

2 **Environmental Risk Assessment of Living Modified**
 3 **Microorganisms (LMM) on the Indigenous**
 4 **Microbial Community**

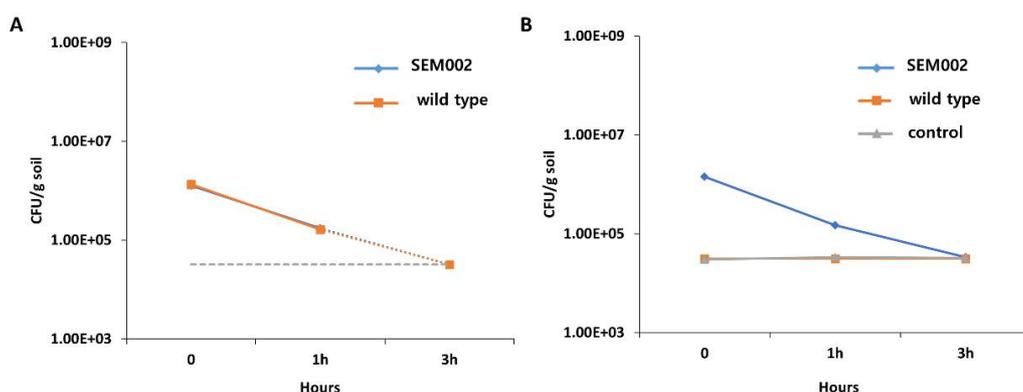
 5 Hyosun Lee ¹, Dong-Uk Kim ², Jigwan Son ¹, Seong-Bo Kim ³ and Jong-Ok Ka ^{1,*}

 6 ¹ Department of Agricultural Biotechnology and Research Institute of Agriculture and Life Sciences, Seoul
 7 National University, 08826 Seoul, Korea; watermelon@snu.ac.kr (H.L.); sonjigwan@snu.ac.kr (J.S.)

 8 ² Department of Biological Science, College of Science and Engineering, Sangji University, 26339 Wonju-si,
 9 Korea; dukim@sangji.ac.kr

