Fan modification in pad and fan cooling low tech greenhouses

BACKGROUND:

The Mid tech greenhouses use substantially less water (- 35%) for cooling compared to the low tech greenhouses. Analyses showed that extracting the air from high up in the greenhouse is the main reason for this lower water use. This research is published in a scientific paper. To create this effect in the low-tech greenhouses, a simple air duct is placed on the fans.

OBJECTIVES:

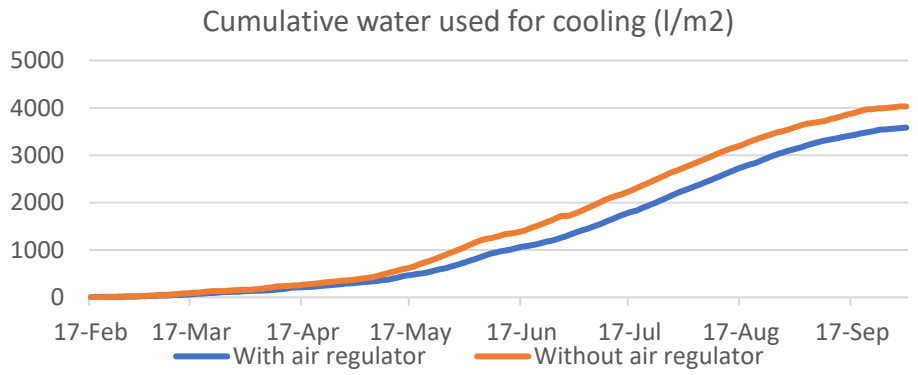
1. Compare water use for cooling with and without air duct
2. Compare greenhouse climate with and without air duct.

TREATMENTS:

The fan in one of the two low tech greenhouse compartments are Estidamah is modified. The other low tech greenhouse is used as a reference.

RESULTS:

The modified air ducting in Low tech-GH has reduced the water consumption for cooling by 11% compared to the reference GH.



CONCLUSION

The modification presented can easily be adopted by the growers and enhance their water use efficiency.