February 15, 2010

MEMORANDUM

To: All Commercial Hybrid Corn Seed Providers in Montana

From: Kenneth D. Kepharf/ Superintendent/Research Agronomist

Professor of Agronomy

Subject: 2010 Corn Hybrid Test – Contract Service Agreement

The Southern Agricultural Research Center (SARC) is one of seven research centers in the Montana Agricultural Experiment Station (MAES) system of Montana State University, Bozeman. Located in an irrigation district of the Yellowstone River Valley east of Billings, Montana, SARC conducts research programs that serve an agriculture more diverse than the remainder of the state. This memorandum is an invitation to participate in the SARC corn hybrid field test for the 2010 production year.

For 2010, the SARC Variety Testing Program will again be offering a corn hybrid field test for grain production. The test will be conducted at one location under irrigation on the research center using conventional herbicides. SARC is not offering separate tests for Roundup Ready™, Liberty Link™ or other genetically modified hybrids at this time. This memorandum serves as a contract service agreement to perform said research on a fee basis.

Details for submitting hybrids and testing methods used are as follows:

Entries: All corn hybrids offered or likely to be offered for sale in Montana will be accepted for performance testing. All hybrids must be entered by using the attached 2-sided application form. Hybrids ranging from approximately 75 to 100+ day maturity rating (Minnesota scale) will be accepted, however, 85 to 90 day hybrids probably represent full season grain types at this location during most years. Please indicate priority by order of listing. Entries will be accepted on a first come, first served basis, however, the right is reserved to limit the number of entries from each entrant if the number of entries exceed available facilities.

Transgenic or genetically modified hybrids must be identified, and licensed for both domestic and export sales. Montana State University and the Montana Agricultural Experiment Station shall not be held liable for corn hybrids submitted for testing and not properly identified by the entrant.

Fee & Remittance: The fee schedule for 2010 remains $150.00 US for each hybrid tested. Remittance shall accompany entry form. Please make all remittances payable to “SARC Variety Testing Program”.

Methods: A randomized complete block (RCB) design with four replications or balanced lattice design with three replications will be used, depending on the total number of entries. Seed for each row within each plot will be electronically counted to insure that each entry establishes from a uniform population. Plots will be 4 rows wide and 30 feet long. Row spacing will be 30 inches. Plots will be planted using a modified John Deere MaxEmerge planter equipped with fluted seed cones. Target planting date is May 1, 2010. Preplant broad spectrum broadleaf and grass herbicides will be applied for weed control in all entries. Post emergence application of herbicides and hand weeding will be implemented as needed. Nitrogen and phosphorus will be applied to produce a 200 bushel corn crop based on established soil test recommendations.

Data will be collected from the center two rows. All hybrids will be evaluated for establishment, silking date, lodging (if applicable), grain yield, test weight and grain moisture content. Center rows will be trimmed to 27 feet prior to harvest, and harvested with a research plot combine equipped with a conventional 2-row corn header. Reported grain yields (bushels/acre) will be adjusted to 15.5 percent grain moisture content. Related climate data (i.e. temperature, precipitation, GDD_{corn}) and management information also will be summarized.
Seed Required: Past studies at SARC indicate maximum corn grain yields under irrigation are achieved with an established population of ~38,000 plants per acre. Hybrids will be planted at 105 percent of the target population. Each row will be planted with 68 seed, approximately equal to planting 39,500 plants per acre. Please submit a 1,000 gram (~2 pounds) sample of seed for each entry. Any remnant seed will be stored as a reference sample for the duration of the 2010 cropping season. Upon publication of the results, all remnant seed will be destroyed. Prior arrangement may be made to return remnant seed to the entrant. Treated seed must be accompanied with the appropriate material safety data sheet (MSDS) for each active ingredient.

Reporting Results: Tabularized test results will be provided to all entrants not more than 30 days after final harvest. Results will be published in the Annual Progress Report of the Southern Agricultural Research Center, miscellaneous popular reports, out-reach bulletins, extension presentations, and on the SARC web site (http://www.sarc.montana.edu/). All test results belong to Montana State University and may be distributed in additional publications and through other media as to provide the greatest benefit to the public.

Disposal of Grain: All grain harvested from the hybrids submitted for testing will be disposed of through commercial feed channels. Plot samples will be bulked and mixed together prior to disposal. Guard rows will be harvested and bulked using a commercial field combine after yield rows have been harvested.

MTA’s: All Material Transfer Agreements require review and approval by the Vice President for Research at Montana State University. Please provide adequate lead time if your application involves a MTA for submission of entries.

Import Permit: Submissions from Canada require a USDA/APHIS permit for importation. Canadian vendors, please notice that a copy of SARC’s permit (#41-3486) to import hybrid corn seed is attached to this letter, which must accompany all seed shipments.

