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National road Map program for horticultural product waste management: Apple, Grape, citrus.

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Food processing companies have been developed and hence waste materials from processed products have becom challenging issue. Wastes management has been considered in the Iranian Fourth Development Plan, and Fars Engineering Research Center was assigned to inscribe a National Road Map Research Plan for the optimum use of the horticultural waste materials. According to FAO statistics, Iran has the 4th rank in apple and lime production in the world, 7th for grape, and 8th for orange. These products have been selected due to their high production rate, in this study for further investigation concerning the current situation and desired future applications of the wastes. A comprehensive SWOT analysis was carried out using brain storm approach to identify the strategies for the potential value-added by-products and the best use of the wastes. Waste materials are mainly pulp, seeds, and a large quantities of the peel. Except partial use of the pulp in some cases such as animal feed, there is no specific application for the peels. Oil seed, citric acid form the wastes of grape processing plants as well as various essence and pectin from citrus peels can be named as by-products from fruit processing plants in the world while in Iran so far there is no commercial industry to process these wastes. Lack of the statistics in details from the industries, not easy access to the available import/export data from the officials, and uncooperative behavior of the processing plants were the main challenges in this study. SWOT analysis resulted in the average score for the internal and external influencing factors to be 5.2 and 3 for oil seed5.1 and 2 for apple pectin, 6 and 2.8 for lime pectin, and 6and 3.2 for orange pectin. Therefore, the strategy for the above mentioned products was invading -development

Keywords: Fruit Wastes Management, SWOT Analysis, Road Map Research Plan, Pectin, Seed oil

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