



Phytophagous arthropods and natural enemies associated to artichoke crops in Argentina: Populations dynamic studies

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The “Cinturón Hortícola Platense” is one of the most important horticultural areas in Argentina. The artichoke is a traditional crop of CHP, representing the region with more cultivated area with this crop (47%). The pest control is done by chemical control with broad spectrum pesticides most of them harmful towards beneficial organisms.

The objective of this work was to know the phytophagous arthropods and natural enemies associated to this crop, evaluating the population dynamics of them during two years to design environmental friendly control strategies in the frame of Integrated Pest Management.

Monitoring was done during two years (2010; 2011) in two fields from local farmers and in two artichoke varieties. Sampling was done randomly and the presence of phytophagous and any natural enemies was recorded. Data from periodical samplings were used to obtain an unbiased estimate of the population density of phytophagous and natural enemies.

The most abundant phytophagous were the aphids, founding more than six species, where the most relevant were *Capithophorus eleagni* and *Aphis gossypii*. Besides, there is a rich community of natural enemies associated to these phytophagous, being coccinellid predators as more abundant with more than eight species. *Eriopis connexa* and *Cycloneda sanguinea* were the most abundant species during 2011 but *Harmonia axyridis* has displaced them during 2012, becoming the most abundant specie.

Regarding to the population dynamic of aphids, two picks were observed (autumn and spring). Although coccinellids were present in the crops in autumn, spring and summer, the pick of their population coincided with the aphids picks.

These studies could be used to design new strategies of pest control in this crop focusing in the conservation of natural enemies.

Keywords: conservation biological control, artichoke crops, aphids, coccinellids.

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