

Supplementary Table S1 Classification standard of disease severity.

Grade	Symptoms
0	No lesion on ginseng epidermis
1	Small rusty brown lesions on ginseng epidermis, internal tissue was normal
2	Lesions were less than 1/5 of root surface
3	Lesions were 1/5 to 1/2 of root surface
4	Lesions were 1/2 to 2/3 of root surface, part of ginseng root was rot
5	Lesions were more than 2/3 of root surface, and whole root were rotted