

KITCHEN PROCESSES AS A TOOL TO ELIMINATE THE RESIDUES OF CERTAIN ACARICIDES IN/ON EGGPLANT

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Abstract

Fenpyroximate, diafenthiuron and fenazaquin, three acaricides have been used at recommended concentration, to control the two spotted spider mite, *Tetranychus urticae* Koch on egg plant. Degradation behavior of these acaricides at 3, 7 and 14 days after application was estimated. The efficiency of kitchen processes - washing, peeling and boiling - to eliminate the residues of the former acaricides was also determined. The highest initial deposit (2.09 ppm) was recorded by fenpyroximate although application rate was the lowest, whereas diafenthiuron has the lowest initial deposit (0.13 ppm) although application rate was the highest. The initial deposit of fenazaquin (0.6 ppm) came between the two formal values. Residues percentages 14 days after application, (compared by initial deposit) were 4.31, 38.46 and 36.67 % for fenpyroximate, diafenthiuron and fenazaquin, respectively. Residual half-life was 2.518, 3.971 and 10.37 days for fenpyroximate, diafenthiuron and fenazaquin respectively. In general, all the tested kitchen processes were effective for removing the residues of the three acaricides, peeling process was the best.

Key words: fenpyroximate, diafenthiuron, fenazaquin, Residues, Eggplant.

INTRODUCTION

Due to its high dietic and taste value, the eggplant (*Solanum melongena* L.) has become an object of interest to nutritionists, dieticians, producer and consumers in the whole world. This vegetable is an important source of mineral salts, it contains much potassium, calcium, iron and phosphorus. It has a beneficial effect on human health - decreases cholesterol in the blood, amplifies heart action, causes liquid excretion from the organism and is anti-cancerous. (Martiewicz and Golcz, 2003). This plant requires a wide dissemination in Egypt. Farmers in Ismailia Governorate prefer cultivating vegetable crops on their farms because environmental factors are suitable beside the outcome on is somewhat satisfactory for them (Yousri *et. al*, 1995). Eggplant is one of the preferable crop in this area for pests. The two spotted spider mite *Tetranychus urticae* is one of these pest. This serious pest causes quality and quantity damage to eggplant. Farmers are facing a serious problem in terms of pest that firmly attack this crop.

A wide range of chemicals have been marked for controlling this pest (El-adwy *et. al*, 1996, Shouky *et. al*. 1989). The miss use of pesticides leads to sufficient control