Fig. 1. Aboveground biomass accumulation (a-b) of maize and faba bean in relation to cropping treatments and film mulching. M-Mo means film mulching with monoculture, M-In means film mulching with intercropping, NM-Mo means no film mulching with monoculture, and NM-In means no film mulching with intercropping. And land equivalent ratio (c) and water use efficiency (d) of intercropping system in the two growing seasons of 2018-2019, among them, gray represents maize, green represents faba bean.

Fig. 2. Trajectories of (a) cumulative biomass production and corresponding trajectories of instantaneous rates of biomass production (b) by isolated and competing maize and faba bean. Curves in the Fig for maize and faba bean plotted against one another. Diagonal lines show the 1:1 relationships between maize and faba bean. Symbols represent the times of harvesting.

Fig. 3. Effects of cropping system treatments and film mulching on leaf, stem, grain, and sheath biomass of maize plants (a-b) and biomass allocation in the two growing seasons (c-d).

Fig. 4. The graphical abstract. Note: WUE is water us efficiency, SWS is soil water storage, Imax is the maixmum growth rate, LER is Land equivalent ratio.

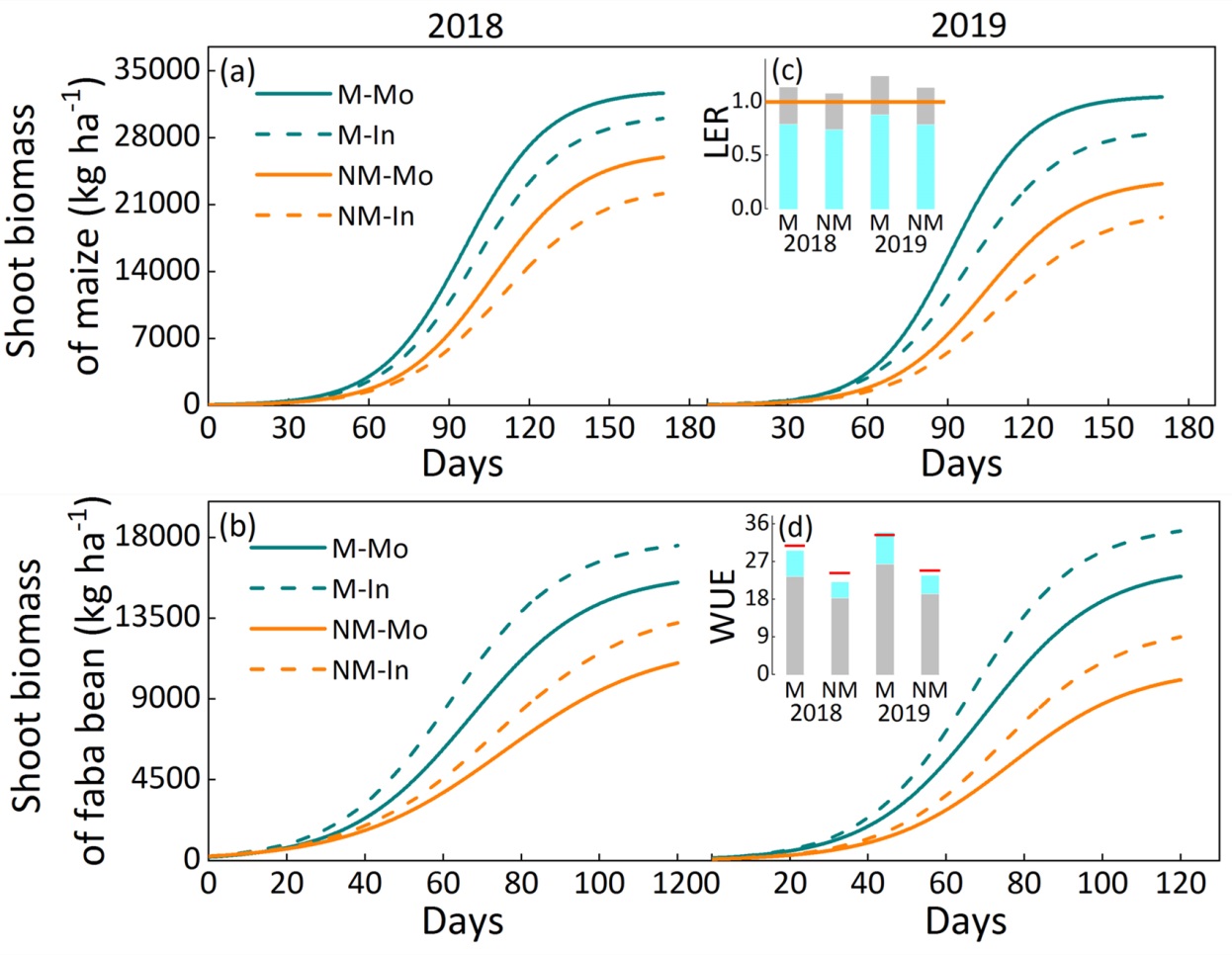


Fig. 1. Aboveground biomass accumulation (a-b) of maize and faba bean in relation to cropping treatments and film mulching. M-Mo means film mulching with monoculture, M-In means film mulching with intercropping, NM-Mo means no film mulching with monoculture, and NM-In means no film mulching with intercrop. Land equivalent ratio (c) and water use efficiency (d) of intercropping system in the two growing seasons i.e., 2018-2019. In the graph, gray represents maize and green represents faba bean.

