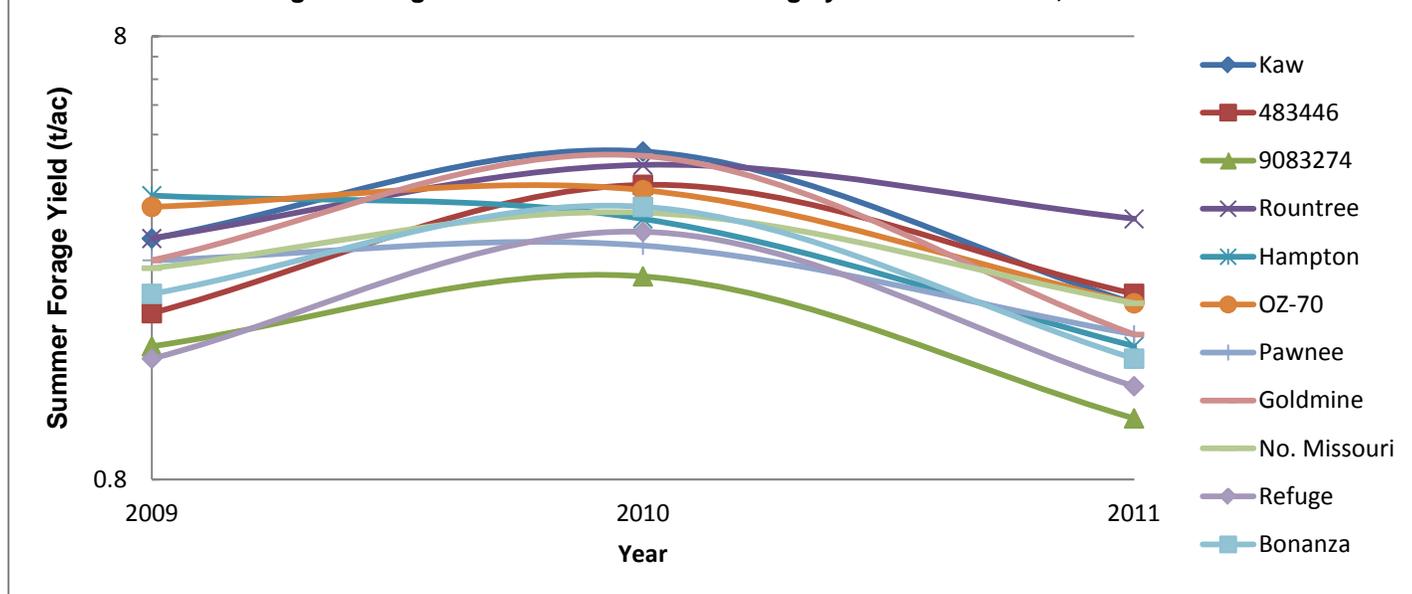
Recently, the Manhattan Plant Materials Center (PMC) participated in an Inter Center Strain Trial (ICST) with PMCs at Booneville, Arkansas, and Elsberry, Missouri, to compare a number of prevarietal releases of big bluestem that Booneville and Elsberry have released in recent years. Comparative evaluations of these releases and a selection (Accession 483446) from Manhattan further documented their performance and adaptation in a broader geographical area. Information gained from these plantings may be used to provide data to support elevating lower class releases (e.g., source identified and selected class) to a higher release category (e.g., tested class or cultivar). In addition to these releases, standard big bluestem cultivars commonly used in Natural Resources Conservation Service (NRCS) conservation plantings and programs were included in the trial, Table 1.

Table 1. Big bluestem prevarietal releases and cultivars tested in the ICST at 3 PMCs.

