

Supplementary Figures

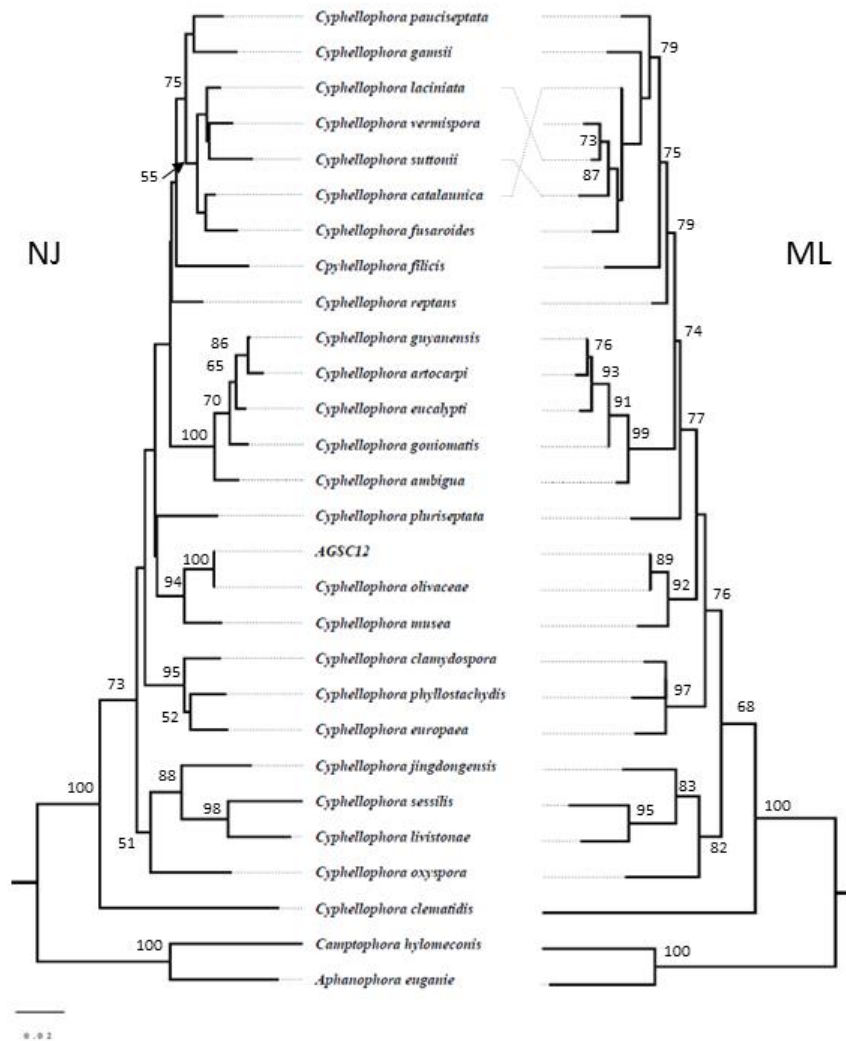
New strain of *Cyphellophora olivacea* exhibits striking tolerance to sodium bicarbonate

LAJOS ACS-SZABO*, LASZLO ATTILA PAPP,
HAJNALKA CSOMA, IDA MIKLOS &
MATTHIAS SIPICZKI

*Department of Genetics and Applied Microbiology,
Faculty of Science and Technology, University of
Debrecen, 4032 Debrecen, Hungary*