Force Majeure: Montana State University shall not be liable for any failure to perform as required by this agreement, to the extent such failure to perform is caused by any reason beyond the university’s control, or by reason of any of the following: labor disturbances or disputes of any kind, accidents, failure of any required governmental approval, civil disorders, acts of aggression, Acts of Nature (such as freeze, rain, hail, disease, insects, and fire), energy or other conservation measures, failures of utilities, mechanical breakdowns, material shortages, disease, or similar occurrences.

No Warranty: Montana State University makes no warranty whatsoever regarding research outcomes obtained hereunder. Any decision regarding safety, applicability, marketability, effectiveness for any purpose, or other use or disposition of said research outcomes shall be the sole responsibility of client and/ or its assigns and licenses.

Closing Date: Signed applications for entry must be postmarked no later than March 30, 2010. Unsigned applications will not be accepted. Mail completed application form and checks to:

Ken Kephart
MSU Southern Ag. Research Center
748 Railroad Highway
Huntley MT 59037-9099

Seed must be received by April 15, 2010. Ship all seed prepaid to the above address.

If you are not responsible for submission of materials into public performance tests, please pass this letter and application form onto the appropriate person in your company. With sufficient interest and participation in the 2010 hybrid corn test, this program will be continued for the foreseeable future. Please feel free to contact me if you have any questions regarding this matter.
Corresponding contact and address.

Submitted by: ________________________________
Company: ________________________________
Address: __________________________________
City/State/Zip Code: __________________________
Phone: ____________________________________
FAX: ______________________________________
Email: _____________________________________

Federal Employer Identification Number: ________________________________
(Company FEIN required to process remittance, not for public distribution)

For publication as contact information (if different from above).

Contact: ________________________________
Company: ________________________________
Address: __________________________________
City/State/Zip Code: __________________________
Phone: ____________________________________
FAX: ______________________________________
Email: _____________________________________

Submission and Performance Testing Policy Agreement

Permission is hereby given to the personnel of the Southern Agricultural Research Center, Montana State University, to test corn hybrids designated on the second page of this entry form in the manner indicated by the test agreement. I certify that seed submitted for testing is a true sample of the seed being offered for sale. I understand that Montana State University seeks to protect the genetics and intellectual property rights of the entrants and that no seed submitted for testing will be used for breeding, selection, genetic engineering or other related purposes.

I understand all results from the SARC Variety Testing Program belong to Montana State University and shall be controlled by the University so as to produce the greatest benefit to the public. Performance data may be used in the following way: 1) Tables may be reproduced in their entirety provided the source is referenced and data are not manipulated or reinterpreted; 2) Advertising statements by an individual company about the performance of its submitted entries may be made as long as they are accurate statements about the data published with no reference to other company’s names or hybrids.

Signed ________________________________
Title ________________________________
Date ________________________________
**2010 Hybrid Corn Test Entry Form - Montana Agricultural Experiment Station, Southern Agricultural Research Center, Huntley, Montana.**

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<thead>
<tr>
<th>Brand/Hybrid Identification (as desired for publication)</th>
<th>GMO (Yes/No)</th>
<th>RM (days)</th>
<th>Grain Color</th>
<th>Unique Grain Traits</th>
<th>Stalk Strength (1-9)</th>
<th>Root Strength (1-9)</th>
<th>Flex Ear Type (Yes/No)</th>
<th>Prolific Ear Type (Yes/No)</th>
<th>Herbicide Resistance</th>
<th>Insect Resistance</th>
<th>Other Unique Traits/Information</th>
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**GMO:** Is the hybrid transgenic or genetically modified?  
Relative Maturity: Indicate relative maturity in days (Minnesota).  
Grain Color: "Y" = Yellow, "W" = White, "R" = Red or Red Tinged.  
Unique Grain Traits: "W" = Waxy, "HO" = High Oil, "LP" = Low Phytase, "HL" = High Lysine.  
Stalk Strength: Rates for stalk strength are from 1 to 9 where 1=poor, 5=average and 9=excellent.  
Root Strength: Rates for stalk strength are from 1 to 9 where 1=poor, 5=average and 9=excellent.  
Flex Ear Type: Does hybrid ear length change in response to environmental conditions?  
Prolific Ear Type: Does hybrid ear number change in response to environmental conditions?  
Insect Resistance (including transgenic): "BT" = European corn borer resistance from *Bacillus thuringiensis*, event unknown, "YG" = YieldGuard BT event, "NKYG" = Northrup King Brand YieldGuard BT event, "YGCR" = YieldGuard Corn Rootworm event, "NG" = NatureGuard BT event.  
Other Unique Traits: Please use short phrases to describe other unique traits possessed by this entry.