

Correlation Between Fresh Weight of Fruit and Seed Content of Spine Gourd (*Momordica cochinchinensis* Roxb.)

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Spine gourd (*Momordica cochinchinensis* Roxb.) is one of the indigenous, delicious, dioecious and perennial vegetable of Assam. The crop is propagated by swollen tubers, since the crop grown from seed produces maximum number of male plants and also seeded vine may not bear fruits in the first year (Mishra and Sahu, 1983). The fruits of spine gourd are used as vegetable when they are tender and green. The fruit is oval in shape (5 – 10cm length), pointed and densely covered with conical spines. Numerous seeds are found in the pulp of the fruit. Since the vegetables with less number of seeds per fruit is preferred by the consumer, hence determination of number of seeds per fruit is very important. A study was therefore, undertaken to correlate the influence of fresh weight of fruit, number of seeds, fresh and dry weight of seed and seed ratio.

Twenty fruits were selected randomly and parameters like fresh weight, number of seeds, fresh and dry weight of seeds and seed ratio were calculated out individually for each fruit (Table 1). Correlation coefficient (r) were calculated according to Snedecor and Cochran (1967) and seed ratio was calculated as follows:

$$\text{Seed ratio} = \frac{\text{Dry weight of seed}}{\text{Fresh weight of fruit}} \times 100$$

The data on fresh weight of fruit, number of seeds/fruit, fresh and dry weight of seed/fruit and seed ratio revealed that the fresh weight/fruit ranged between 29.24 g and 87.38g with an average of 56.37 g/ fruit, where the number of seeds and fresh and dry weight of seeds/fruit ranged between 8 to 37, 1.00 to 8.69 g and 0.35g to 5.67g with an average of 17, 4.30 and 1.22 g respectively. However, the seed ratio ranged from 0.36g to 6.49% with an average of 2%.

Estimation of correlation coefficient (Table 2) revealed that except seed ratio all other parameters like number of seeds and fresh and dry weight of seed/ fruit were positively correlated with the fresh weight of fruit. There was a positive correlation between number of seeds/fruit and seed ratio ($r=0.700$). The fresh and dry weight of seeds/fruit was also positively and significantly correlated to seed ratio indicating that greater seed weight/fruit enhanced the seed ratio substantially. Pulekar and Patil (1986) also reported similar findings in water melon. Thus, the study provided an information that the fresh weight of fruit could be used as a key for selection of

suitable fruit for vegetable purpose, as the number of seeds present in a fruit is very important from quality point of view.

REFERENCES

- Mishra, K.C. and Sahu, R.P. (1983). Ind. Hort. 28 : 5-8.
 Pulekar, C.S. and Patil, B.P. (1986). Seeds and farms 12 : 44 - 45.
 Snedecor, G.W. and Cochran, W.G. (1967). Statistical Methods, 6th edn, Oxford and IBH.

Table 1. Mean seed parameters in relation to fresh weight

Fresh weight of fruit (g/fruit)	56.37
Number of seed/fruit	17.00
Fresh weight of seed (g/fruit)	4.30
Dry weight of seed (g/fruit)	1.22
Seed ratio (%)	2.00

Table 2. Correlation coefficient

Parameters	Number of seed/fruit	Fresh weight of seed/fruit	Dry weight of seed/fruit	Seed ratio %
Fresh weight of seed	0.717*	0.687*	0.557*	0.35
Number of seed/fruit		0.932*	0.776*	0.700*
Fresh weight of seed/fruit			0.734*	0.692
Dry weight of seed/fruit				0.953

*Significant of 5%