

Table S1. Evaluation criteria of resistance level of melon powdery mildew

Disease index (DI)	Evaluation of resistance
$DI=0$	Immune (I)
$0 < DI \leq 15$	Highly resistant (HR)
$15 < DI \leq 35$	Resistant (R)
$35 < DI \leq 55$	Moderately resistant (MR)
$55 < DI \leq 75$	Susceptible (S)
$DI > 75$	Highly susceptible(HS)

Table S2. Appearance characteristics of five melon varieties.

Treatment	T1	T2	T3	T4	T5
Fruit shape	ellipse	ellipse	ellipse	ellipse	round
Skin base color	opal	Yellowish green	White background	Yellow green star base	Grayish green
Skin covering color and pattern	no	Green star spots	80% medium thick vertical grain	All dense coarse mesh	All dense coarse mesh
Flesh color	white	Light green	orange	orange	deep orange
texture	Sand shortness	crispy	Hard and brittle	Hard and brittle	crispy
Fiber	less	less	less	less	more
juice	more	more	less	less	less
fragrance	light	no	light	light	no
flavour	good	middle	good	good	middle
adhesion	tight	tight	middle	tight	tight

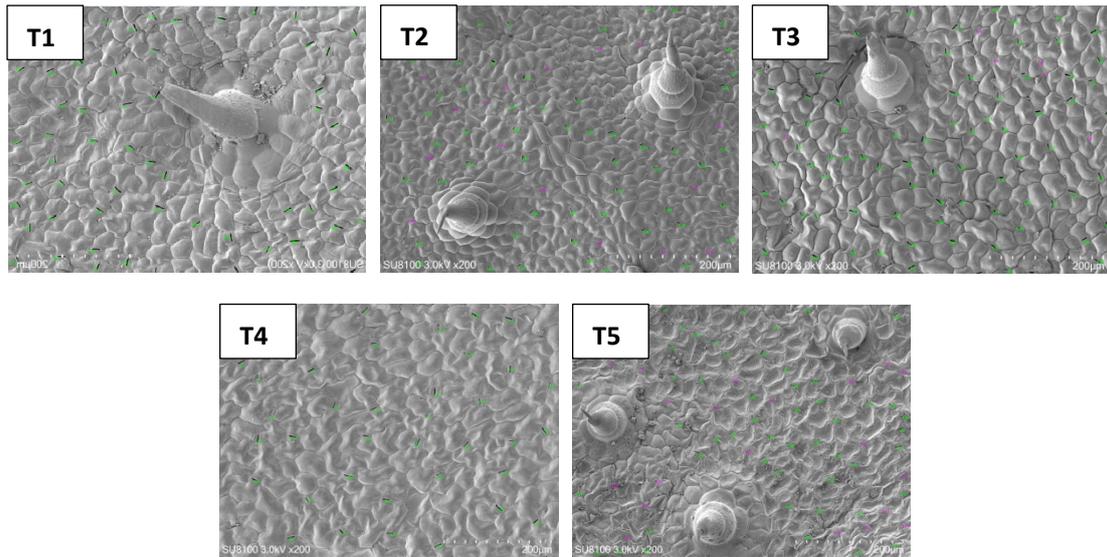


Figure S1. Scanning electron microscope image of upper epidermis of melon leaves.

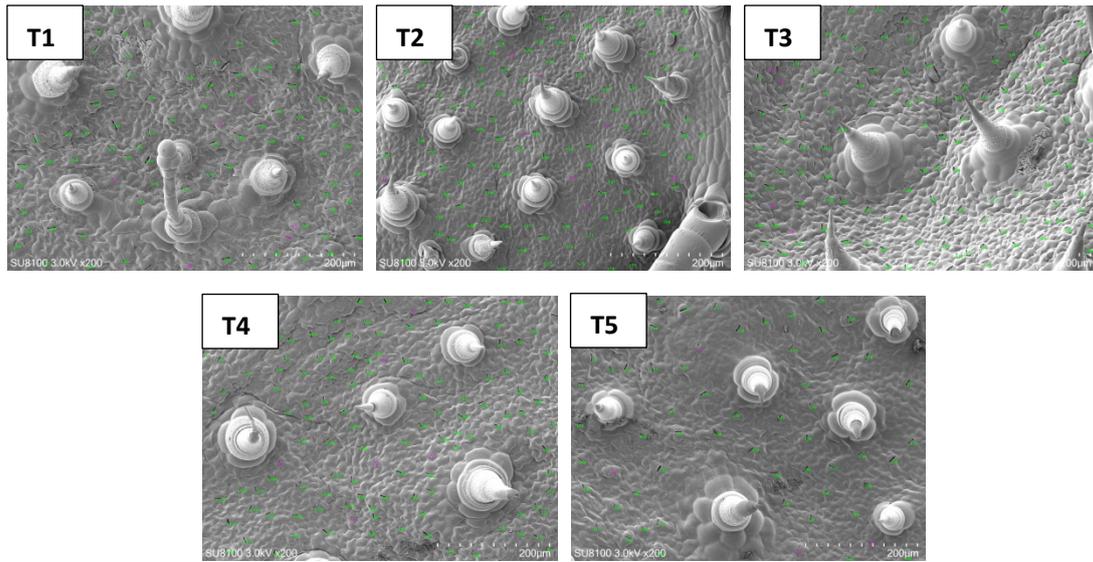


Figure S2. Scanning electron microscope image of mildew on lower epidermis of melon leaves.