ABSTRACT

INFLATING COATED GREENHOUSE DEVELOPMENT

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In the study, it has been tried to thermal insulating efficiency of greenhouse and adaptedness to field on the purpose of decreasing heating costs which is an important expense in greenhouse activities by being designed a new type of top dressing with present equipments and suitable construction to this top dressing. After modelling with stereo drawing programme of greenhouse, its installation in the field has been realized. It is provided that pressure and pneumatic circuit stands in balanced by be being aerate with certain pressure among top dressing layers which are designed as double-layer. Temperature and PAR was measured comparatively with data logger and quantum PAR sensor, in cold-start conditions, synchronously, in greenhouse and out of greenhouse, also in a different greenhouse which is covered with monolayer PE. In the result of calculations which were made by being assumed that homonomous greenhouse is covered with monolayer top dressing, it is understood that puffing top dressing decrease it's heating loss at the rate of 67.8% in comparison with monolayer top dressing. As a result of measurement which was made, it has been seen that the daily total PAR rate changes between 2500 - 16000 $\mu mol.m^{-2}.day^{-1}$ along with its change in total sunny hours. When compared to a greenhouse which is covered with monolayer PE, it is understood that there are no difference between PAR and potential temperature. In the light of obtained verity, it was conclude that puff covered greenhouse can significantly decrease heating expense in comparison with present greenhouse.

Key Words: PAR, Greenhouse, Heat, Insulation