USWBSI Durum CP Planning Meeting Report

Fargo, ND

Thursday, May 8, 2008

The Durum CP planning group met at the Department of Plant Sciences at North Dakota State University, Fargo, ND on May 8, 2008. Xiwen Cai, Shiaoman Chao, Elias Elias, Justin Faris, Greg Fox, Scott Halley, Prem Jauhar, Shahryar Kianian, Marcia McMullen, Joel Ransom, Steven Xu, and Shaobin Zhong were present at the meeting. Brad Miller and Jim Quick were invited but could not make it to the meeting. The following is the agenda and discussion generated at the meeting:

1- Discuss the Coordinated project (CP).

All the participants agreed to collaborate in all the research areas to have a successful durum CP.

2- Discuss the proposed Scab Initiative action plan and possible changes to fit durum.

VDHR milestones for the action plan were discussed. The participants believe that it is not possible to release one new variety with scab resistance per year. It also is not possible to increase three durum lines with scab resistance per year; the question was how resistant? Durum has a narrower source of resistance than other wheat classes. The conclusion was the milestone is to release varieties that have better scab resistance than Divide. Also it was mentioned that ND has database on the web with info about durum varieties and their resistance to FHB. The national scab web site should have links to this local information.

3- Give a summary of progress to date.

Xiwen Cai discussed his project of the fine Mapping of Qfhs.ndsu-3AS in Durum Wheat. His group has increased marker density within the QTL region and developed more user-friendly markers for MAS in breeding and germplasm development.

Elias Elias gave a summary of efforts of developing scab resistant durum varieties. There are several lines in advanced and elite yield trails with resistance from Sumai 3 that potentially could have better resistance than Divide. He continues to screen accessions from ICARDA in China and greenhouses.

Shahryar Kianian in collaboration with Dr. Elias continues to work with the Tunisian sources of resistance. They believe that Tunisian 7 may have a novel source of resistance.

Steven Xu discussed his research of the introgression of FHB resistance from *T. carthlicum* and *T. dicoccum* to ND durum cultivars. They have developed a large number (~5,000) BC_1F_1 crossed seeds from backcrossing the F_1 hybrids with the ND durum cultivars.

4- Develop a milestone matrix that covers all durum research areas.
The durum CP will develop a new revised milestone matrix to be included in future grants.

5- Discuss the CP budget.
There were no changes made to the work plans and therefore there were no changes made to the budget.

6- Discuss specific durum research activities.
The following areas of research were discussed:
- The use of native or adapted sources of resistance
- The use of non-native or wild relatives sources of resistance
- Pyramiding sources of resistance
- Regional nursery programs
- Mapping and the use of the genotyping centers
- Management studies
Marcia McMullen will conduct this research through the MGMT group