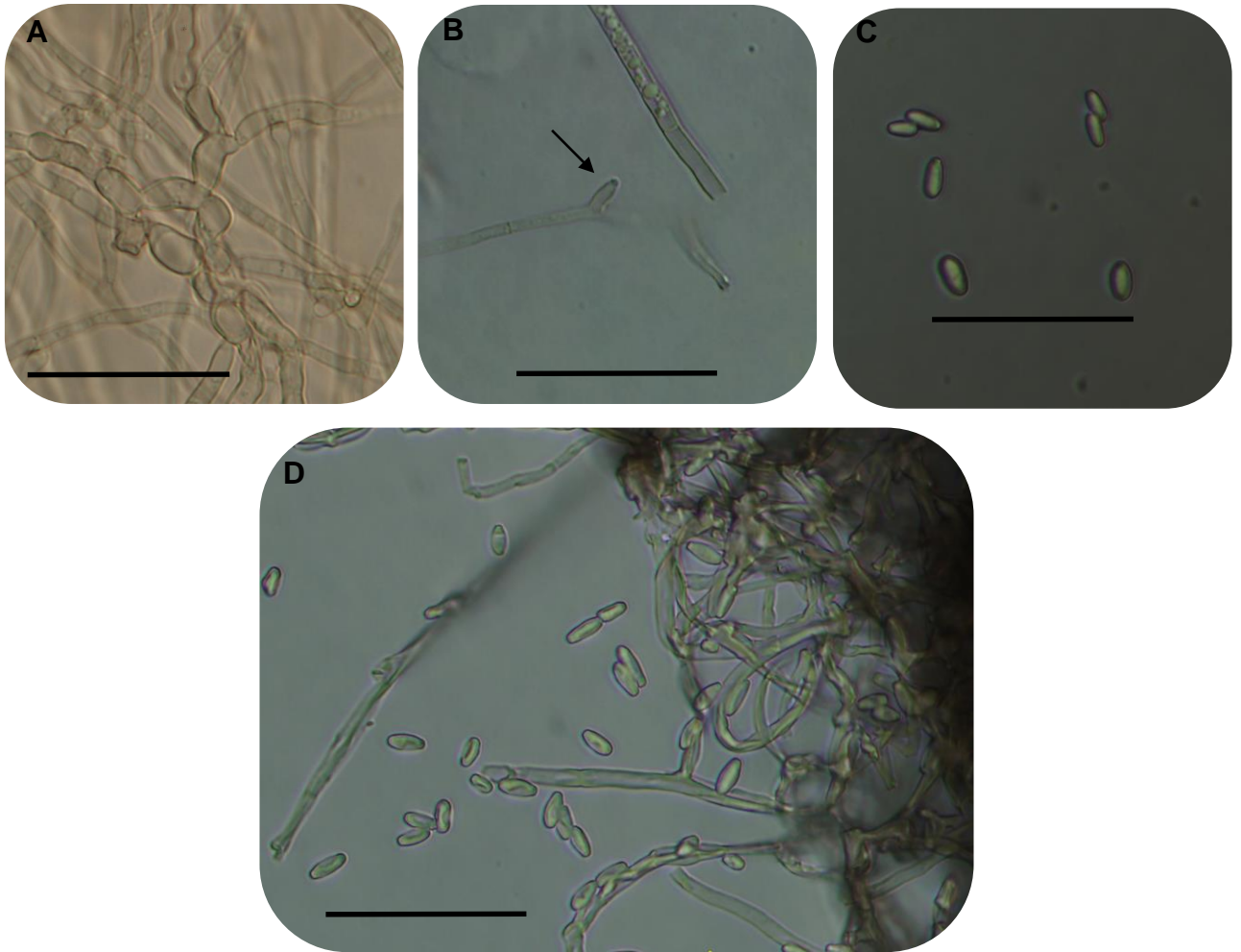
* acs-szabo.lajos@science.unideb.hu

Supplementary Figure S1.



