Electronic Supplementary Material

Effect of triazole fungicides Titul Duo and Vintage on the development of symbiotic pea nodules (*Pisum sativum* L.)

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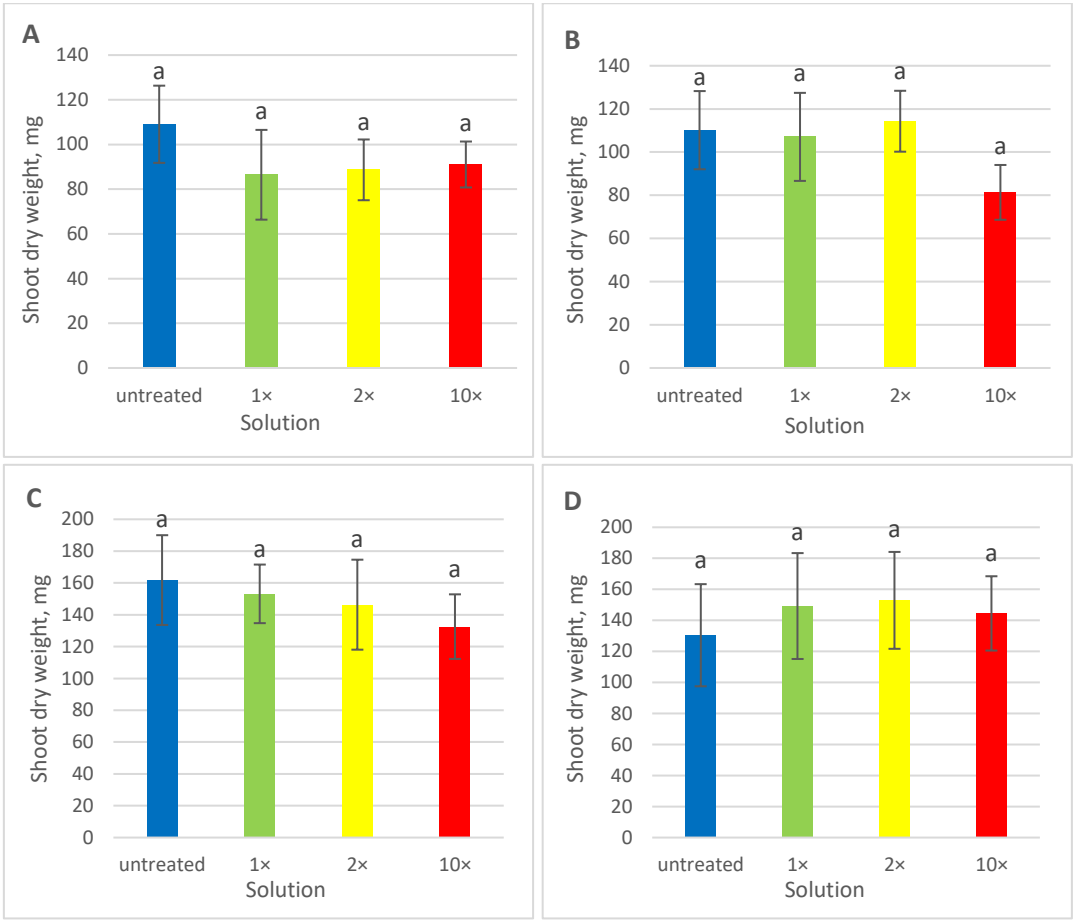

Figure S1. Mean dry weight of shoots of pea (*Pisum sativum* L.) cv. 'Frisson' treated with recommended by the manufacturer (**1×**), double- (**2×**), and tenfold-concentrated (**10×**) solutions of fungicides Titul Duo (**A,C**) and Vintage (**B,D**). (**A,B**) Fungicide treatment at 10 DAI. (**C,D**) Fungicide treatment at 20 DAI. Different letters indicate at groups with significant difference according to the least significant difference test ($p < 0.05$; $n = 20$). Vertical bars represent standard deviation.