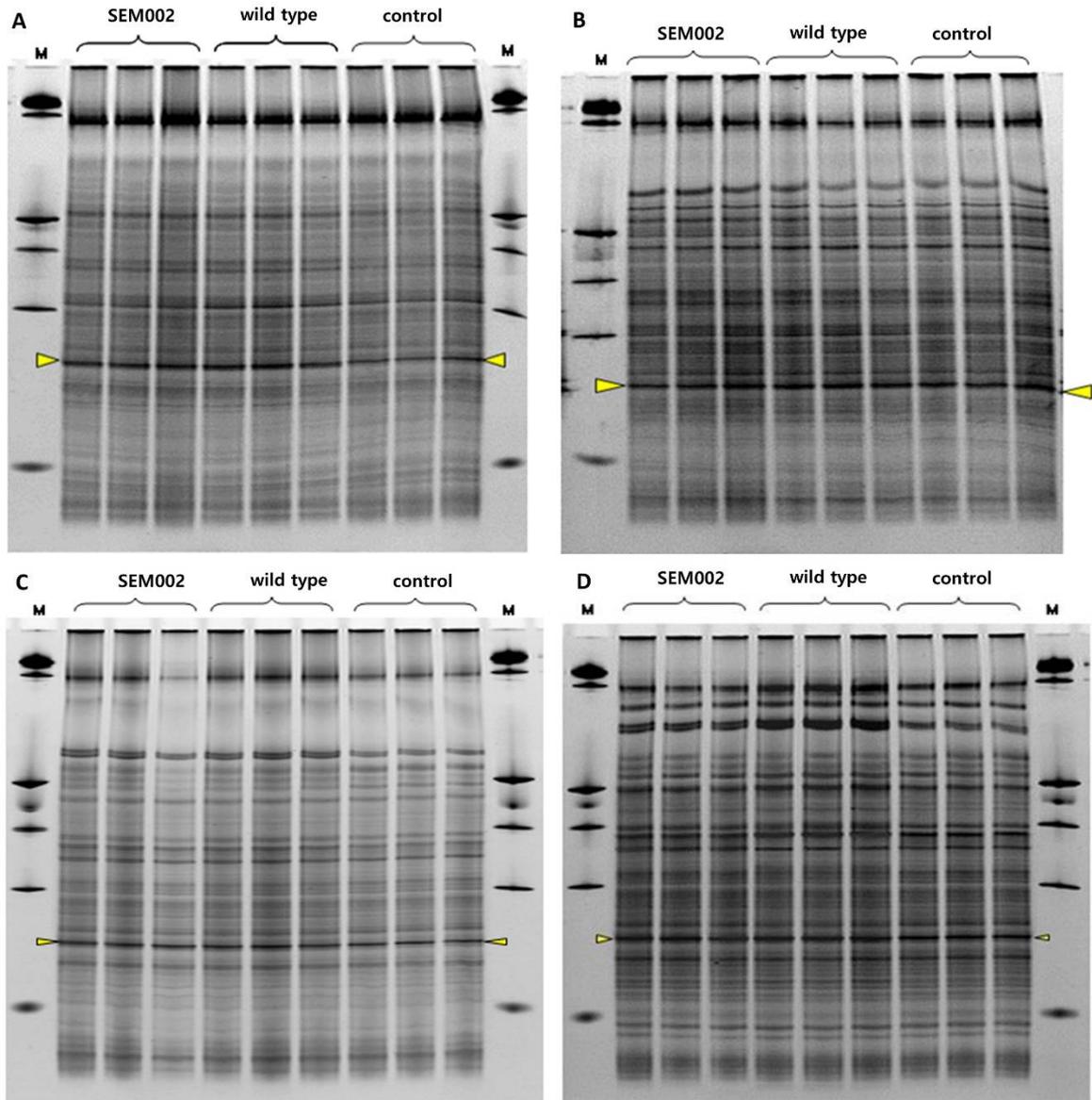
 10 ³ Bio-Living Engineering Major, Global Leaders College, Yonsei University, 03722 Seoul, Korea;
 11 seongbo.kim@yonsei.ac.kr

12 * Correspondence: joka@snu.ac.kr



13

 14 **Figure S1.** Changes in the bacterial counts of LMM and wild-type strains in LB medium and LPK
 15 medium after the release of LMM and wild-type strains into forest soil microcosm. A, LB medium; B,
 16 LPK medium. SEM002, number of SEM002 cells in the SEM002-inoculated soil; wild type, number of
 17 wild-type cells in the wild type-inoculated soil; control, antibiotic-resistant bacterial counts in the
 18 control group Dotted lines indicate that the inoculated strains were undetectable after 3 h of the
 19 experiment. Dotted lines parallel to the x-axis indicate the background level of indigenous
 20 microorganisms.



