

Figure S1. Boxplot of NH_4^+-N (on the left) and NO_3^--N (on the right) concentrations of soil sampled at the end of cauliflower experiment. The upper and lower hinges match the 25th and 75th percentiles (1st and 3rd quartile). The solid line and squared indicate the median and mean values, respectively. Soil without treatment (C), Fertilized soil and treated with Pesticides (FP), soil FP with the application of Mixed Biochar (FPMB), and soil FP with the application of Wood Biochar (FPWB).

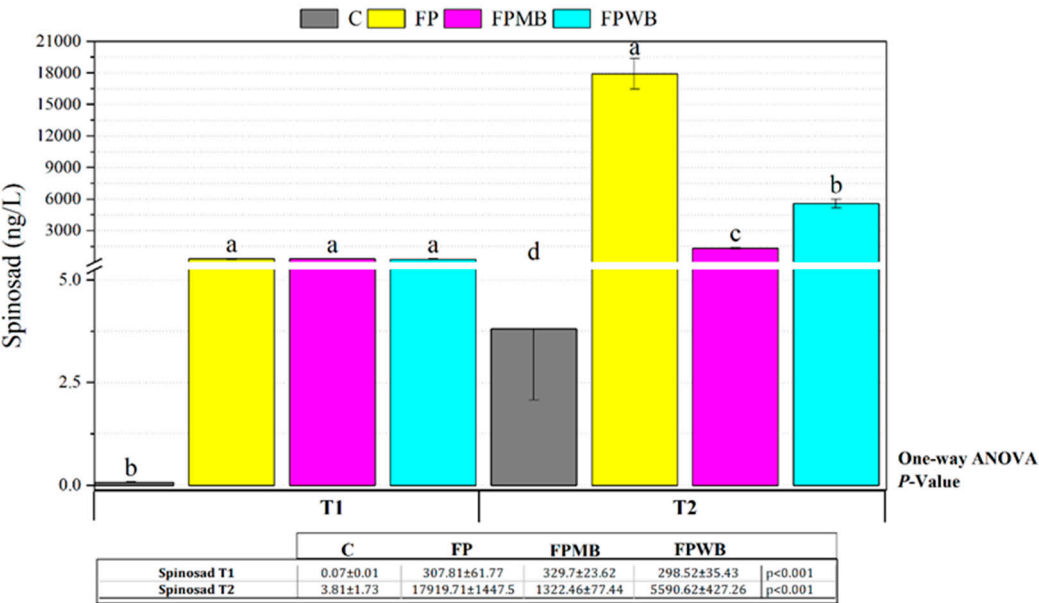


Figure S2. Box chart of insecticide spinosad-base concentration in percolation water at 10 days post-I° pesticides application (T1) and 10 days post-II° pesticides application (T2). Different letters indicate significant differences ($P < 0.05$) relation to soil treatments, based on one-way ANOVA and Tukey's test. The concentration value represents the sum of the isomers A and D of the spinosad molecule. Soil without treatment (C), Fertilized soil and treated with Pesticides (FP), soil FP with the application of Mixed Biochar (FPMB), and soil FP with the application of Wood Biochar (FPWB).

Table S1. Pesticides concentrations in soil sampled at the end of cauliflower experiment.

| Treatments | Azoxystrobin concentration ($\mu\text{g/kg}$) (One-way ANOVA) | Spinosad concentration ($\mu\text{g/kg}$) (One-way ANOVA) |
|--|--|--|
| Soil without treatment (C) | 5.55d \pm 0,30 | 0 \pm 0 |
| Fertilized soil and treated with Pesticides (FP) | 204.6b \pm 8,45 | 4309,16b \pm 386,57 |
| Soil FP with the application of Wood Biochar (FPWB) | 939.62c \pm 27,91 | 4720,92a \pm 107,32 |
| Soil FP with the application of Mixed Biochar (FPMB) | 711.16a \pm 15,01 | 4792,15a \pm 139,10 |

Notes: Values in the columns are the means \pm SE (n = 3). Significant differences were obtained by one-way ANOVA and Tukey test ($p < 0.05$). Different letters indicate significant differences due to treatments.

