Abstract:

Harvesting for too long each season could progressively reduce the vigour of asparagus and, therefore, be a cause of long-term yield decline. A ten-year field trial was carried out in Germany to investigate the influence of harvest duration on yield and quality of white asparagus. All plots were harvested for four and eight weeks in years one and ten respectively. In the other eight years there were six treatments with harvest durations ranging from four to nine weeks per season, with the end of harvest varying from 25 May to 29 June. Results were analysed to determine how yield changes depended on the yields in the preceding years.

Total spear yield over all the seasons was highest when the harvest was eight weeks long. Yield was reduced if the harvest was either one week longer or any shorter than eight weeks. The cumulative yield of grade I spears (diameter >16 mm and <26 mm) is more important for growers. In the early years the highest yields of these spears were obtained from the nine week harvest, but they declined faster in later years than in the eight week harvest. The yields of grade I spears were similar with six, seven or eight week harvests, but with less yield decline than with the nine week harvest. Shortening the harvest duration to four or five weeks reduced the grade I yield by approximately half compared with the yield from the longer harvests.

It is recommended that the harvest season should be shortened progressively from eight to six weeks as the age of crops increases. Production of thicker, higher-value spears appears to become concentrated in this shortened harvest season as crops get older. Measurement of soluble carbohydrate in the root system would help growers to decide the best time to stop the harvest on a crop-by-crop basis.