

Seasonal Occurrences of *Panonychus ulmi* (Koch) and *Tetranychus urticae* Koch in the Apple Orchard, Kyung pook

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Monthly densities of *Panonychus. ulmi* and *Tetranychus. urticae* in apple orchards in 8 location in Kyungpook province were investigated for 8 years from 1992 through 1999, and the results are summarized as below.

In general, density of *P. ulmi* was decreased during summer and, then, increased slightly in the autumn, while that of *T. urticae* was continually increased, more or less, from April to October.

Relative density of *T. urticae* was higher than that of *P. ulmi* throughout the season from the spring differ from the pattern of The 80s and the tendency became more obvious since 1996.

T. urticae in apple orchards was reported to prefer to feed on weed during spring and become more abundant on apple leaves from July. However, in some years, relative dominance on apple leaves were observed throughout the season from spring.

It is still premature though, above phenomenon could be interpreted that the food preference in *T. urticae* between weeds and apple leaves is in the process of changing.

There was some tendency that both the percentage of orchards with *T. urticae*, and the density were higher when the temperature and precipitation were higher from April to June. However, the percentage and density were higher when the temperature and precipitation were lower from August to October.