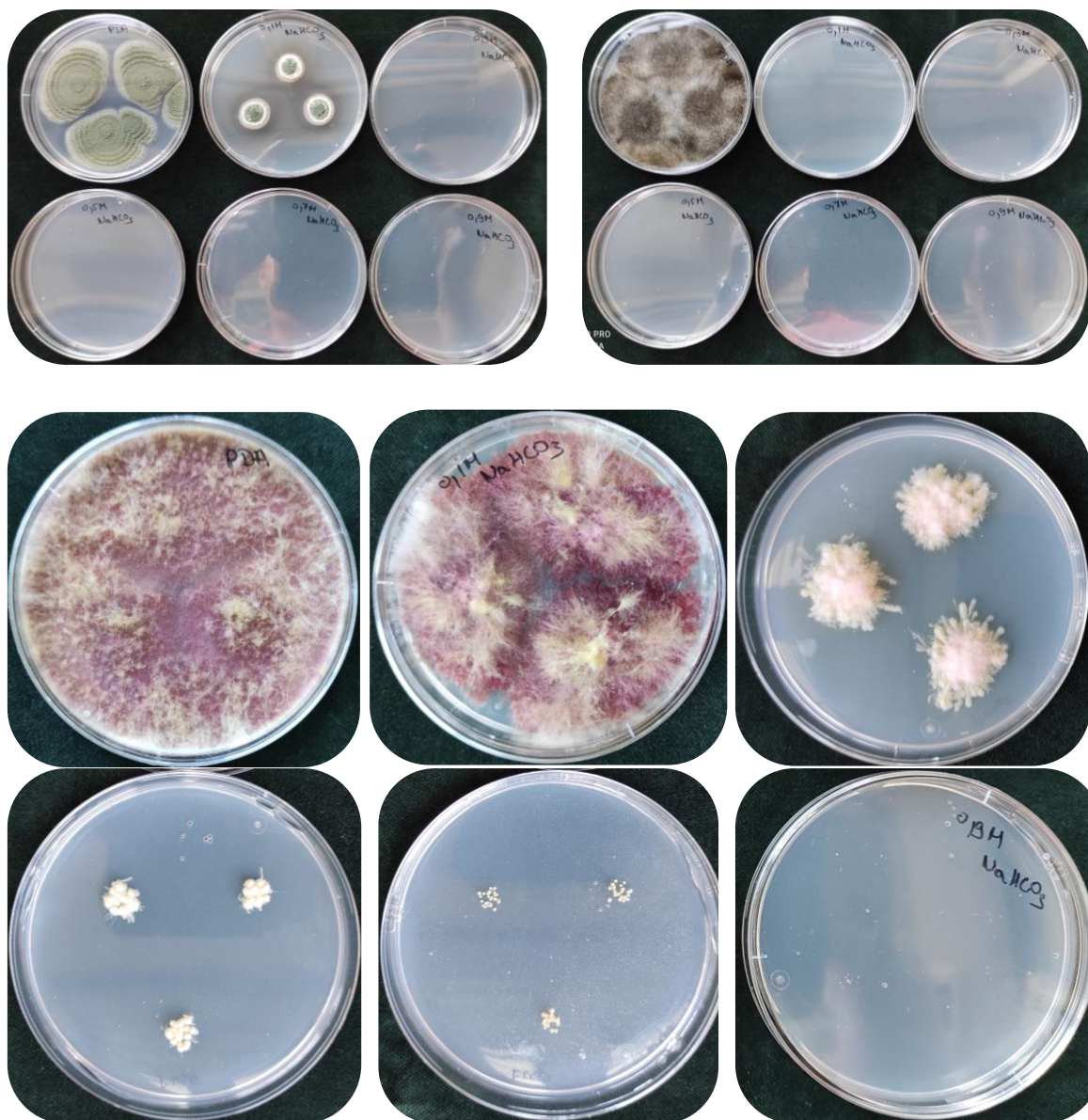
Supplementary Figure S1. Phylogenetic analyses of the strain AGSC12 and other *Cyphellophora* species using different methods. NJ: Neighbour Joining tree with bootstrap analysis. ML: Maximum Likelihood tree with aLRT. Only bootstrap and aLRT values bigger than 50 are shown. Although the two trees showed some minor differences in their topology, the strain AGSC12 clustered to the same branch with the *C. olivacea* ex-type strain in both cases.

Supplementary Figure S2.



