

NCCC167 Germplasm Report

<u>Release</u>	<u>Source</u>	<u>Comments</u>
Inbred lines:		
ND2001	NDSG(M)C19	Yellow-dent inbred line derived from the improved breeding population, NDSG(M)C19 through pedigree selection and four years of early and late generation testing. When compared to commercial checks, hybrids with this inbred as a parent produced above average grain yield, average agronomic performance, and below average test weight. Good combining ability with LH82-derived lines especially in dry environments. Good source for developing early maturing and high yielding inbreds. AES maturity 200-300. Good male.
ND2002	NDSM(M)C7	Yellow-dent inbred line derived from the improved breeding population, NDSCD(M)C7 through pedigree selection and four years of early and late generation testing. Hybrids with this inbred as a parent produced above average grain yield, below average test weights, and above average root lodging was also observed. Good combining ability with specific Iodent types. Good source for developing early maturing and high yielding inbreds. AES maturity 200-300. Good male and female.
ND2003	NDSCD(M)C10	Yellow-dent inbred line derived from the improved breeding population, NDSCD(M)C10 through pedigree selection and five years of early and late generation testing. Hybrids with this inbred as a parent produced the top specific combining ability for grain yield across 15 ND locations in 2006 (similar to top performing check) and average agronomic performance. Good combining ability with specific Iodent types, especially under irrigation. However, it combined well across testers of several heterotic groups. Good source for developing early maturing and high yielding

inbreds. AES maturity 200-300. Good male and female.

ND2004	NDSM(M)C8	Yellow-dent inbred line derived from the improved breeding population, NDSM(M)C8 through pedigree selection and four years of early and late generation testing. When compared to commercial checks, hybrids with this inbred as a parent produced above average grain yield and average agronomic performance, with the exception of excellent lodging resistance. Good combining ability across heterotic groups. Good source for developing early maturing lodging resistant inbreds. AES maturity 200-300. Good male and female.
ND2005	NDSM(M)C5	Yellow-dent inbred line derived from the improved breeding population, NDSM(M)C5 through pedigree selection and six years of early and late generation testing. Hybrids with this inbred as a parent produced average grain yield but significant early maturity and high test weight. It also produced above average root lodging and excellent stalk lodging resistance. Good combining ability with Iodent and LH82-derived types. Good source for developing very early maturing, high quality, and lodging resistant inbreds. AES maturity 200. Good female.
ND2006	NDSBF(LM)C7(HGR)C4	Yellow-dent inbred line derived from breeding population, NDSBF through recurrent selection, pedigree selection and five years of early and late generation testing. Hybrids with this inbred as a parent produced the top performance for grain moisture at harvest, test weight, and grain protein concentration. Average performance for other traits was similar to checks, except ND2006 crosses had below average stalk lodging and above average root lodging (especially with LH82 testers). Good combining ability with Iodent types.. Good source for developing very early maturing and above

N551	NCLNB_01	<p>average quality inbreds. Excellent dry down. AES maturity 100-200. Good male.</p> <p>N551 was developed by seven generations of self-pollination from the population NCLNB_01. This population was formed from a diallel cross of 18 lines with some tolerance to corn lethal necrosis. The primary background of NCLNB_01 is Stiff Stalk (B14A and B68) N551 is a relatively tall white-cobbed Stiff Stalk line that flowers about one to two days later than B73. In limited testing on LH185 and LH287, it had slightly higher grain yield and equivalent grain moisture to FR1064 x LH185 and FR1064 x LH287.</p>
N552	NS[S1]1_08	<p>N552 was developed by seven generations of self-pollination from the Stiff Stalk population, NS[S1]1_08. Characteristics and Performance--N552 is a moderately short, red-cobbed Stiff Stalk line with a strong tendency to produce two ears that results in high per se yield in favorable environments. It flowers approximately one day earlier than B73. In limited testing on LH185 and LH287, it had slightly higher grain yield than FR1064 x LH185 and FR1064 x LH287 and based on grain moisture at harvest was a couple of days earlier in maturity.</p>

Germplasms:

NDBSK(HI-M)C3

Yellow-dent maize broad-based improved population released for breeding programs developing elite germplasm for short-growing-season areas. It is an earlier version of BSK(HI)C11, originally improved from Krug Yellow Dent. It is released as an improved early maturing germplasm source for development of inbred parents for early maturing, high quality, and high yielding corn hybrids as well as an elite parent for population hybrids. This improved population was consistently the best North Dakota (ND) improved population for grain yield performance per se even though it was 6.9% less grain moisture at harvest than the original improved version brought to ND (AES 300 maturity).

NDBS11(FR-M)C3

Yellow-dent maize broad-based improved population released for breeding programs developing elite germplasm for short-growing-season areas. It is an earlier version of BS11(FR)C13. It is released as an improved early maturing germplasm source for development of inbred parents for early maturing and high yielding corn hybrids and for elite population hybrids. This improved population was consistently the best ND improved population for grain moisture at harvest per se of all newly adapted populations (8.5% less moisture than the original improved version) and it is AES 300 maturity.

NDBS1011

Yellow-dent maize broad-based improved population released for breeding programs developing elite germplasm for short-growing-season areas. It is a cross between BS10(FR)C13 and BS11(FR)C13. The original cross was made at North Dakota State University (NDSU) and later improved for adaptation to ND (AES 300 maturity).

**NB[RFS3]_08, NB[S1]1_08,
NB[S1]2_08, NB[S1]3_08,
NS[RFS]1_08, NS[RFS]2_08,
NS[RFS3]_08, NS[S1]1_08,
NS[S1]2_08, NS[S1]3_08**

All NS populations were selected from a University of Nebraska Stiff Stalk population, which is closely related to the original Iowa State Stiff Stalk population. All NB populations were selected from a broad-based 32-line synthetic formed at the University of Nebraska in the early 1950s.

These populations are the cycle 8 populations from a long-term selection program initiated by Bill Compton. The "RFS" populations were developed by reciprocal full-sib selection (NB was the tester for NS and NS was the tester for NB), whereas the S1 populations were developed by S1 per se selection. A rather unique feature of this selection program was that the two methods of selection were replicated. The number adjacent to the right bracket in the population name is the replicate number.

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