

Table S1. Results of the statistical analyses to examine the effects of cover crops on the subsequent cash crop defense against fall armyworm

| Experiment        | Traits                             | Test Statistic     | P value |
|-------------------|------------------------------------|--------------------|---------|
| Field experiments | Mass gain (Treatment)              | F = 1.04, df = 1   | 0.3110  |
|                   | Mass gain (Field)                  | F = 10.35, df = 2  | 0.0001  |
|                   | Mass gain (Treatment * Field)      | F = 0.64, df = 2   | 0.5314  |
|                   | Pupal weight (Treatment)           | F = 2.70, df = 1   | 0.1046  |
|                   | Pupal weight (Field)               | F = 16.94, df = 2  | <0.0001 |
|                   | Pupal weight (Treatment * Field)   | F = 1.04, df = 2   | 0.3588  |
|                   | Days to pupate (Treatment)         | F = 0.04, df = 1   | 0.8367  |
|                   | Days to pupate (Field)             | F = 4.11, df = 2   | 0.0206  |
|                   | Days to pupate (Treatment * Field) | F = 0.61, df = 2   | 0.5448  |
|                   |                                    |                    |         |
| Lab experiments   | Pupal mass (Treatment)             | F = 29.65, df = 1  | <0.0001 |
|                   | Pupal mass (Field)                 | F = 31.11, df = 2  | <0.0001 |
|                   | Pupal mass (Treatment * Field)     | F = 22.73, df = 2  | <0.0001 |
|                   | Days to pupate (Treatment)         | F = 315.69, df = 1 | <0.0001 |
|                   | Days to pupate (Field)             | F = 104.98, df = 2 | <0.0001 |

|                                    |                    |         |
|------------------------------------|--------------------|---------|
| Days to pupate (Treatment * Field) | F = 224.80, df = 2 | <0.0001 |
| Wax (Treatment)                    | F = 0.84, df = 1   | 0.3769  |
| Wax (Field)                        | F = 2.54, df = 2   | 0.1165  |
| Wax (Treatment * Field)            | F = 1.01, df = 2   | 0.3931  |
| PPO (Treatment)                    | F = 0.86, df = 1   | 0.3717  |
| PPO (Field)                        | F = 0.02, df = 2   | 0.9731  |
| PPO (Treatment * Field)            | F = 1.76, df = 2   | 0.2137  |
| Pupal length (Treatment)           | F = 19.39, df = 1  | <0.0001 |
| Pupal length (Field)               | F = 38.33, df = 2  | <0.0001 |
| Pupal length (Treatment * Field)   | F = 23.17, df = 2  | <0.0001 |

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Figure S1. Regional map and individual fields used in the study. (a) Regional map of the fields, (b) Cemetery field showing control and cover crop plots during cover cropping season, (c) Mahac field showing the control and cover crop plots during cover cropping season, (d) Hunter field showing the control and cover crop plots during the cover cropping season.

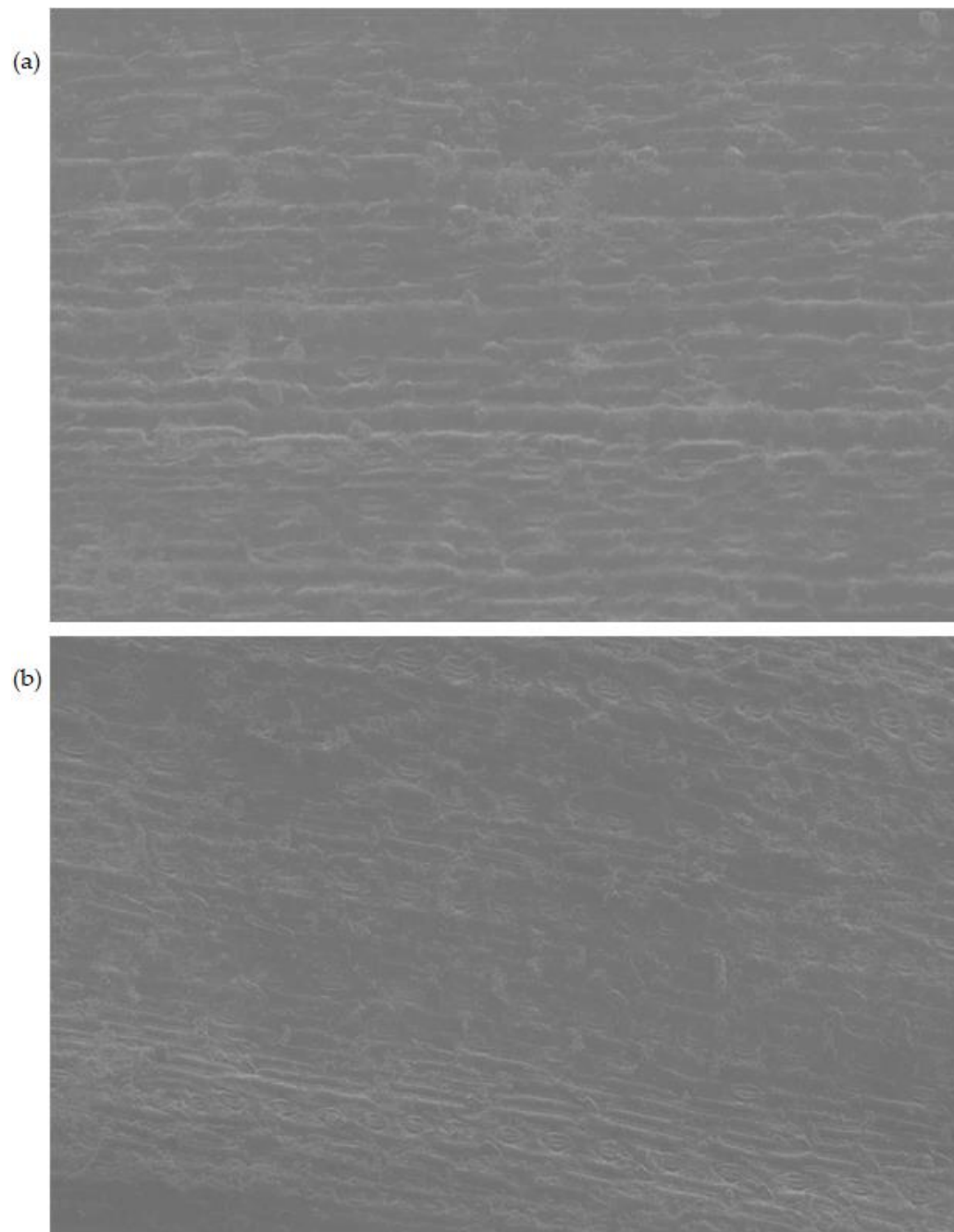


Figure S2. Electron micrograph (200X) of the adaxial side of sorghum leaves from both control and cover crop plots. (a) electron micrograph (200X) of the adaxial leaf surface of sorghum leaves planted in the cover crop treatment plots, (b) electron micrograph (200X) of the adaxial leaf surface of sorghum leaves planted in the control plots.