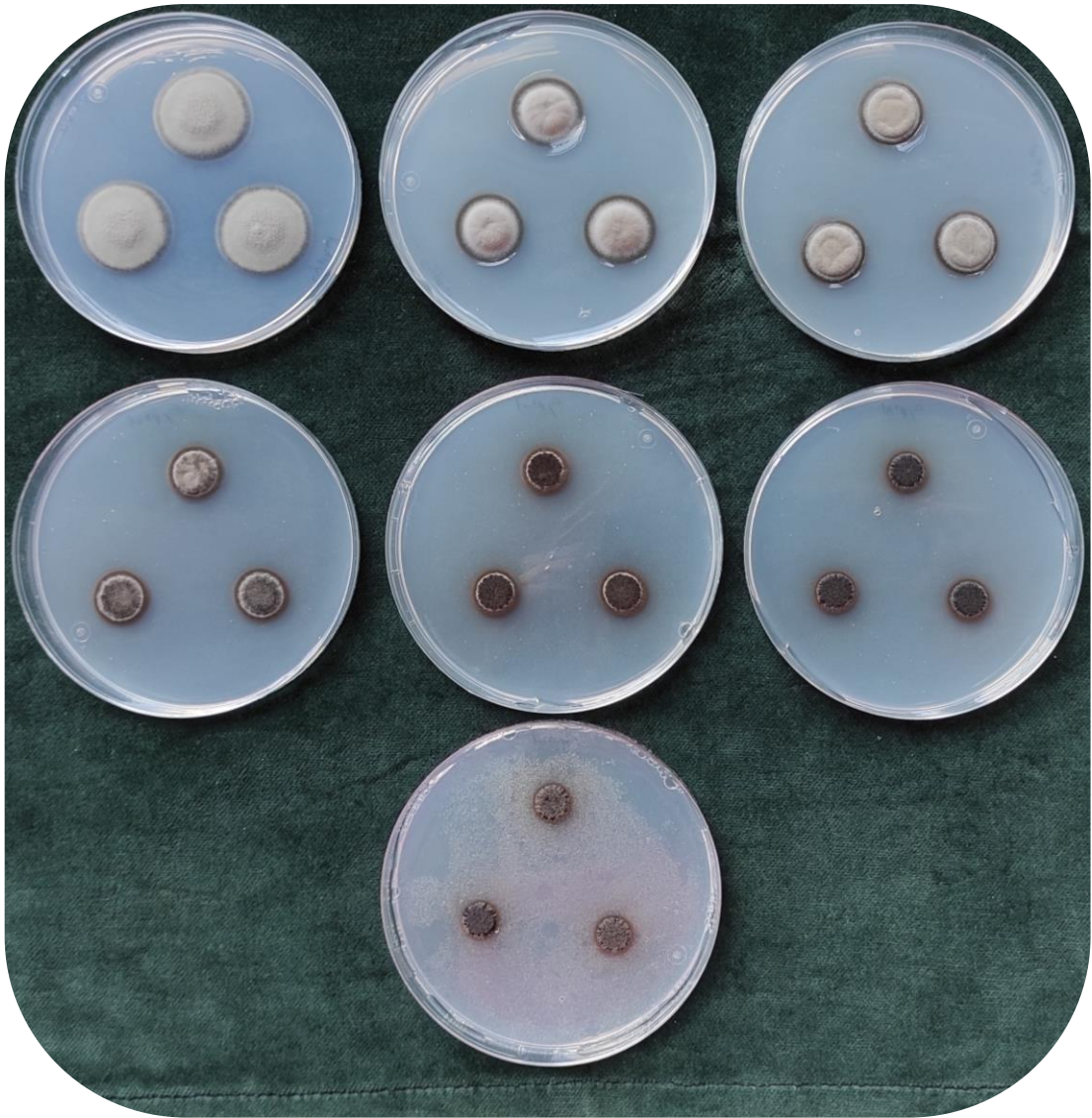
Supplementary Figure S2. (A) Microscopic morphology of young (thin and smooth) and old (thick and bulky) hyphae. (B) Lateral phialide is shown by the black arrow. (C) Conidia. (D) Conidia among the hyphal net. Scale bars: 10 μm .

Supplementary Figure S3.



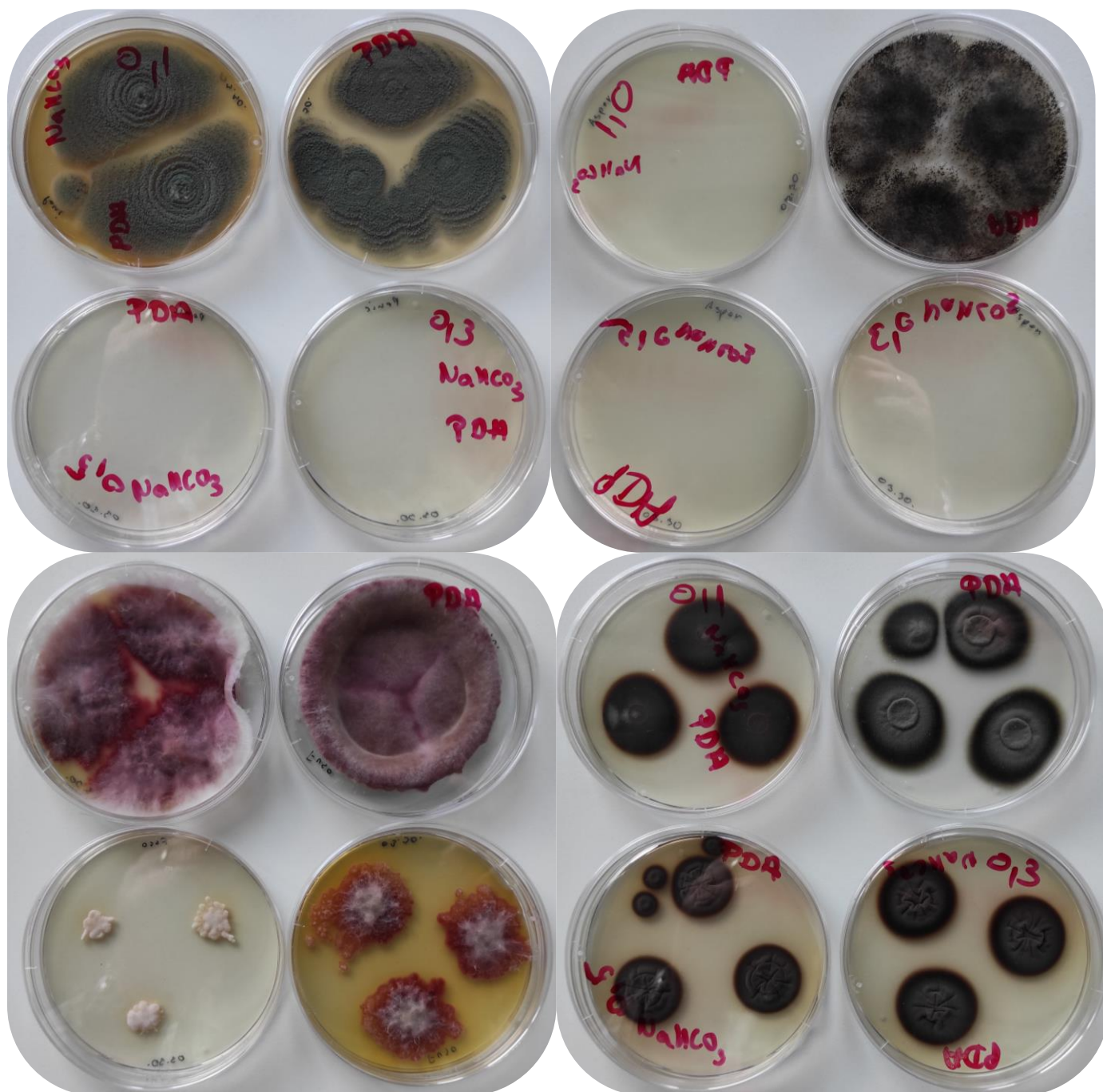
Supplementary Figure S3. Colony forming ability of the examined fungal strains on NaHCO_3 (II.)-containing PDA plates. Green mold: *Penicillium expansum* SZMC 2175, blackish mold: *Aspergillus niger* CBS 554.65, Reddish-yellowish mold: *Fusarium graminearum* FGSC 9075. The NaHCO_3 concentrations are the following in the top line from left to right: 0.0M (control), 0.1M, 0.3M and in the bottom line from left to right: 0.5M, 0.7M, 0.9M. None of the tested strains was able to produce colonies at all the different concentrations. *P. expansum* and *A. niger* showed extreme intolerance to NaHCO_3 (II.). *F. graminearum* was able to initiate colony formation even at 0.7M concentration, but only at 0.1M concentration produced normal colonies compared to the untreated control. Photos were taken after 14 days of cultivation.