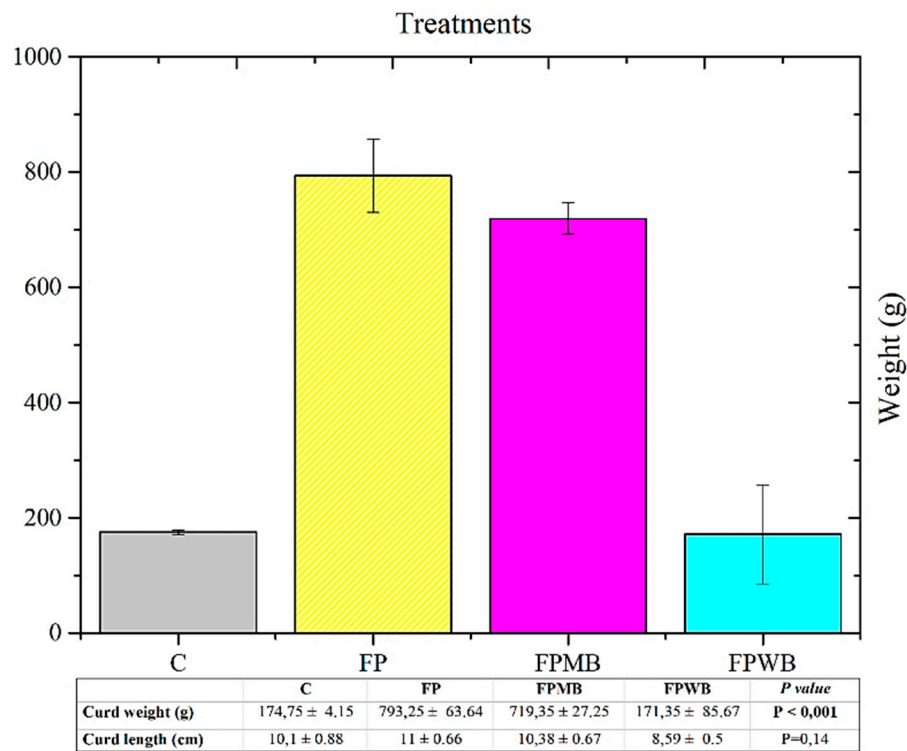


Figure S3. Column graph of morphologic curd growth parameters at the end of the study. Values in the table are the means \pm SE (n = 4). Significant differences were obtained by one-way ANOVA and Tukey test ($p < 0.05$). Soil without treatment (C), Fertilized soil and treated with Pesticides (FP), soil FP with the application of Mixed Biochar (FPMB), and soil FP with the application of Wood Biochar (FPWB).

