

## Investigation on sink/source related traits and their relation of watermelon germplasm to promote use

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Watermelons, *Citrullus* species(*Cucurbitaceae*), are native to Africa and have been cultivated since ancient times. The fruit flesh of wild watermelon is watery, but typically hard-textured, pale-colored and bland or bitter. The familiar sweet dessert watermelons, *C. lanatus*, featuring non-bitter, tender, well colored flesh, have a narrow genetic base, suggesting that they are originated from a series of selection events in a single ancestral population. In this study, considered as sweet dessert watermelon, genetic resources, *C. lanatus*, comprising of traditional cultivars and local accessions were collected from 18 different countries in four continents.

A total of 60 accessions were characterized morphologically according to RDA genebank descriptors combined with Japan and China, list for 11 qualitative characteristics, leaf length, leaf width, petiole length, petiole diameter-source, stalk end length, stalk diameter, fruit length, fruit diameter, rind thickness, flesh sugar content(°brix), fruit weight-sink, and 6 sink related characters, leaf margin incision-source, fruit shape, fruit skin ground color, fruit skin stain color, fruit skin stain pattern and flesh color-sink, were also investigated. Even though the relatedness between some morphological traits and fruit weight or fruit sweetness showed no significance, the accessions investigated have a great deal of variation for most of the morphological traits. Additionally, the accessions which showed good performance in flesh color and fruit shape (IT271048) and high sugar content of flesh (IT274119, IT290118) above 14brix, were investigated in this experiment. The accessions, which have the information on specific traits including the selected accessions could be introduced, distributed and investigated for further use.

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