

Development of Rockwool Alternative Mat for Cut Rose Production

In Japanese rose and tomato cultivation by using rockwool mats, after they were transplanted new cultivars, then the rockwool mats are dumped and are not reused.

Then, we developed new growing medium hardened by heat fusion fiber for cut roses and tomatoes, which can be reused as compost.

Types of Medium	Reuse	Yield and Quality	Load on Environment
Alternative Mats	Reclamation	Excel	Lowness
Rockwool Mats	Rejection	Excel	Highness

[Outline of alternative mediums]

1. The materials are coir or vermiculite which are used as soil conditioners.
2. The materials are hardened by heat fusion fiber and formed the same as rockwool mat.
3. The size of each alternative mat is 40.5cm length × 20.0cm width × 7.5cm thickness. It's easy to carry and there are no occurrence of harmful dust.



Left: Rockwool, Right: Coir Cube for cuttings



Alternative mats for growing



Blooming of roses on alternative mats

[Cut stem yield and quality]

No. of cut stems are higher.

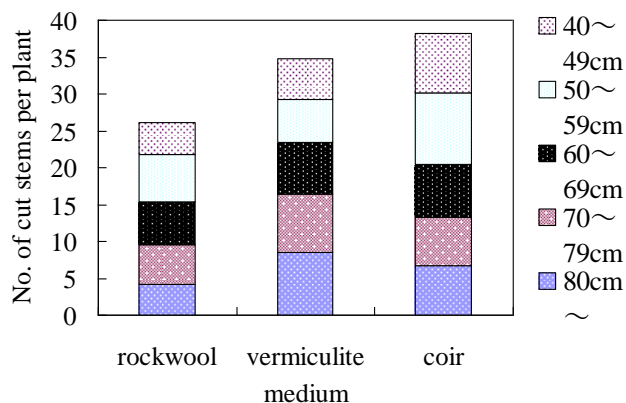


Fig. Number of cut stems in each medium.

Medium	Cut stem length (cm)	Cut stem weight (g)	No. of Node
Coir	68	39	16
Vermiculite	66	36	16
Rockwool	62	37	16

*Quality of cut stems are higher than the rockwool.