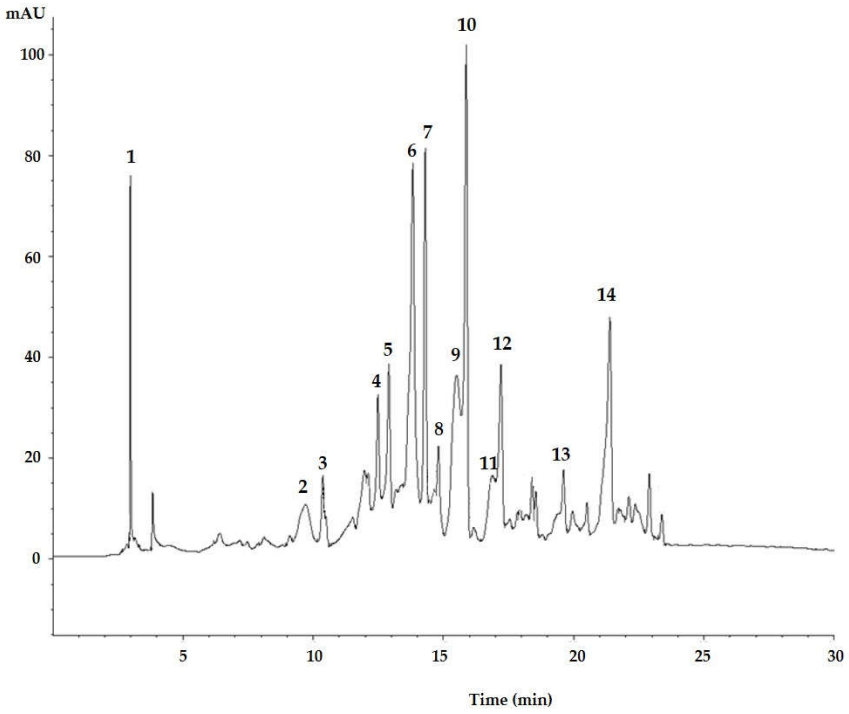


**Figure S1.** HPLC chromatogram of sprouted wheat phenolic profile extracted at 290 nm. Proposed phenolic compounds were numbered by elution order (See Table S1 for peak numbers).

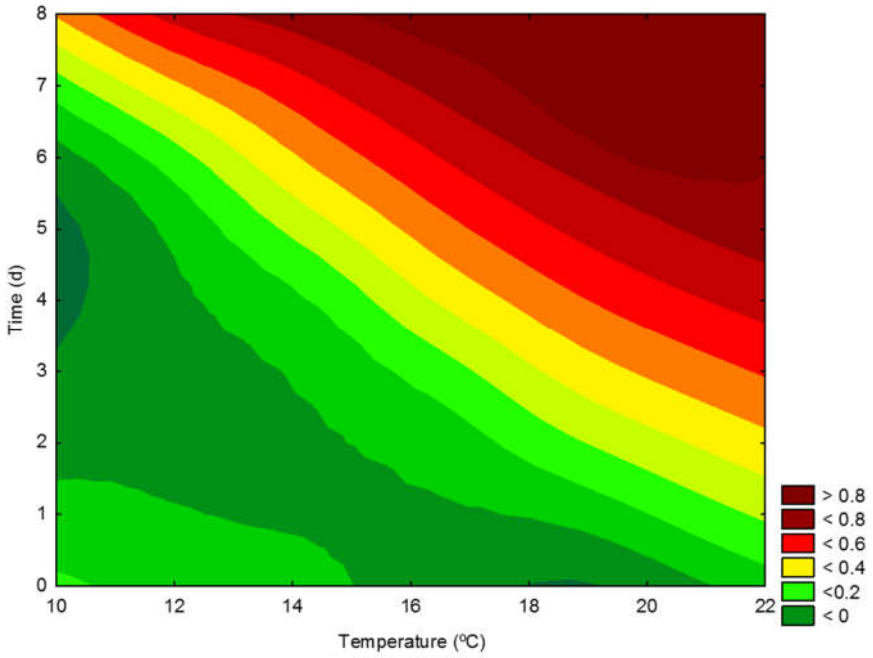


**Figure S2.** Bidimensional contour plot for desirability (*D*) as function of germination temperature and time.

**Table S1.** Chromatographic and mass spectrum data of the phenolic compounds identified in whole wheat grains and sprouts

| Peak no. | $[M-H]^-$ (*m*/*z*) | $MS^2$ (*m*/*z*) | RT (min) | Tentative identification | Phenolic class | Standard for quantification |
|---|---|---|---|---|---|---|
| 1 | 355 | 179 | 2.9 | Caffeic acid *O*-hexoside | Phenolic acid | Caffeic acid[1] |
| 2 | 625 | 305 | 9.8 | Apigenin-6/8-*C*-pentoside-8/6-*C*-hexoside (i1) | Flavone-*C*-glycoside | Vicenin-2[2] |
| 3 | 625 | 305 | 10.5 | Apigenin-6/8-*C*-pentoside-8/6-*C*-hexoside (i2) | Flavone-*C*-glycoside | Vicenin-2 |
| 4 | 607 | 323 | 12.2 | Methyl isoorientin-2-*O*-rhamnoside | Flavone-*C*-glycoside | Vicenin-2 |
| 5 | 431 | 186 | 13 | Vitexin (aginenin 8-*C*-glucoside) | Flavone-*C*-glycoside | Vicenin-2 |
| 6 | 367 | 193 | 13.9 | Feruloylquinic acid | Phenolic acid | Ferulic acid[3] |
| 7 | 564 | 269 | 14.3 | Apigenin-6-*C*-arabinoside-8-*C*-hexoside | Flavone-*C*-glycoside | Vicenin-2 |
| 8 | 385 | 192 | 14.8 | Dihydroferulic acid (i1) | Phenolic acid | Ferulic acid |
| 9 | 385 | 192 | 15.5 | Dihidroferulic acid (i2) | Phenolic acid | Ferulic acid |
| 10 | 193 | - | 15.8 | Ferulic acid | Phenolic acid | Ferulic acid |
| 11 | 415 | 191 | 16.9 | 1-Acetoxypinoresinol | Lignan | Podophyllotoxin[4] |
| 12 | 594 | 179 | 17.2 | Vicenin-2 (apigenin-6,8-di-*C*-glucoside) | Flavone-*C*-glycoside | Vicenin-2 |
| 13 | 431 | 186 | 19.6 | Isovitexin (aginenin 6-C-glucoside) | Flavone-*C*-glycoside | Vicenin-2 |
| 14 | 769 | 269 | 21.4 | Apigenin-6-*C*-galactosyl-8-*C*-glucosyl-*O*-glucuropyranoside | Flavone-*C*-glycoside | Vicenin-2 |

RT: retention time; i: isomer;

[1] Linearity range 1-100 μg/mL, $r^2 > 0.99$

[2] Linearity range 1-50 μg/mL, $r^2 > 0.99$

[3] Linearity range 1-100 μg/mL, $r^2 > 0.99$

[4] Linearity range 1-50 μg/mL, $r^2 > 0.99$