RESULT DEMONSTRATION REPORT

2014 Evaluation of Oat Varieties for Grain and Bushel Weight

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SUMMARY: Six oat varieties were evaluated in this trial and harvested for grain to measure yield. Oat yields among varieties differed throughout the Niemeier oat variety test. TAMO411 provided the heaviest grain yield at 37 bushels an acre and a test weight of 33.2 lbs/bu. TAMO606 provided the second heaviest grain yield in this trial with 30 bushels an acre and a test weight of 33 pounds per bushel. The plot average yield was 27.07 bushels an acre and an average test weight of 32.95 bushels/hares. Percent lodging was recorded and did vary among the varieties.

OBJECTIVE: This demonstration was conducted to evaluate oat yield ability and straw strength in Central Texas Blackland growing conditions.

MATERIALS AND METHODS: Plots were planted on October 12, 2013. The test plots were planted with the farmer’s grain drill. The grain drill was set to deliver 105 pounds of seed per acre. All varieties were drilled at the same drill setting. Fertilizer applications consisted of 100 pounds/acre of 18-46-0 and Anhydrous.

Yields were obtained by combine harvest on June 5, 2014. Bushel weight was obtained from samples and yields were adjusted to 14% moisture. Lodging scores (scale of 1-5) were obtained at harvest. All plots were located on uniform land and not replicated.

RESULTS AND DISCUSSION: TAMO411 produced the highest grain yield in the test with 37 bushels an acre. Yields ranged from 20 to 37 bushels an acre. (See Table I. Evaluation of Oat Varieties). The average yield for the plot was 27 bushels/acre with average test weight of 32 pounds/bushel and an average moisture of 11.78%. Bob provided the lightest yield at 20 lbs/acre. The heaviest bushel weight was recorded by RAM 99016 at 33 pounds/bushel.

ECONOMIC ANALYSIS: The varieties producing the highest grain yield obviously generated the highest gross income. Production practices, seed cost and other cost of production were essentially equal across all varieties. If we utilize the available price at the local elevator at harvest of $5.00/bushel, the top grossing variety produced a value of $188.32 an acre while the least grossing variety was valued at $102.99 per acre, a difference of $85.36 per acre. The difference in value per acre illustrates the need to continue to evaluate varieties for production and performance under local growing conditions.
<table>
<thead>
<tr>
<th>Plot No.</th>
<th>Hybrid Variety</th>
<th>%Moisture @ Harvest</th>
<th>Test Weight (Lbs/Bu)</th>
<th>Yield(a) Lbs/A</th>
<th>Yield Bu/A</th>
<th>Lodging (c)</th>
<th>Gross Value S/A (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bob</td>
<td>11.5</td>
<td>32.4</td>
<td>1235.8</td>
<td>20</td>
<td>5</td>
<td>$102.99</td>
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<td>2</td>
<td>TAMO606</td>
<td>11.4</td>
<td>33</td>
<td>1810.3</td>
<td>30</td>
<td>1</td>
<td>$150.87</td>
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<td>3</td>
<td>Horizon 270</td>
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<td>32.8</td>
<td>1534.4</td>
<td>25</td>
<td>1</td>
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<td>RAM 99016</td>
<td>11.7</td>
<td>33.4</td>
<td>1561.7</td>
<td>26</td>
<td>2</td>
<td>$130.15</td>
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<td>Big Mac</td>
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<td>32.9</td>
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<td>TAM411</td>
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<td>33.2</td>
<td>2259.8</td>
<td>37</td>
<td>3</td>
<td>$188.32</td>
</tr>
</tbody>
</table>

(a) Denotes yield adjusted to 14% moisture  
(b) Gross Value per Acre is calculated assuming average market price ($5.00/bushel) at time of harvest at local elevator  
(c) Lodging score (5 being desirable and 1 being non-desirable, or on the ground)

**Demonstration:** Evaluation of Oat Varieties for Yield Comparison

**Cooperators Name and Location:** Jerry and Jason Niemeier, McGregor Texas

**Date Planted:** October 12, 2013  
**Date Harvested:** June 5, 2014

**Fertilizer Used:** 100 lbs of 18-46-0 Anhydrous Nutrisphere and Avail

**Last Crop:** Corn

**Seeding Rate:** 105 pounds/Acre

**Harvest:** Producer combine harvested, utilized grain buggy/weigh wagon assisted at harvest by Ron Joiner of Pioneer

Yield (Bu/A) (*)

(*) Yields adjusted to 14% moisture

Chart II. Evaluation of Oat Varieties Test Weight 2014 – Jerry and Jason Niemeier, McGregor

Test Weight (Lbs/Bu)
CONCLUSION: Based on results from this test, several varieties appear to have potential for good yields. Newer releases continue to produce good grain yields. However, some of our traditional varieties are producing well in certain growing conditions. More testing will be required before making a final decision to base variety selection before planting. All varieties were limited by available moisture during the growing season.

ACKNOWLEDGEMENTS: Appreciation is expressed to Jerry and Jason Niemeier for taking the time as well as providing the equipment and land to make this test trial possible. Also, thanks to Ron Joiner of Pioneer for the use of a weigh wagon and for his assistance at harvest. Special thanks is extended to the seed companies for providing seed and financial support during the growing season. Thank you to Dr. Clark Neely, Extension Small Grain Specialist for proof reading this document.