



Chmelařský institut s. r. o.

DEVELOPMENT OF LOW TRELLIS IN CZECH REPUBLIC



Ježek, J., Křivánek, J., Ciniburk, V., Kořen, J.

Hop Research Institute Co., Ltd., Kadaňská 2525, Zatec, Czech Republic, E-mail: jerizoj@seznam.cz

ABSTRACT

In CR hop is traditionally cultivated on high trellises. The growing technology has been improved recently. Nevertheless, it is still based on vine ability to turn round a wire and reach the height of 7-8 m. This technology can hardly become automated because spring operations (fixing wire at the top of a wirework and in the soil as well as young shoot training) must be carried out by labours regardless unfavourable weather conditions, which often occurs during the spring.

Higher inputs into hop growing and unstable prizes for hops have been typical for recent years. Hop growers must decrease inputs to be profitable. Low trellis system of hop growing may be one of the ways to solve this situation. Lack of good labours and decreasing interest in such work is another problem. In the past secondary school and university students made up the essential part of temporary workers as these activities used to be compulsory for them. Nowadays, people from Slovakia, Ukraine and Rumania represent the main source of this labour.

Hop growing on low trellis seem to be a quick and pragmatic alternative. This type of hop cultivation is not entirely new for Czech hop research as some trials were carried out as early as the beginning of the nineties (1992-1996). Nevertheless, at that time there used to be no such need and therefore no research continued.

In 2008 the first hop growers in Žatec (Saaz) hop region began to establish low trellises. Availability of a mobile picking machine produced by Chmelařství was the most important hint for them to start this type of hop growing. According to Central Institute for Supervising and Testing in Agriculture (CISTA), which register hop gardens in CR, the total acreage has increased recently from 17.4 ha in 2009 to 36.8 ha in 2010.

Hop Research Institute in cooperation with Czech University of Life Sciences of Prague (Faculty of Engineering, Dept. of Agricultural machines) finished some machines necessary for agro-technical operations in low trellises. Practical models of seeding machines as well as machines for mechanical cutting and chemical regulation of hop growth, for building up the shape of hop plant habits, fertilizer applicators, machines for low trellis building, spraying machines for hop protection against pests and diseases as well as shallow and deep soil treatment have been realized within the project.



Example: low trellis building



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Example: machine for chemical regulation of hop growth and for mechanical cutting



Option - grassing



Example: spraying machine for hop protection



Czech mobile hop picking machine HUN-30 (produced by Chmelařství, cooperative Saaz)



Low trellis during winter

Hop Research Institute Co., Ltd., Saaz, Czech Republic

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