

# Procedures and Guidelines

## University of Maryland

### 2020 Corn Hybrid Performance Tests

#### **Objective:**

To evaluate the agronomic performance of corn hybrids which are either currently available to growers or are being considered for sale to growers in Maryland and the Mid-Atlantic region.

#### **Procedures**

##### **1. Entries:**

A company may enter as many hybrids as desired. Each hybrid entered will be tested in one of four maturity group tests based upon Corn Relative Maturity (CRM) information provided by the submitting company. In recent years, there has been an early-harvest price incentive generally for corn harvested prior to Labor Day. This prompted the addition of a very early test (hybrids  $\leq 103$  day CRM) during 2017 that will continue during 2020.

Very early season	<104 day CRM
Early season	104 – 108 day CRM
Mid-season	109 – 112 day CRM
Full-season	>112 day CRM

##### **2. Check Hybrids:**

Producers desire the inclusion of popular, commonly grown hybrids that serve as check hybrids for the tests. A minimum of two hybrids meeting these criteria will be included in each maturity group test.

##### **3. Location of Tests:**

- Lower Eastern Shore Research and Education (R&E) Center-Poplar Hill, Quantico, MD
- Lower Eastern Shore R&E Center-Salisbury, Salisbury, MD (irrigated site)
- Wye Research and Education Center, Queenstown, MD
- Central Maryland R&E Center-Clarksville, Clarksville, MD
- Western Maryland R&E Center, Keedysville, MD

##### **4. Field Plot Design and Management:**

Each maturity group test at each location will have hybrids arranged in a randomized complete block experimental design with three replications. Each plot will consist of four, 30-inch rows that will be ~32 feet in length (~0.0073acre). The plots will be planted using a John Deere 1750 planter equipped with coulters and trash-wheels for no-till planting and modified planter units manufactured by Clewell Precision Machine, Inc., Milton, PA for planting research plots. Starter fertilizer units were added to the planter during 2017. These units will supply liquid starter fertilizer (per product available at each research farm) in a 2X2 placement. The seeding rate will be ~30,000 seeds/acre. Standard recommendations for fertility and pest management practices will be used at each location. Planting date will be dependent upon weather but generally begins ~April 25 at the three Eastern Shore locations and is completed by May 15 at the two locations west of the Chesapeake Bay. The two center rows of each plot will be harvested with a Massey Ferguson 8-XP (or newer model, pending purchase in 2020) plot combine equipped with a Harvest Master HM 800 grain gauge (Juniper Systems) that records yield, grain moisture content and test weight on a Panasonic Toughpad equipped with Mirus Harvest software. Harvest normally begins by mid-September and is completed by mid-October.

##### **5. Data Collection:**

- Emerged plant population three weeks post-planting
- Percent lodged plants at harvest
- Harvest population
- Grain moisture at harvest
- Yield in bushels/acre corrected to 15.5% moisture

##### **6. Publication of Results:**

All data will be published in Agronomy Facts No. 54 that is posted to the University of Maryland Cropping Systems web site:

The publication of data for the entries does not imply approval or endorsement by the University of Maryland. Any reproduction of the data must give the name, number and date of the Agronomy Facts from which the data originated. The University of Maryland strives to publish the preliminary results for the test no later than November 10.

**7. Entry Fee:**

A fee of **\$500 per entry** is charged for each hybrid submitted to a maturity group test. This fee has increased slightly since 2018, due to the purchase of new harvesting equipment. This fee covers testing an entry at five locations. Discounts based upon the total number of hybrids submitted to the test are available. The discounts are 5% for 6 – 10 entries and 10% if the entry total is 11 or more. Every possible effort will be made to plant, harvest, and summarize the results for each entry. However, if unforeseen circumstances or weather conditions cause loss of the crop and data, the University of Maryland will incur no financial liability including the reimbursement of test fees.

**Please make checks payable to the “University of Maryland” and mail to:**

Dr. Nicole Fiorellino  
University of Maryland  
Plant Science & Landscape Architecture  
2124 Plant Science Building  
4291 Fieldhouse Road  
College Park, MD 20742

**Send entry forms to one of the following:**

**E-mail (preferred)**

nfiorell@umd.edu

**Mail**

Dr. Nicole Fiorellino  
University of Maryland  
Plant Science & Landscape Architecture  
2124 Plant Science Building  
4291 Fieldhouse Road  
College Park, MD 20742

**8. Information Required from Seed Company:**

Information regarding corn relative maturity (either GDU’s or days to maturity), hybrid traits, and seed treatment is required. Please designate this information on the entry forms.

**9. Quantity of Seed Required:**

Please submit a **minimum of 6000 seeds** per entry. Receiving less than this amount of seed per entry risks the possibility that there will not be enough seed to plant in all trials.

**10. Method of Shipping Seed:**

All seed should be shipped prepaid to:

Corn Hybrid Testing Program  
ATTN: Dr. Nicole Fiorellino  
University of Maryland  
102 Research Greenhouse  
4252 Terrapin Trail  
College Park, MD 20742

**11. Closing Dates:**

- **March 6, 2020 for submission of entry form**
- **March 30, 2020 for delivery of seed**