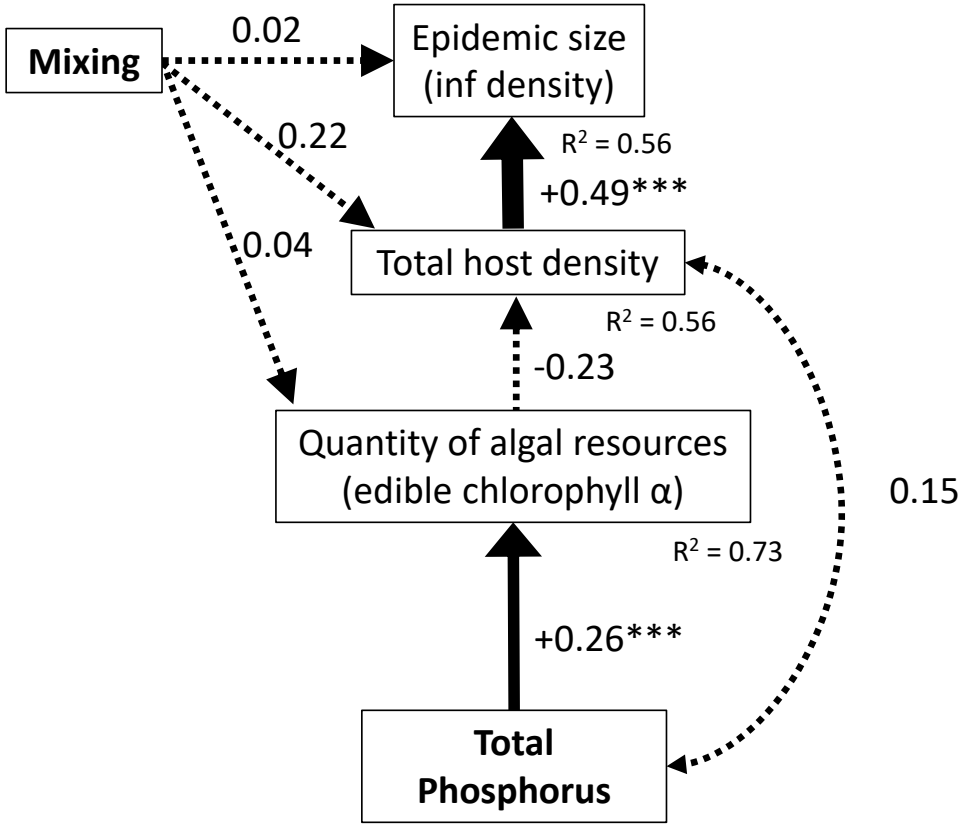
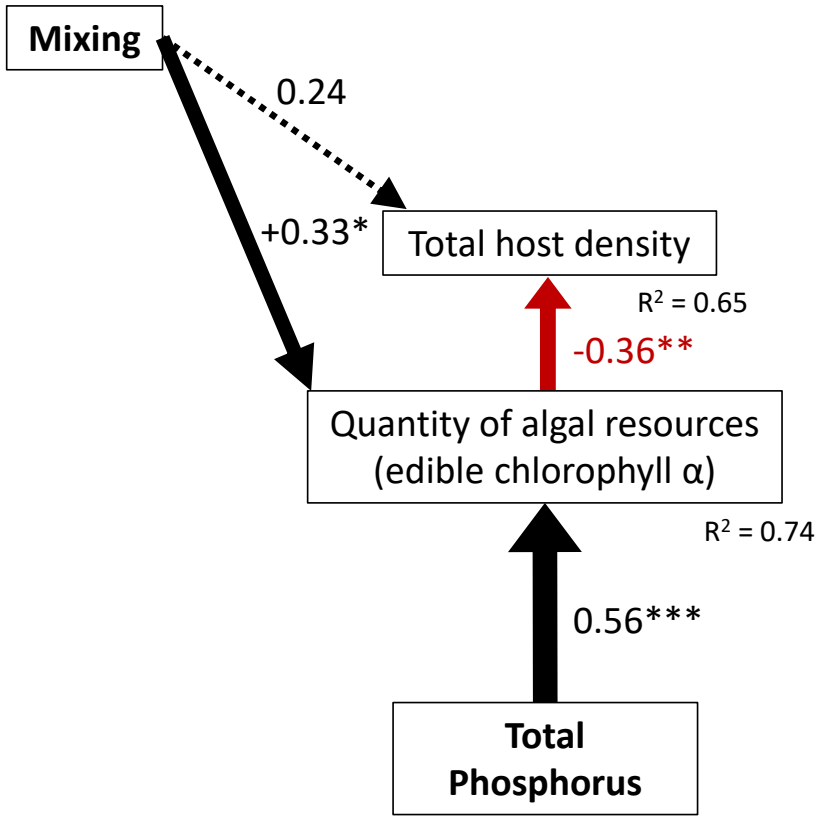
a. +spores path model



b. –spores path model