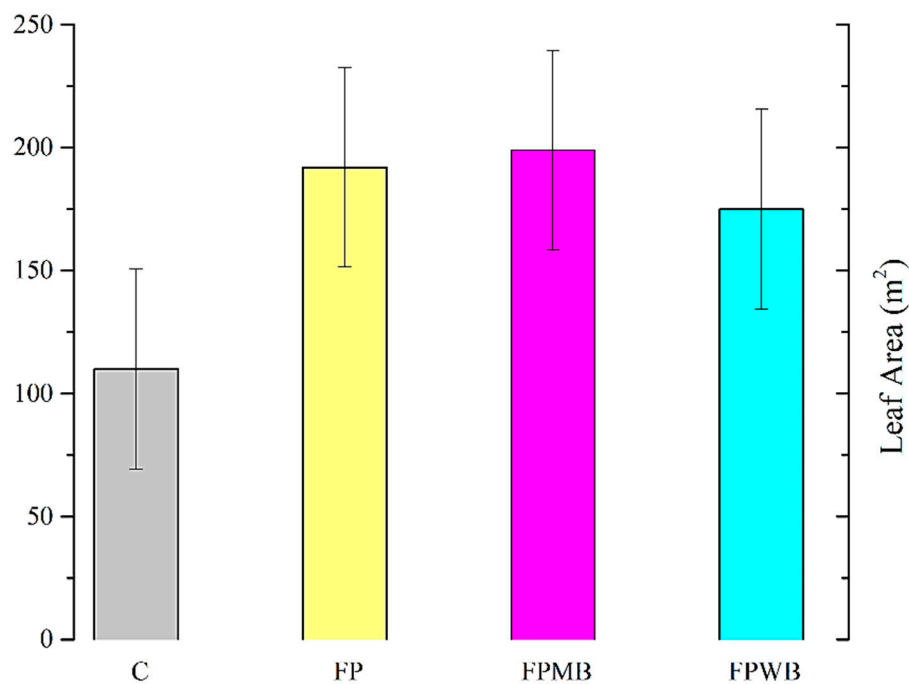


Figure S4. Effect of biochar treatment on leaf area of cauliflower plants at the experiment end. The error bars represent the standard deviation. Soil without treatment (C), Fertilized soil and treated with Pesticides (FP), soil FP with the application of Mixed Biochar (FPMB), and soil FP with the application of Wood Biochar (FPWB).

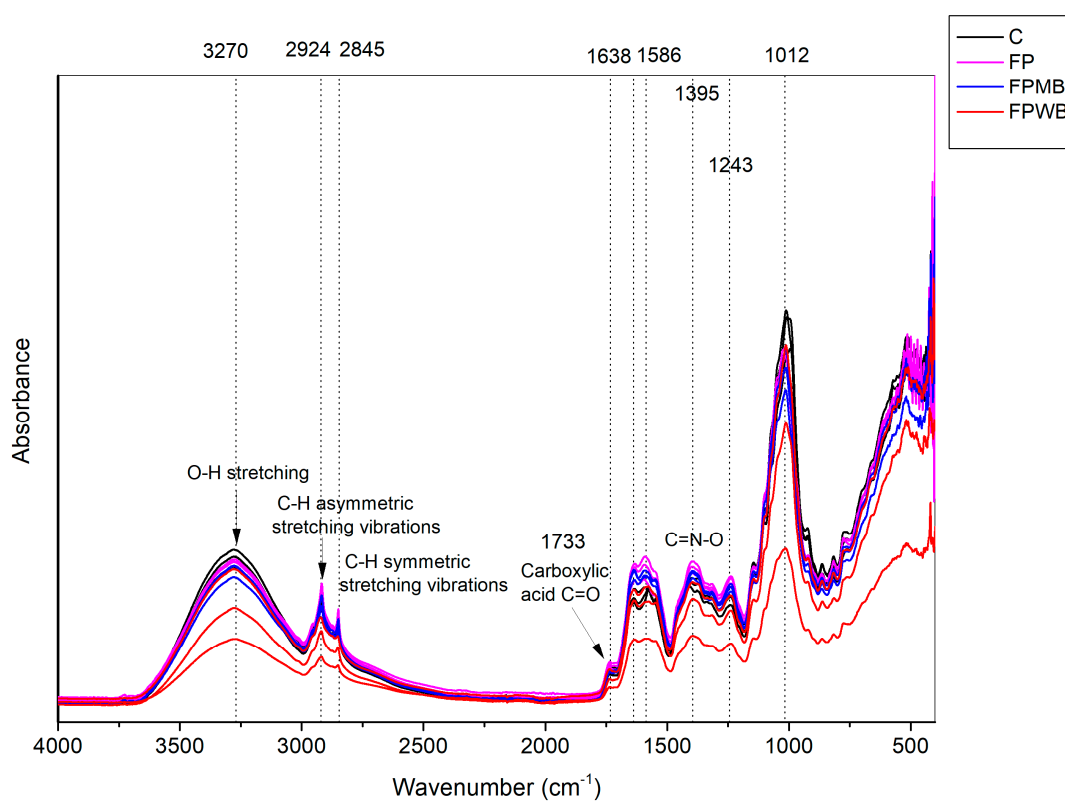


Figure S5. ATR-FTIR spectrum of *Brassica oleracea* L. var. *botrytis* curds, over the region (4000–500 cm⁻¹): C soil without treatment (black), FP Fertilized soil and treated with Pesticides (magenta), FPMB soil FP with the application of Mixed

Biochar (blue) and FP with the application of Mixed Biochar (blue) and FPWB soil FP with the application of Wood Biochar (red).