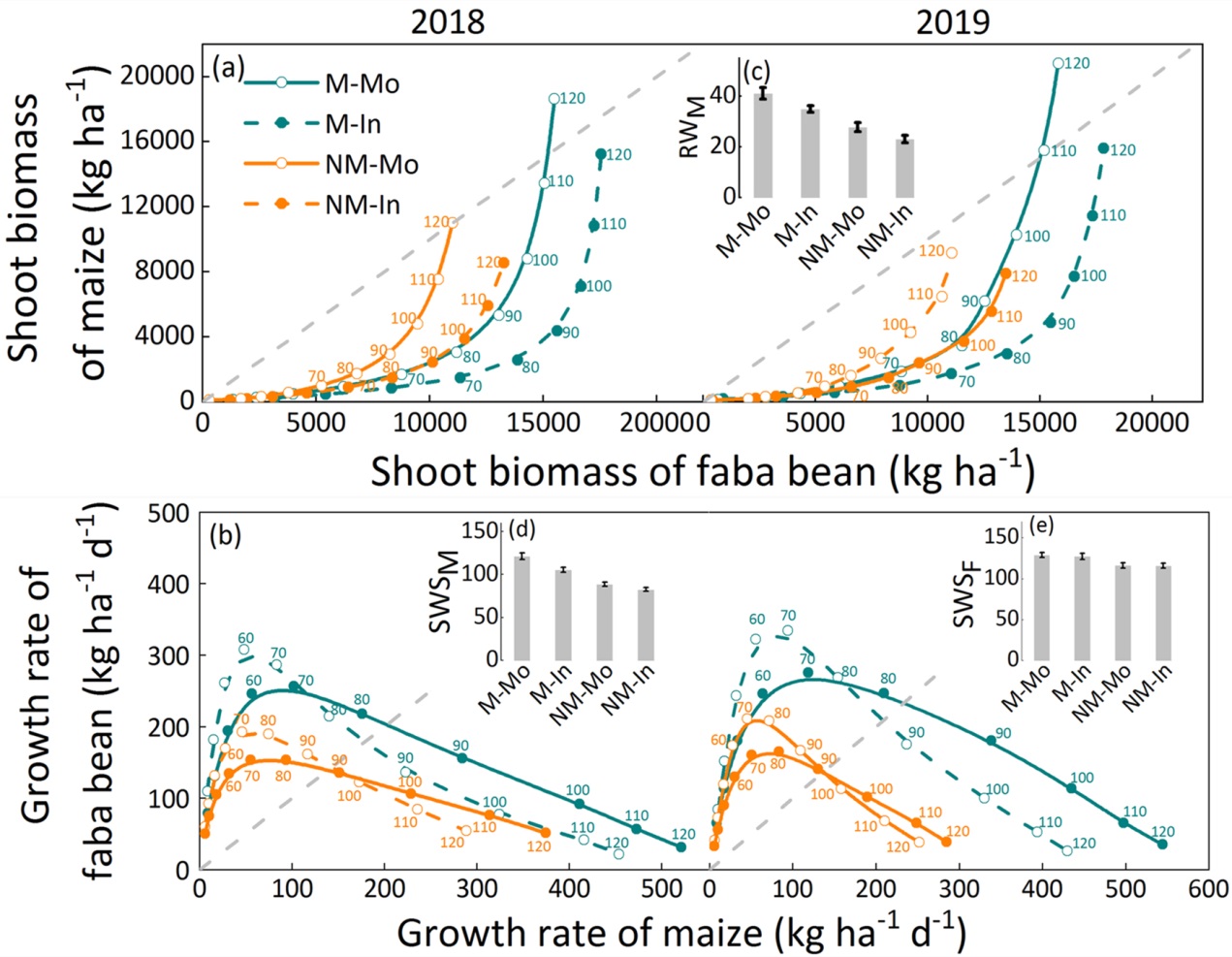
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Fig. 2. Trajectories of cumulative biomass production (a) and corresponding trajectories of instantaneous rates of biomass production (b) by isolated and competing maize and faba bean. Curves for maize and faba bean plotted against one another. Diagonal lines show the 1: 1 relationships between maize and faba bean. Symbols represent the times of harvests.

