A Fasciated Mutant in Watermelon

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A fasciated mutant was observed in colocynth (Citrullus colocynthis Schrad.) plant introduction PI 537277. The plant grows normally for several nodes, and then the main stem becomes flatter and wider at 10 to 15 cm above the cotyledonary node. Increased numbers of leaves, tendrils, and flowers (staminate and pistillate) are produced on each node of the main stem (Fig. 1). Occasionally, the main stem separates into two flattened stems. The staminate and the pistillate flowers are fertile (Fig. 2).

Fasciated plants have been described in cucumber and melon as well. The trait is controlled by a single recessive gene in both crops (1, 2). In cucumber, the gene has incomplete penetrance (2). It was reported that environmental factors also influence penetrance of the fasciation gene in cucumber. The proportion of fasciated plants of 'Lemon' was increased by irradiation and growth regulator treatments, but these treatments did not induce fasciation in normal monoecious cucumber cultivars (2).

It was also reported that fasciation is associated with opposite leaf arrangement at lower nodes of the main stem (2). We observed an association between opposite leaves and fasciation in PI 537277 as well. A study of fasciation in watermelon is needed to determine the inheritance of the trait.

Literature Cited

Figure 2. Fruit set in faciated mutant