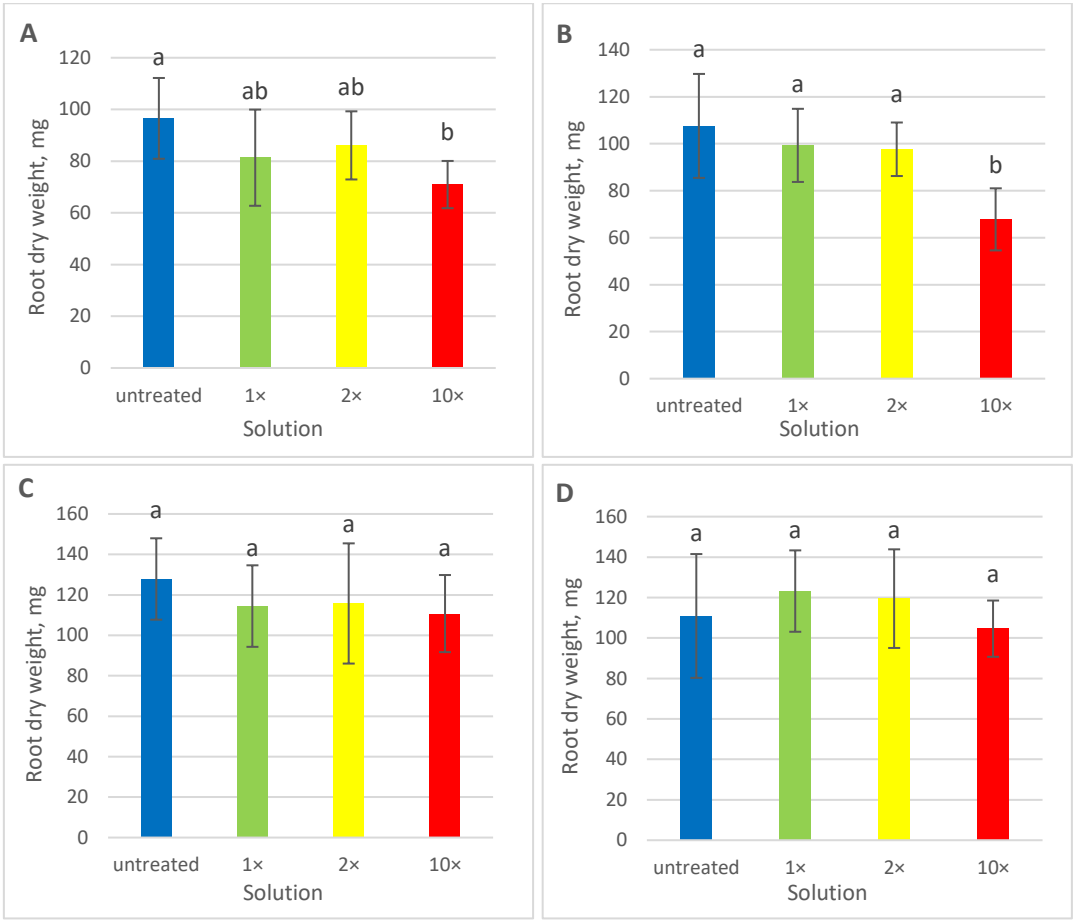

Figure S2. Mean dry weight of roots of pea (*Pisum sativum* L.) cv. 'Frisson' treated with recommended by the manufacturer (**1×**), double- (**2×**), and tenfold-concentrated (**10×**) solutions of fungicides Titul Duo (**A,C**) and Vintage (**B,D**). (**A,B**) Fungicide treatment at 10 DAI. (**C,D**) Fungicide treatment at 20 DAI. Different letters indicate at groups with significant difference according to the least significant difference test ($p < 0.05$; $n = 20$). Vertical bars represent standard deviation.

