

The changing times of orchard growing systems

by Malcolm Withnall

A conversation with Stuart Clark, a UAP Fruit Agronomist, draws out his considerable commercial experience as a cornerstone philosophy for top fruit growers.

"It is only by looking at economic influences from around the world that a successful strategy can be planned," explained Stuart. "It will be difficult to survive without taking close note of the right crop, grown to the right customer specification, and sold at the most advantageous price". He is totally convinced that these market demands have to be translated into everyday fruit growing if growers are to continue to produce, and invest in new orchards.

Reflecting back over recent decades he is able to comment on the 24ft square format for many orchards, often grown as 'high-headed' trees (standards) with livestock grazing underneath,

supplementing the land use. "Often planted on the vigorous M2 rootstock, at this spacing many years of growing the tree frame delayed optimum yield", he added.

The massive improvements gained from virus free material under the EMLA Scheme led to the introduction of MM106, alongside the existing Malling series (M9, M26, MM111, MM104), enabling growers to move towards semi-intensive plantings at two or three times the tree density, shortening the delay to full production.

For farms with variable soils, achieving uniform growth remained a challenge, with growers making errors in selecting planting distances to suit variable farm conditions. "At this time these systems were relatively easy to manage, yields were good, and prices firm," commented Stuart. "This was a profitable time for growers, especially with a strong home market for English fruit".

The impact of accession to the EEC is well documented, but the arrival of Golden Delicious heralded a new era of reduced margins. Aggressively marketed and priced, English growers saw a rapid decline in their market share and economic fortunes. "This made the UK growers look abroad to see what other growers were doing", said Stuart.

"Intensive, single-row, high density systems, grown in a conical shape, mostly using M9 rootstock, planted at 3.75m x 1.5m were commonly seen, and in some countries, two, three and even eight-row beds were planted, mostly using Continental varieties".

Stuart observed that the more intensive systems required that growers be acutely aware of light penetration, pest control, and ease of picking. "A range of new tree controls were used, including tying down and growth regulators, to suppress growth and induce fruit bud",

he added.

However, he observes that intensification did compromise the balance of growth in many systems, along with pest and disease control. "Traditional English varieties such as Cox were very inconsistent in yield, accentuating these problems," he added.

"Equally, intensive pear orchards fell foul of similar constraints, being of variable yield (25-50 tonnes/ha) and being expensive to produce, and gained no 'English' price premium. Although there were some notable successes with these systems, from year 10 onwards they became very difficult to sustain economically. Overall, growers moved away from multi-row systems, returning to single-row as the preferred option, growing closer together in the row to improve output whilst reducing costs".

With the adoption of year-round supply for many edibles in the retail outlets, it became

