

## **Pepper Crop Production under Shading and Insect Proof Screenhouses**

N. Rigakis, N. Katsoulas, P. Belitsiotis, C. Kittas  
University of Thessaly,  
Dept of Agriculture Crop Production and Rural  
Environment, Fytokou Str, 38446, Volos,  
Greece

T. Bartzanas  
Centre for Research and  
Technology Hellas, IETETH-  
CERTH, 1<sup>st</sup> Ind. Area, 38500,  
Volos, Greece

**Aim of this study was to experimentally investigate the effect of three different shading and insect proof nets on pepper crop development and production. Three screenhouses were used; two of them were covered by a 50 mesh insect proof screen with shading intensity of about 15% and 35% and the third one was covered by a green shading net (not insect proof) with shading intensity of about 35%. The experiments were carried out from May to October 2012 in the experimental farm of the University of Thessaly in Velestino, Central Greece. Seedlings of sweet pepper plants were transplanted during May in three screenhouses and outside and measurements of crop development, production and quality, along with climate measurements inside and outside the screenhouses were performed. The results showed that compared to outside, plants grown under the green shading net were about 17% higher and produced about the same number of fruit with about 7% higher total fruit yield. The highest fruit number and total fruit yield was observed under the 15% shading insect proof screen (about 7 kg m<sup>-1</sup>) which was about 80% higher compared to outside and about 35% higher than that observed under the insect proof screen with the higher shading intensity. Marketable fruit yield for all screenhouses was more than 90% of the total yield, while for the open field crop the marketable fruit production was about 60% of the total. Pepper fruit sunscald was nearly eliminated, while BER and defects from pests were significantly reduced mainly under the insect proof screens.**

**Keywords:** insect proof screen, shading, sweet pepper, fruit number, yield, yield quality, sunscald, BER.