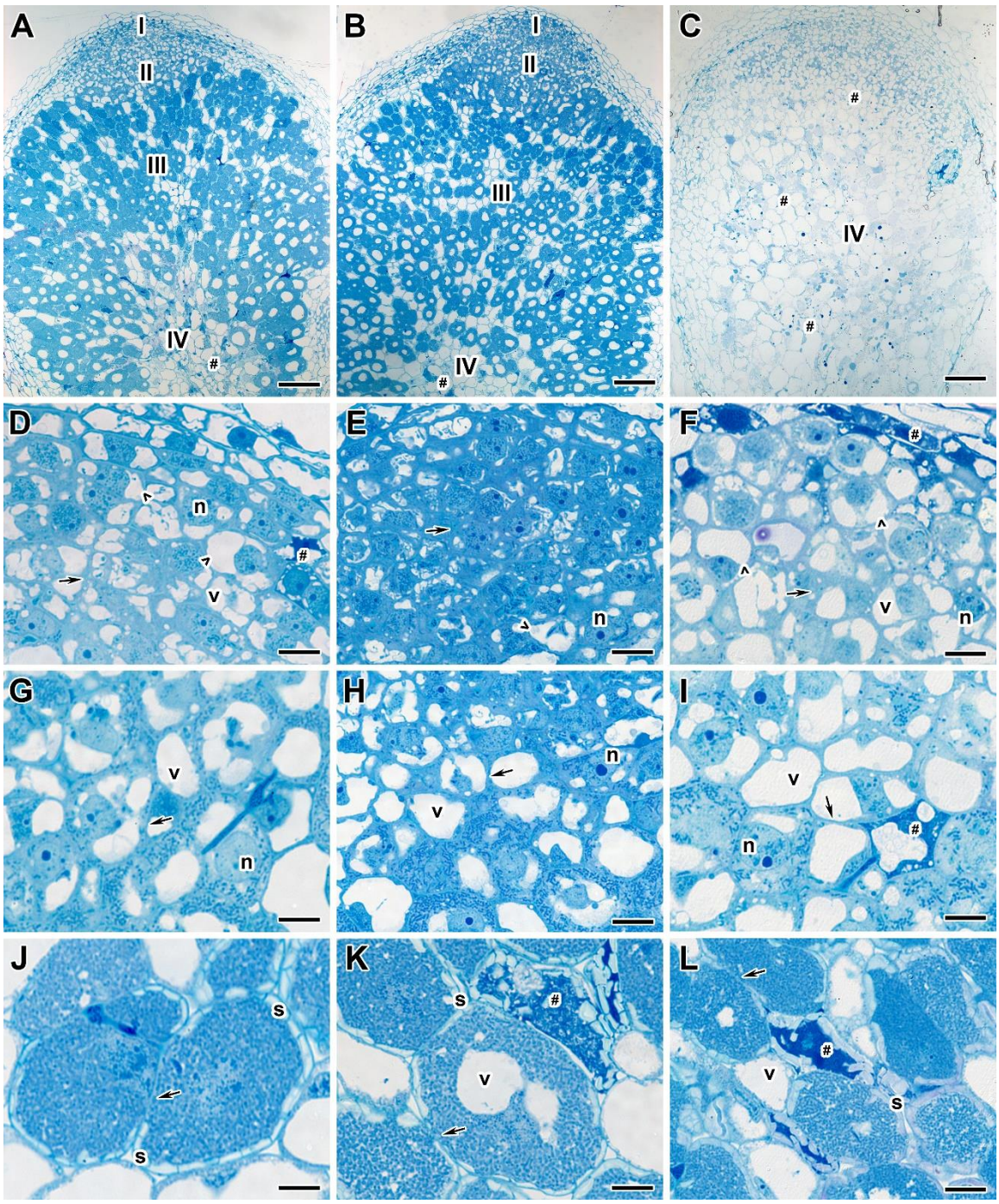

Figure S3. Histological organization of the nodules of pea (*Pisum sativum* L.) cv. 'Frisson' treated with fungicide Vintage at 10 DAI. (**A,D,G,J**) Treatment with fungicide at the concentration recommended by the manufacturer. (**B,E,H,K**) Treatment with a double-concentrated solution of fungicide. (**C,F,I,L**) Treatment with a tenfold-concentrated solution of fungicide. (**A–C**) Longitudinal section of a nodule. (**D–F**) Nodule meristematic cells. (**G–I)** Cells in the infection zone. (**J–L**) Infected cells in the nitrogen fixation zone. I, meristem; II, infection zone; III, nitrogen fixation zone; IV, senescence zone; n, nucleus; v, vacuole; #, degrading cells; s, starch accumulation. Arrows indicate a barely visible cell wall between infected cells, empty arrowheads indicate vacuole fusion. Bars (**A–C**) = 100 μm, (**D–M**) = 10 μm.