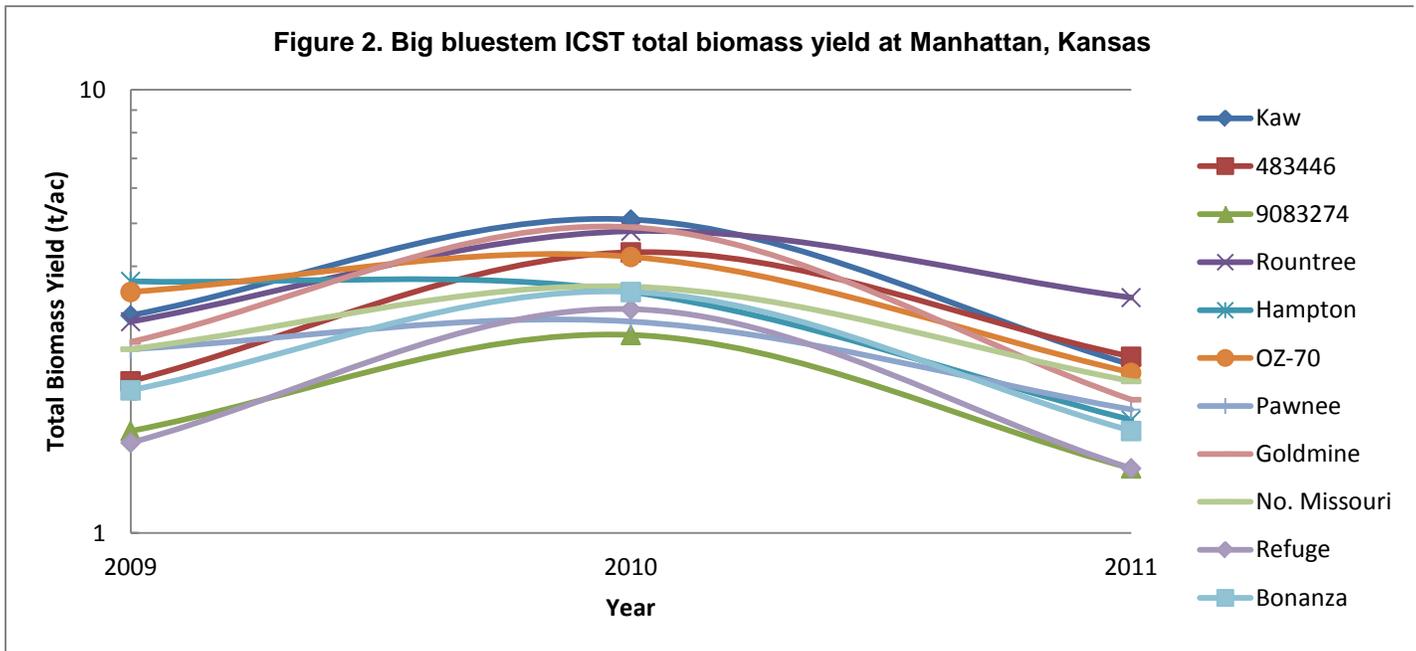
Release Name	PI or Accession Number	Origin
Hampton Germplasm	9056854	AR, MO, and OK
OZ-70 Germplasm	9078831	73 accessions from AR, MO, and OK
Refuge Germplasm	9078832	AR
	9083274	Logan County, AR
Northern Missouri Germplasm	9079000	accessions from northern MO
Rountree	474216	Monona County, IA
Kaw	421276	Flint Hills south of Manhattan, KS
	483446	southcentral KS and eastern OK
Pawnee	9005159	Pawnee County, NE
Bonanza	641701	derived from Pawnee
Goldmine	641702	derived from Kaw

Hampton and OZ-70 were the most productive followed by Rountree, Kaw, and Goldmine in the initial summer harvest, July 2009. In 2010, Kaw was better than Goldmine and Rountree with Accession 483446 a not too distant fourth. In 2011, Rountree was significantly better than all other entries with 483446, OZ-70, Kaw, and Northern Missouri Germplasm rounding out the top 5 rankings. Only Rountree, Kaw, and OZ-70 were consistently among the top 5 entries, Figure 1.

Figure 1. Big bluestem ICST summer forage yield at Manhattan, Kansas



In terms of total biomass yield, Figure 2, Hampton, OZ-70, Kaw, Rountree, and Goldmine were the top producers in 2009. Kaw took over the lead in 2010 followed by Goldmine and Rountree, and with 483446 joining the top 5, followed by OZ-70. By 2011, Rountree was significantly better than 483446, Kaw, OZ-70. Northern Missouri Germplasm joined the top 5 for the first time. In comparing 3-year averages for total biomass yield, Rountree, at 3.7 tons per acre (t/ac), was not significantly different from the next five entries. Kaw ranked second followed by OZ-70 with Goldmine and 486446 ranking fourth and fifth, respectively.



Outside My Window

In March the return of the eastern phoebe is always a welcome indication that spring is here. The phoebe is the first of the flycatchers to arrive and the last to depart in the fall. They are most welcome as they eat a lot of flying insects. Think pesky mosquitoes and gnats to name a few. Eastern phoebes have taken up residence at the PMC for as far back as I can remember. For years they had a nest under the eave of the seed storage building on the downspout as it turns back toward the wall of the building making an ideal shelf on which to build a nest. Their nest is an open cup with a mud base lined with moss and grass. Located on the southeast corner of the building with a machinery building on the south and a large Norway spruce to the east, the location offered a bit of seclusion from human activity. The phoebes returned to this same nest each spring until a few years ago when an American robin took over the nest. The robin used to nest in the spruce until it spotted the phoebe nest which offered a more open situation. The phoebes simply moved to the office where they found a nice location on a beam under the PMC's veranda. A nearby elm offers a great perch from which to hunt for food. The phoebes can also be seen atop other trees in the surrounding environs. In early April the phoebes begin setting up house. Outside my window they can be seen gathering mud to touch up their nest.



Phoebe nest located on the north side of the PMC's veranda on a beam near the entrance to the conference room.

Eastern phoebes lay 3-8 eggs with both parents raising about two broods a year.

~ John M. Row, Plant Materials Specialist