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**HORMONAL BALANCE AND PHYSIOLOGICAL BACKGROUND FOR
DECISION SUPPORT ON FRUIT SET IMPROVEMENT ON PEAR TREES**

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Since the growth regulator chlormequat chloride (CCC) was removed in Belgium in 1998, pear growing in intensive training systems has become more difficult and fruit growers are looking for alternative ways to control the vegetative growth of the pear trees. Prohexadione-Ca, a new growth regulator with good results on apple trees, is much less effective on pear trees and can have a negative effect on return bloom. The best way to control the vegetative vigour of a fruit tree is a regularity in the productivity, which can be achieved by a treatment with gibberellins, but the results of these treatments are not consistent. In this study, we investigate the effect of treatments of 'Conference' pear trees with Prohexadione-Ca and different gibberellins on proteome and gene expression, in order to obtain a better understanding of the physiological background of the process of flower initiation and fruit set on 'Conference' pear.

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