Editorial

Virtual Special Issue: Durum Wheat—Ancient Crop, Modern Challenges

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INTRODUCTION & SCOPE

Durum wheat (*Triticum durum* Desf.) is the 10th most important crop in the world for production. Its cultivation dates back to the origin of human civilization in the Levantine, and from there it spread to all corners of the world. It is both a staple crop for smallholder farmers, and a cash crop when its harvest is linked with the industrial transformation to pasta, couscous, Dalia, and burghul. Because of its ability to withstand harsh conditions, it is often cultivated in the marginal lands where severe terminal droughts are common, but it also finds great appreciation for its yield potential when grown under irrigation. Similarly, its rheological characteristics make it suitable for different food products, via industrial or household transformation. Lately, its appreciation further grew among farmers because of its genetic resistance to the widely spread rust races that are causing terrible epidemics on bread wheat (*T. aestivum* L.). Still, durum wheat has also shown extreme sensitivity to other diseases such as *Fusarium* spp. and *Septoria* spp.

In this special edition dedicated to durum wheat, we would like to gather the expertise of the best research groups around the world to deliver 10–15 articles that will span the whole spectrum of durum wheat applied research. We are aiming to gather excellent research articles in the following topics/subject areas:

1. *Genebank*: status of durum wheat collections, characterization, and use.
2. *Physiology*: useful and usable traits for adaptation of durum wheat to the changing climates.
3. *Pre-breeding*: identification of exploitable loci and germplasm sources for abiotic and biotic stress tolerance.
4. *Breeding*: solid multi-locations studies (G + G × E), identification of useful traits, and available genetic diversity within breeding programs. Submissions from developing countries are highly encouraged.
5. *Marker assisted selection*: report of useful and validated markers to be deployed by durum wheat. breeders.

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6. *Agronomy*: incorporating G × M for durum wheat. Special interest will be given to studies reporting on the deployment of conservation agriculture, fertilization strategies that help increase protein content, experiments under contrasting planting systems or experiments describing crop mixtures.
7. *Economy*: global status of durum wheat production and future trends.
8. *Socio-economy*: strategies to understand farmers needs for the durum wheat crop of tomorrow.

ARTICLES GUIDELINES

We will accept articles that present results from at least two seasons and/or two treatments for physiology, pre-breeding, and agronomy, or five environments for G + G × E studies. We are open to any type of submission concerning durum wheat, as long as novel and interesting conclusions are presented and supported by statistically significant results. The term for article submission is set for 31 July 2020. All publications will be open access and immediately available online. Publication fees will be fully waived for articles submitted to this special issue.

We are looking forward to receiving your submissions!

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