21

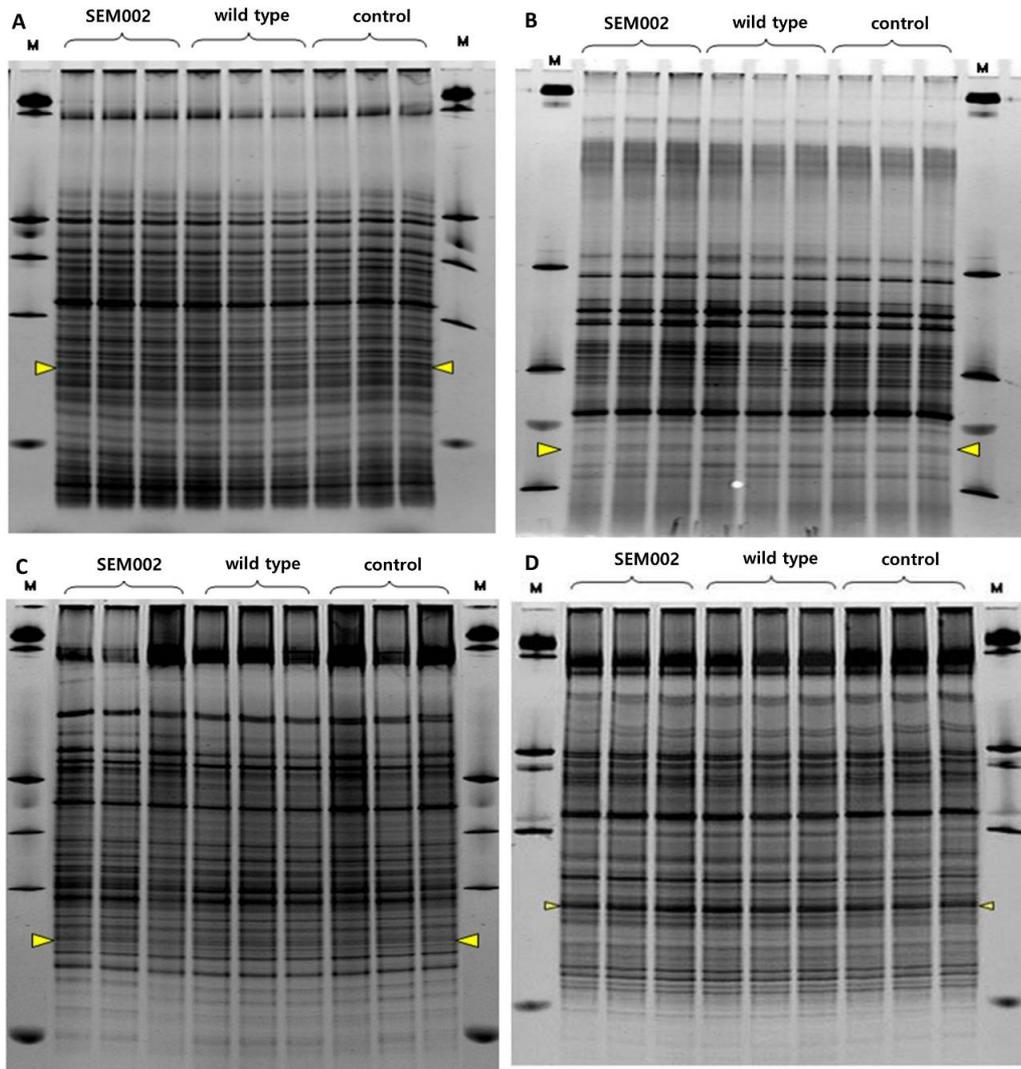
22

23

24

25

Figure S2. Analysis of structural changes of the bacterial community in the factory soil microcosm experiment using real-time PCR-DGGE. A, Day 15; B, Day 35; C, Day 55; D, Day 75. SEM002, LMM-inoculated soil; Wild type, ATCC 13032 strain-inoculated soil; Control, uninoculated soil. The arrows indicate DGGE bands of LMM and wild-type strains.



