Study on Methods to Improve Germination of Triploid Watermelon

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While consumption trends are changing according to the time flow, preferences of seedless watermelon is increasing. However, Farmers are struggling due to expensive seedlings and low germination rate of seedless watermelon. Poor seed germination in triploid watermelon is generally correlated with thick seed coat and high moisture content. Therefore, germination characteristics were examined according to the method to improve germination of triploid watermelon. 4 cultivars which are sold in the domestic market were used; ‘Fashion’ (Bayer), ‘Uniquegem’ (Bayer), ‘Style’ (Bayer), ‘Aijoeun’ (Iseo). Germination was carried out in three ways; practice (sowing on topsoil), in mixture of topsoil and water (1 : 1 w/v), and anchor paper. Then, germination rate, germination force (germination rate up to 4 days after sowing), and sprouting time (the day when 50% of the seed were germinated) were examined. Seeds were sown on 6 August. As a results, the germination rate was the lowest as 15.0 - 76.7% in practice, was 81.7 - 100.0% in mixing topsoil and water, and was the highest as 96.0 - 100.0% in the anchor paper. Germination force was the lowest as 3.3 - 70.0% in practice, was 75.0 - 96.7% in mixture of topsoil and water, and the highest as 90.0 - 100.0% in the anchor paper. Sprouting time was on August 10 in practice, on August 9 in mixture of topsoil and water, and the shortest on August 8 in anchor paper. That is, when germinating seeds of triploid watermelon with anchor paper, germination rate, germination force, and sprouting time were the best. These results suggested that anchor paper regulates moisture suitable for germination of triploid watermelon seeds.

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