

## Developing high yielding heat tolerant wheat varieties for the South East Asia

### CRW mission:

By using a combination of high quality basic and applied research in genomics, molecular biology, physiology, conventional and fast breeding approaches, improved breeding tools, and by leveraging resources from other organisms, the Climate Resilient Wheat Innovation Lab is developing new wheat varieties that can withstand heat stress. In the process, the innovation lab will train a cadre of students and scientists at all levels, and will build capacity in the focus countries to conduct high quality - basic and applied research to address food security needs of the near future.

### Contact us:

Kulvinder S Gill  
Project Director  
[ksgill@wsu.edu](mailto:ksgill@wsu.edu)  
(509) 335-4666  
<http://css.wsu.edu/gill-lab-usaid/>



### A leap forward: Training young scientist to sustain Feed the Future efforts

Training the younger generation of scientists in cutting edge scientific tools and techniques is important; to address the current challenges posed by climate change on productivity of wheat crops and sustain the efforts for the future. The world population is expected to grow by 38% from 2010 to 2050 and is expected to reach 9.6 billion people. Of this increasing world population, India is expected to increase by 34% from 2010-2050. The Indo-gangatic plain, the breadbasket of India, is under threat of wheat yield losses due to projected increasing temperatures. Increasing temperature particularly at the flowering stage of wheat is adversely affecting the wheat production around the globe, [read more](#)

### Multi-location field trial in India: learning path to a successful conduct

Field evaluation is critical not only for initial identification of the donors carrying complementary mechanism of heat tolerance in wheat but also for the basic understanding of factors/genes/QTLs responsible for imparting the heat tolerance in wheat. Across different locations, field evaluation, plays a critical role in evaluating the agronomic performance of the selected heat tolerance lines developed using genomic tools and techniques. Thus, field evaluation is indispensable to carry out project activities; from identification of donors to subsequent utilization of identified donors for [read more](#)

### Standardization of control condition heat screening protocols for wheat

Control condition heat screening protocols are important for the identification of the heat tolerant lines as well as to study various physiological phenomena associated in providing the heat tolerance in wheat. Four different protocols were developed and tested to evaluate the wheat lines and to identify the complementary mechanism [read more](#)

### Spotlight:

- CRWIL congratulates authors for publication of research articles in *Frontiers of Plant Sciences*. The article reports the novel findings on structural and functional analysis of AGPase gene. Read the article here: <http://journal.frontiersin.org/article/10.3389/fpls.2017.00019/full>
- Devender Sharma and Navin Chandra received 1<sup>st</sup> and 2<sup>nd</sup> prize in poster presentation during National seminar held in GBPU, Pantnagar, India.
- CRWIL welcomes two students Hafiz Ahamad and Shadab from UAF Pakistan

### Developing Story:

- New partnership with HAU, Hisar, India
- Matching grant from BIRAC soon to be released