

## A Fasciated Mutant in Cucumis melo

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As in Cucumis sativus (1) fasciated plants sometimes occur in C. melo. We have observed such a mutation in the line 'Vilmorin 104' in the 'Cantaloup Charentais' type. The plant grows normally for several nodes, then the main stem gets flat and wider and wider (up to 10-15 cm); no more lateral branches appear. The leaves remain small. The male and female flowers are fertile. This character can be seen easily on the main stem but it can also appear on lateral branches when the main stem has been previously cut. Fasciation seems to be related with opposite leaf arrangement on the upper nodes. No influence of environmental factor has been detected.

The study of  $F_1$  and  $F_2$  progenies shows that the fasciation is controlled by a recessive gene (Table 1). We propose the name "fasciated" and the symbol "fas" for this mutant.

First attempts to localize this mutant have been conducted with a line monoecious (a+), male sterile (ms-4), with dark green color of the fruit skin (w+) and an unknown gene for powdery mildew resistance (Pm). Fasciated segregates independently from these four genes.

### Literature cited

1. Robinson, R.W., 1978. Fasciation in the cucumber. Cucurbit Gen. Coop. Rept., 1, 11.

Table 1. Observed phenotypes in  $F_1$  and  $F_2$  progenies between 'Vilmorin 104' (fasciated) and 'Bulgarie 7' (normal).

	Normal	Fasciated	chi square (3:1)	
			value	Probability
Vilmorin 104	0	20		
Bulgarie 7	20	0		
$F_1$ = Bulgarie 7 x Vilmorin	25	0		
$F_2$ = $F_1 \oplus$	136	37	1.204	27.2

Table 2. Segregation data observed in F<sub>2</sub> progenies between fasciated (fas) mutant and a, Pm, ms-4 and w.

Genes	normal <u>fas</u> /+	fasciated <u>fas</u> / <u>fas</u>	chi square (9:3 : 3:1)	
			value	probability
a+/- a/a	96 38	31 7	2.388	49.6
Pm/- Pm+/Pm+	100 35	29 9	0.945	81.5
ms-4+/- ms-4/ms-4	102 34	26 11	1.582	66.4
w+/- w/w	87 35	23 6	3.879	27.5