

To celebrate the 100-year anniversary of Stewart Seeds™, we recreated some of our favorite products from the past 100 years. The goal of this project was to see how modern genetics compare to products from the last 100 years.

MATERIALS AND METHODS

- Seed production began in the 2015 season.
- Jim Stewart and Kevin Marten developed a list of key Stewart products for the demonstration.
- Inbred seeds were procured from the USDA Germplasm Resources Information Network.
- Crosses were made in both winter and summer production from 2015 to 2017.
- Demonstration plots were planted in the 2018 Season at Perrysburg, OH, Vincennes, IN, London, OH, and West Manchester, OH. Yield data was only collected at Perrysburg, OH.

RESULTS AND DISCUSSION

There was a general trend of decreased yield with the age of introduction. The lowest yielding product was Reid's yellow dent, at 78.9bu/a. This product is an open pollinated corn that was the progenitor of many corn products sold in the early 1900s. The highest yielding product was the new 09SS409 Brand Blend which produced 208.9 bu/a.

When averaged together modern products (09SS409 Brand Blend, 11SS718 Brand Blend, and 8A625RIB Brand Blend) out yielded historic products by 51.4 bu/a. Part of that yield was attributed to insect protection from modern Bt traits. 2018 saw a higher than normal infestation of corn ear worm at Perrysburg, OH. Feeding impacted historic products by reducing grain and allowing ear molds point of entry. Modern products showed less feeding and fewer ear molds (Figure 3).

Over the last 100 years breeding has brought more than just yield. Other benefits observed in the trial offered by 8A625RIB, 11SS718, and 09SS409 compared to historic products were improved staygreen, better disease tolerance to gray leaf spot, northern corn leaf blight, and anthracnose stalk rot, and better late season standability. The new 09SS409 Brand Blend embodies these



Figure 1: Kevin Marten making a cross



Figure 2: Corn earworm feeding on historic product



improvements. It boasts some of the best scores for gray leaf spot tolerance, Anthracnose stalk rot tolerance, root and stalk strength, and yield potential in the Stewart Seeds™ lineup.

This was a fun project to undertake to celebrate this 100-year anniversary. Stewart Seeds™ would like to thank all our customers for helping us to achieve this milestone!



Figure 3: Ear display showing 7 of the 9 products. Farm Science Review Plot - London, Ohio

PRODUCT	DECADE	YIELD	MOISTURE
RYD (Reid's Yellow Dent)	1900	78.9	20.6
SX67 Brand	1970s	127.9	24.4
SX51 Brand	1980s	139.6	24.0
P3394 Brand	1990s	144.6	23.6
SX36 Brand	1980s	135.3	25.9
C6995 Brand	1990s	164.0	23.7
8A625RIB Brand Blend	2010s	186.1	24.2
11SS718 Brand Blend	2010s	186.5	29.3
09SS409 Brand Blend	2019	208.9	24.5

Table 1: Yield Results from Perrysburg, OH