

## Toward Grower-Friendly Apple Crop Thinning by Tree Shading

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### Abstract

*Light management with shading nets, which reduce sunlight by 74%, leads to successful thinning on apple trees. Such a thinning method could be interesting for organic as well as for integrated production. Trials in 2006 and 2007 with the cultivars Golden Delicious, Elstar, and Topaz showed that this thinning method regulated the crop load to the necessary extent and that the achieved fruit quality is acceptable. However, cultivars respond differently to the length of shading. Three days' shading after 19, 26, and 33 days after full bloom reduced fruits per 100 flower clusters to a satisfactory amount for Golden Delicious and Topaz (except: 33 days). For Elstar, 7 days' shading after 25 days after full bloom resulted in a good thinning effect. Counting of flowers in the following year showed a reduction in alternate bearing for the shaded trees. Results obtained during recent years might suggest that the response of the method to meteorological conditions seems to be surprisingly low. Moreover, date and length of shading seems to be more important. But this will be further investigated by trials in 2008. Practicability of the method in farmers' orchards has to be improved, however. Net installation is still too costly and time-consuming, and therefore easy-to-handle and cheap methods must be developed. This study is part of an effort to increase European consumption of fruit from sustainable production systems, the ISAFRUIT-EU-project.<sup>2</sup>*

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