高知農技セ研報（Bull. Kochi Agric. Res. Cent.）32 : 13-28 (2023)

キュウリのハイワイヤー誘引栽培における生育,収量,受光態勢および作業特性

穂﨑健昌・山﨑浩実・橋本明広・谷内弘道

Growth, Yielding, light interception, and Working Characteristics of Cucumbers(*Cucumis sativus L.*) Trained on a High-Wire

Takemasa Hosaki, Hiromi Yamasaki, Akihiro Hashimoto and Hiromichi Taniuchi

要　　約

キュウリ‘常翔661’を用いた養液栽培において，抑制，半促成栽培の各作型でハイワイヤー誘引栽培(誘引線の高さ3.8m)と慣行つる下げ栽培(誘引線の高さ2.1m)との生育，収量，受光態勢および作業特性を比較・検討した．その結果，ハイワイヤー誘引栽培では慣行つる下げ栽培に比べて以下のような特性を示した．

1. ハウス内の相対湿度が低く，着果数が多く，抑制栽培では誘引枝伸長量が短く，増加節数も生育後半に少なくなった．
2. 流れ果率が低く，収量は抑制栽培で56%、半促成栽培で19%増と著しく多く，A品率も高かった．特にこの傾向は抑制栽培で顕著であった．
3. 葉数・葉面積を多く確保でき，群落下部の葉の受光量も多くなる傾向が認められた．
4. つる下ろしの作業回数および作業時間，1果実当たりの収穫時間を大幅に少なくできたが，誘引枝の紐へのまきつけおよびクリップ留めの作業に多くの労力を要した．

キーワード：キュウリ，ハイワイヤー，生育，収量，受光態勢，作業特性

Summary

We compared the effects on growth , yielding, light interception, and working characteristics of hydroponics cucumber ‘Josho661’ was trained on a high-wire(training line hight 3.8m) with those of traditoinal training(training line hight 2.1m) in the retarding culture and semi-forcing culture. As a result, the following characteristics were shown on high wire training cultivation compare with those of traditoinal training cultivation.

1. High relative humidity in greenhouse and lots of number of fruits, in the retarding culture short elongation of training stems and node appearance rate of late growth stage.
2. Low aborted fruit rate, 56% more yield in the retarding culture, 19% more yield in the semi-forcing culture and high rate of A fruits. In particular, this tendency was remarkable in retarding culture.
3. It can keep a lot of leaves, leaf area, lots of intercepted light of lower canopy.
4. It can be significantly reduced work counts and work times of taking-down and harvesting time per fruit, but required a lot of effort of twisting and clip on stems.

Key words: cucumber, high-wire, growth, yield, light interception, working characteristics