The development to the present 2012 state of the Israeli olive industry

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Abstract

The olive is one of the oldest domesticated fruit tree commodities which developed into a commercial industry involving basic biotechnologies. It spread in ancient times hand in hand with the western civilization. In many regions of Israel and the world it still is a rain-fed highly traditionally commodity. While the table olive industry was subjected about 120 years ago in some countries including Israel to various levels of intensification this however was unacceptable in olive cultivation for oil extraction for many years. Increase of cost of living during the last century the economy of the olive oil commodity became questionable. An increase in efficiency of the industry was obligatory for its commercial survival. Intensification similar to that of table olives was initiated in Israel some 50 years ago. Already the initial results indicated a significant potential for increasing production without reduction in oil quality although slight changes in the varietal taste might occur. Some cultivars responded well but others rather poorly to the fertigation regarding growth, fruit yield and relative oil content. Selection and breeding of responsive varieties to intensification was initiated. Our breeding project yielded some cultivars responding well to the intensive cultivation methodologies. Once responsive cultivars were identified, a new era for the olive oil industry was initiated. An increase in both fruit and oil yield up to more than five times over that in traditional orchards has been achieved. This increased production and tree uniformity initiated new up scaled plantations in new and traditional olive growing regions. These large scale orchards required maximal reduction of manual labor and introduction of harvest mechanization. These relatively large operations triggered up grading of oil mills and new oil extraction technologies leading to an increase in quality oil. The relatively new intensive orchards for the oil industry initiated the development of new orchard systems such as the high density hedgerow orchards for overhead mechanical harvesting. Breeding of new verities for intensive cultivation for oil, table olives and resistance to diseases and pests is the key issue for maintaining a future economical olive industry. It could be concluded that intensification and new suitable cultivars is transforming both the Israeli and world olive oil industry from a traditional barely economical to a thriving efficient developing industry.