UF IFAS Extension
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# 2013 FIELD CORN VARIETY DEMONSTRATION, JAY, FLORIDA

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This report includes a summary of the 2013 field corn variety demonstration in Jay, Florida. It shows the performance of seventeen corn varieties. This data represents only one year and is not replicated, results should be considered over several locations and years before conclusions are valid.

Varieties that were evaluated:

1. 6640 VT3P
2. 6960 VT3P
3. 7087 VT3P
4. 8621 VT2P
5. 8410 VT3P
6. D57VP51
7. D56RR10
8. P1319HR
9. P1498YHR
10. P1636YHR
11. P1690YHR
12. DKC68-05
13. DKC66-96
14. DKC67-88
15. N68B-3111
16. N79A-3111
17. N79T-311

## 2013 Growing conditions and Experimental Design

The soil type was a Red Bay sandy loam (Table 1).

Table 1. Soil fertility report (Jan 2013):

| | | | |
|---|---|---|---|
| pH ..... | 6.8 | K..... | 84 lb/A |
| Ca..... | 788 lb/A | Zn ..... | 6.8 lb/A |
| Mg ..... | 138 lb/A | Mn..... | 114 lb/A |
| P..... | 412 lb/A | Soil type ..... | Red Bay sandy loam |

The field was planted in a rotation of peanut 2012 and 2011 and sod 2008-2010. Each corn variety was plated on 29 Mar under conventional tillage. Plots were twelve, 860-ft rows per variety with 36-in. row spacing. Dual 1.33 pt/A was applied for pre-plant weed control, and Roundup 22 oz/A was applied on 17 May. The corn was fertilized with 26-3-15.5 + 3.6 sulfur at 650 lb/A on 23 May. Corn varieties 1-5 were harvested on 27 August and varieties 6-17 were harvested on 6 Sep.

Rainfall in March, Apr, May, and June was 2.92, 2.35, 7.10, 0.74 in. below normal, respectively; rainfall in Jul, and Aug was 5.23 and 1.37 in. above normal, respectively. Rainfall during the period totaled 29.76 in., which was 6.51 in. below normal. Weather data was obtained from Florida Automated Weather Network (FAWN) station located on Jay research farm and normal represents the mean for the past 54 years of records (Table 2).

Table 2. Weather conditions during 2013 in Jay, FL.

| Month | Total rainfall (in.) | Average minimum a temperature (°F) | Average maximum temperature (°F) |
|---|---|---|---|
| March | 1.4 (2.9 below normal) | 27.5 | 53.6 |
| April | 4.7 (2.4 below normal) | 40.6 | 64.6 |
| May | 0.7 (7.1 below normal) | 43.0 | 91.8 |
| June | 5.8 (0.7 below normal) | 65.5 | 93.8 |
| July | 11.8 (5.2 above normal) | 67.6 | 92.9 |
| August | 5.5 (1.4 above normal) | 67.5 | 95.2 |

**Summary**

Stand count was taken at 4-5 leaf stage when corn was 6-7 in. tall. Plant population ranged from 19,800 to 21,400 plants/A (Table 3). On 24 May Pioneer P1498YHR turned purple in color – a trait that appeared due to cold. Samples were sent for analysis and were phosphate deficient; even will plenty of P in the soil. Cold weather triggered trait and once temperatures warmed plants returned to normal color. Yields ranged from 5,736 lb/A (DKC67-88) to 8,862 lb/A (D57VP51) or 102 to 158 bushes/A.

Table 3. Effect of variety on emergence and yield in corn, Jay, Florida.

| Variety | Plants/ft* (17 Apr) | Plants/A (17 Apr) | Yield (lb/A) | Yield (bushels/A) |
|---|---|---|---|---|
| 6640 VT3P | 1.37 | 19,900 | 7,108 | 127 |
| 6960 VT3P | 1.41 | 20,400 | 7,748 | 138 |
| 7087 VT3P | 1.44 | 20,900 | 7,057 | 126 |
| 8621 VT2P | 1.47 | 21,400 | 7,897 | 141 |
| 8410 VT3P | 1.44 | 20,900 | 8,480 | 151 |
| D57VP51 | 1.41 | 20,400 | 8,862 | 158 |
| D56RR10 | 1.34 | 19,500 | 7,162 | 128 |
| P1319HR | 1.41 | 20,400 | 7,270 | 130 |
| P1498YHR | 1.47 | 21,400 | 7,295 | 130 |
| P1636YHR | 1.37 | 19,800 | 6,647 | 119 |
| P1690YHR | 1.43 | 20,800 | 6,539 | 117 |
| DKC68-05 | 1.45 | 21,100 | 6,551 | 117 |
| DKC66-96 | 1.46 | 21,200 | 6,710 | 120 |
| DKC67-88 | 1.42 | 20,600 | 5,736 | 102 |
| N68B-3111 | 1.45 | 21,000 | 7,067 | 126 |
| N79A-3111 | 1.47 | 21,400 | 7,279 | 130 |
| N79T-3111 | 1.39 | 20,200 | 8,196 | 146 |

*Determined from counts of six, 25-ft rows per plot.
Grain yields are adjusted to 15.5% moisture. Bushel equals 56 lbs.