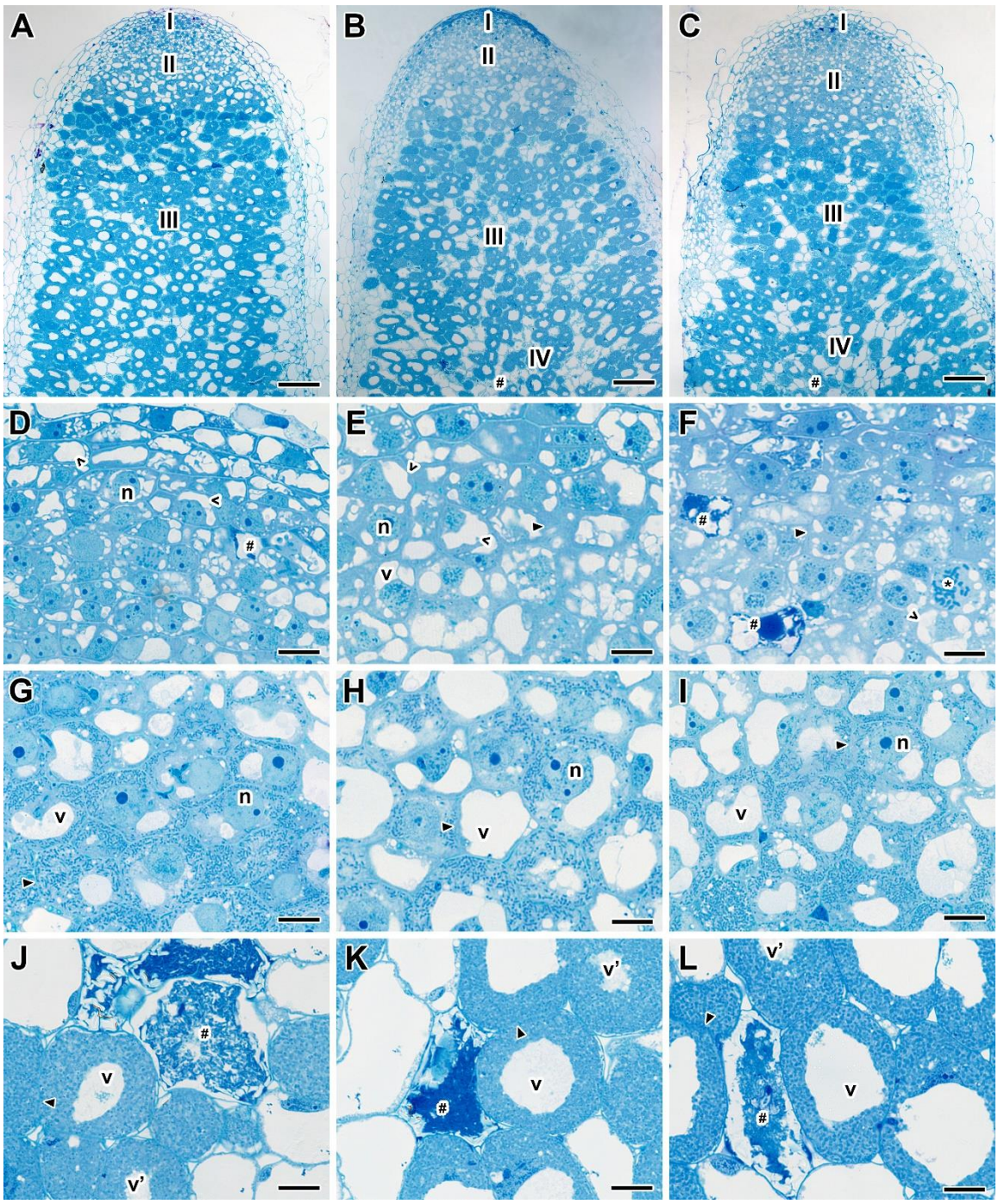

Figure S4. Histological organization of the nodules of pea (*Pisum sativum* L.) cv. 'Frisson' plants treated at 20 DAI with recommended by the manufacturer (**A,D,G,J**), double- (**B,E,H,K**), and tenfold-concentrated (**C,F,I,L**) solutions of Titul Duo (**C,F,G,I,J,K**) and Vintage (**A,B,D,E,H,L**). (**A–C**) Longitudinal section of a nodule. (**D–F**) Nodule meristematic cells. (**G–I)** Cells in the infection zone. (**J–L**) Infected cells in the nitrogen fixation zone. I, meristem; II, infection zone; III, nitrogen fixation zone; IV, senescence zone; n,nucleus; v, vacuole; v', destroyed tonoplast; *, metaphase plate; #, degrading cells. Arrows indicate a barely visible cell wall between infected cells, empty arrowheads indicate vacuole fusion. Bars (**A–C**) = 100 μm, (**D–M**) = 10 μm.