26

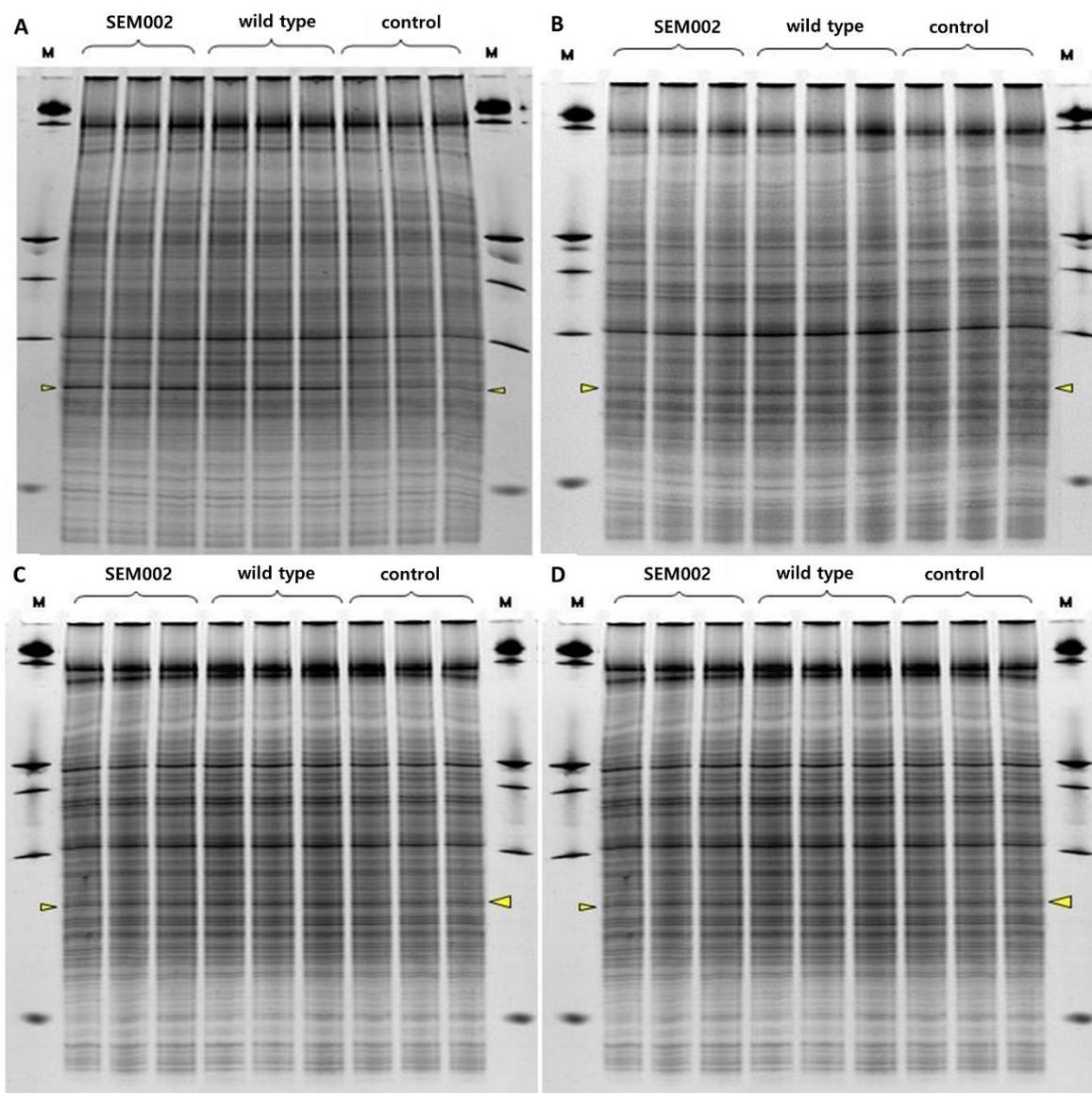
27

28

29

30

Figure S3. Analysis of structural changes of the bacterial community in the factory soil microcosm experiment using real-time PCR-DGGE. A, Day 13; B, Day 33; C, Day 54; D, Day 75. SEM002, LMM-inoculated soil; Wild type, ATCC 13032 strain-inoculated soil; Control, uninoculated soil. The arrows indicate DGGE bands of LMM and wild-type strains.



31
32
33
34
35

Figure S4. Analysis of structural changes of the bacterial community in the factory soil microcosm experiment using real-time PCR-DGGE. A, Day 15; B, Day 35; C, Day 55; D, Day 75. SEM002, LMM-inoculated soil; Wild type, ATCC 13032 strain-inoculated soil; Control, uninoculated soil. The arrows indicate DGGE bands of LMM and wild-type strains.