Supplementary Figure S4.



Supplementary Figure S4. Colony forming ability of the fungal strain AGSC12 on NaHCO_3 (II.)-containing PDA plates. The NaHCO_3 concentrations are the following in the top line from left to right: 0.0M (control), 0.1M, 0.3M and in the middle line from left to right: 0.5M, 0.7M, 0.9M and the bottom line: 1.1M. The strain was able to produce colonies at all the different concentrations. Photos were taken after 14 days of cultivation.

Supplementary Figure S5.



Supplementary Figure S5. Colony forming ability of the examined fungal strains on NaHCO_3 (I.)-containing PDA plates. Green mold: *Penicillium expansum* SZMC 2175, blackish mold: *Aspergillus niger* CBS 554.65, Reddish mold: *Fusarium graminearum* FGSC 9075, grey colonies: *Cyphellophora olivacea* AGSC12. The NaHCO_3 concentrations are the following in the top line from left to right: 0.1M, 0.0M (control) and in the bottom line from left to right: 0.5M, 0.3M. Only the AGSC12 strain from the tested strains was able to produce normal colonies at all the different concentrations. *P. expansum* and *A. niger* showed extreme intolerance to NaHCO_3 (I.). *F. graminearum* was able to initiate colony formation even at 0.5M concentration, but only at 0.1M concentration produced normal colonies compared to the untreated control. Photos were taken after 27 days of cultivation.

The image displays a time-lapse of *Aspergillus niger* growth on agar in six petri dishes arranged in a 3x2 grid. The top row shows the initial state: the left dish has a large, confluent, orange-brown mold, while the right dish has three small, distinct white inoculation points. The middle row shows the mold beginning to expand from these points. The bottom row shows the mold fully covering the agar surface in a uniform, textured layer, indicating complete confluence.

Supplementary Figure S6. Colony forming ability of the fungal strains *F. graminearum* FGSC 9075 and *C. olivacea* AGSC12 on NaHCO₃(I.)-containing PDA plates. The NaHCO₃ concentrations are the following in the top line from left to right: 0.0M (control), 0.7M and in the bottom line from left to right: 0.9M, 1.1M. Only the AGSC12 strain was able to produce colonies at all the different concentrations. Photos were taken after 7 days of cultivation.