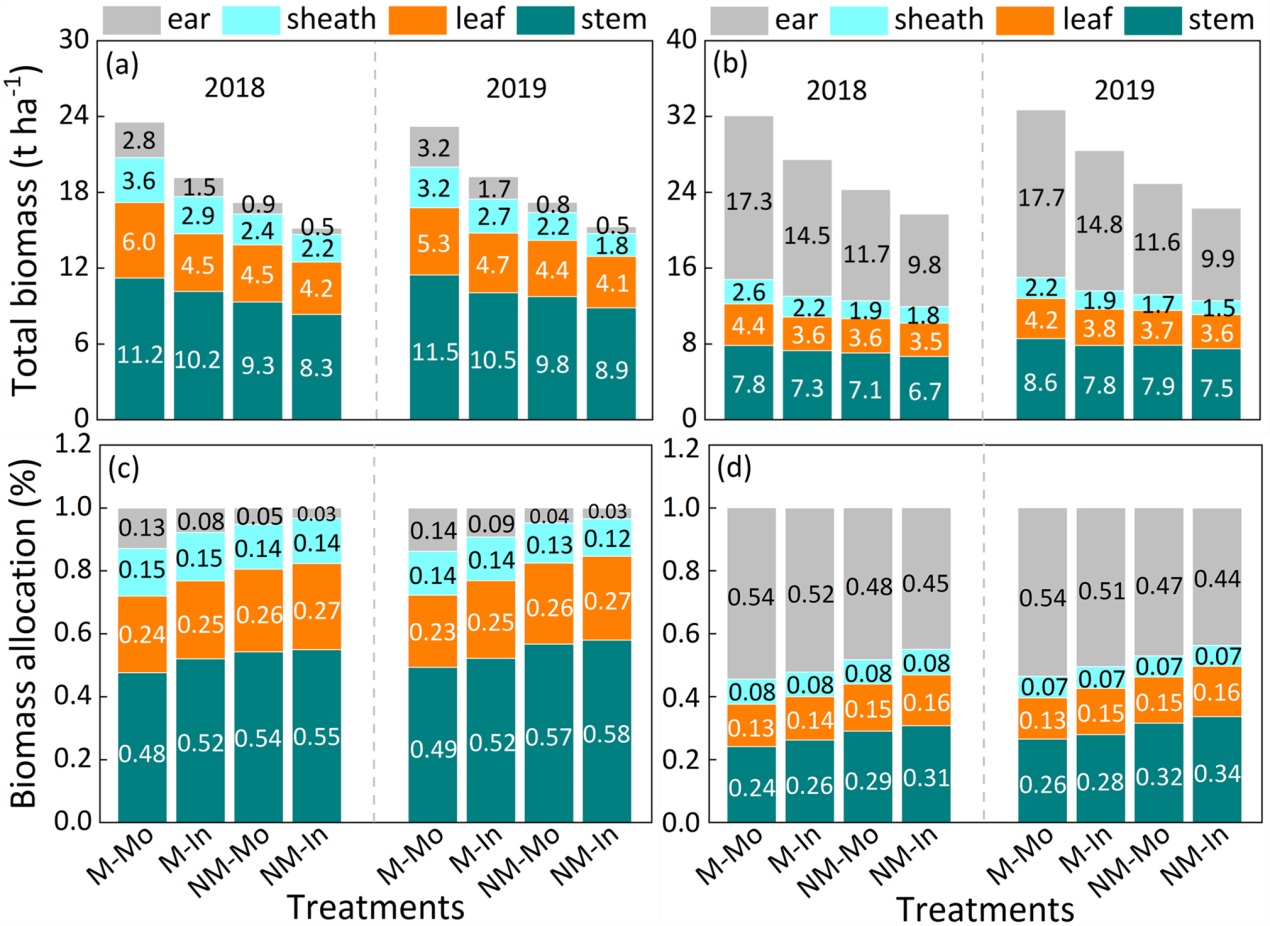
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Fig. 3. Effects of cropping treatments and film mulching on leaf, stem, grain, and sheath biomass of individual maize plants (a-b) and biomass allocation (c-d) in the two growing seasons (2018-2019).

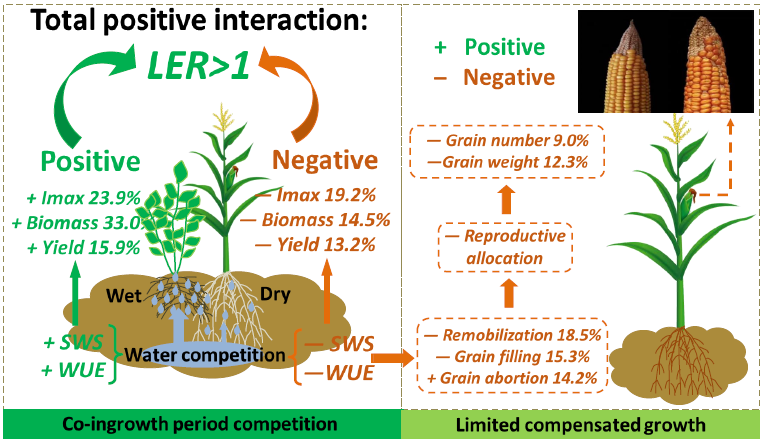
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Fig. 4. The graphical abstract. Note: WUE is water use efficiency, SWS is soil water storage, Imax is the maximum growth rate, LER is Land equivalent ratio.