Seed priming: practical commercial use and its evaluation

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Abstract

Priming is a beneficial technology for germination speed and uniformity improvement. Priming is already an essential technology in current agriculture, and has been used widely in the world for a long time at commercial level with various crops in different cultivation environment such as nursery and open field.

Not only for germination speed and for uniformity improvement, priming also has effect to break dormancy, and is beneficial to get stable germination at abiotic stress condition such as suboptimal temperature. Challenges in germination are of wide range, and therefore priming technologies and its recipes need to be designed to solve specific germination issues faced by the crop, variety and by seed lot.

ISTA supplies standard germination test per species, however, to evaluate and understand the priming effect and its benefit in various aspects, ISTA standard germination test method is not sufficient in some cases. Therefore, modification of ISTA germination test or introduction of additional germination test methods are necessary while considering practical cultivation conditions.

This session will focus on the practical purpose and commercial use of priming technologies in seed industry and will discuss the benefit of priming and the global trend in the use of priming. In addition, certain ideas on how to evaluate the priming effect in practical use at industry level are introduced with sharing the examples of priming effects in certain crops.