

AKAROL® PLUS

Adjuvant in the form of a **concentrate** for preparing a **water emulsion**, based on **paraffin oil**. Designed for **combined use** with contact and systemic **acaricides** and **insecticides**.



Application:

Fruit crops, agricultural crops, coniferous and deciduous trees

Mode of Action:

Increases adhesion of plant protection products on the plant surface, prevents washing off by rain and dew, and reduces spray drift.

Dosage:

Fruit and coniferous trees: 1.5% (1.5 L/100 L water; 1 treatment)
Berry crops and deciduous trees: 1.75% (1.75 L/100 L water; 1 treatment)
Potatoes: 1.5-2.0% (1.5-2.0 L/100 L water; 3-5 treatments every 7 days)



pear trees



currants



deciduous trees



coniferous trees



24.03.2025 r.

Aphid egg colonies, control object



15.04.2025 r.

Mobile forms of aphids, control object



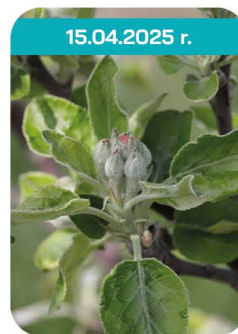
23.04.2025 r.

Dying apple shoots, control object



24.03.2025 r.

Aphid egg colonies, Akarol® Plus 2.0%



15.04.2025 r.

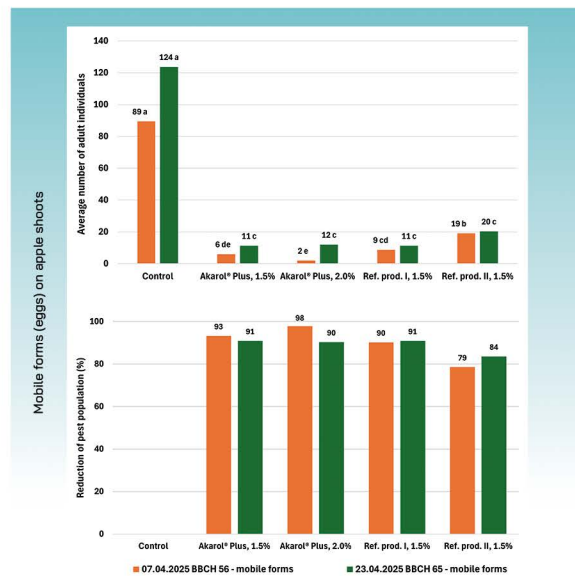
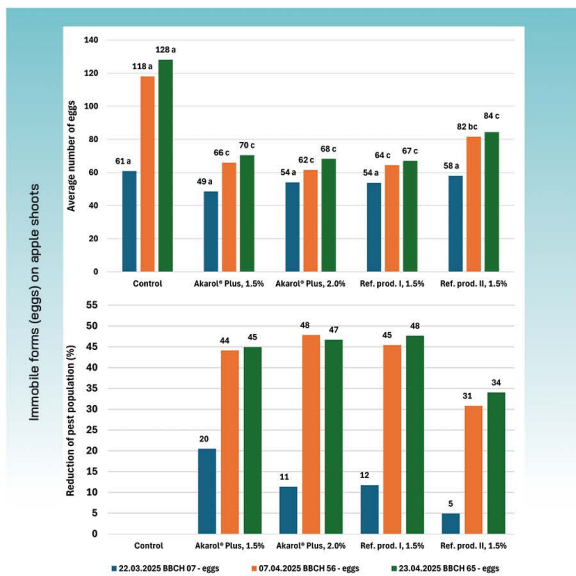
Mobile forms of aphids, Akarol® Plus 1.5%



23.04.2025 r.

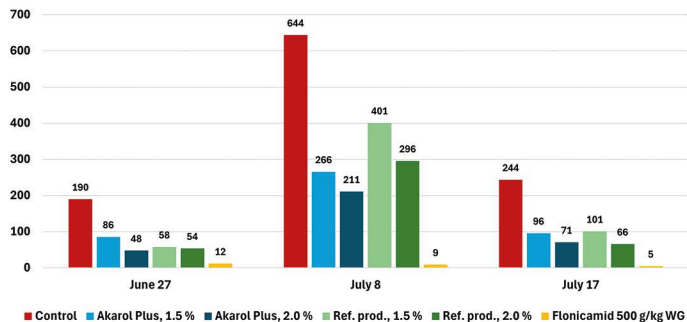
Mobile forms of aphids, Akarol® Plus 2.0%

The conducted **studies** showed that **Akarol® Plus**, applied at concentrations of **1.5% and 2.0%** (1.5 L and 2.0 L per 100 L of water), demonstrated **effectiveness in reducing aphid (Aphis) pressure in apple cultivation** at the level of **11.4-47.8% for eggs** and **90.3-97.8% for the mobile forms** of this pest. The use of the **Akarol® Plus** adjuvant at a **1.5%** concentration generally provided **better results compared to the tested reference products** (applied at the same concentration).

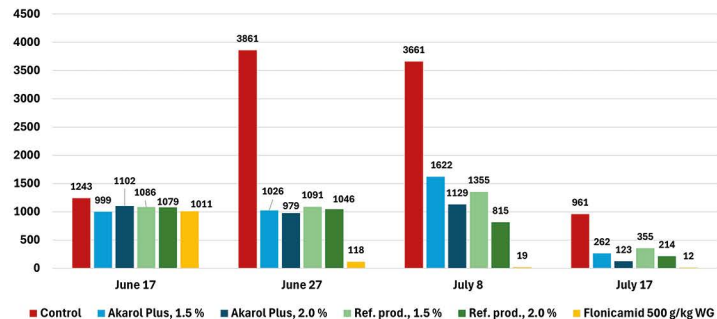


The study was conducted in 2025 in central Poland; means marked with the same letter do not differ significantly (P = 0.05, Student-Newman-Keuls test).

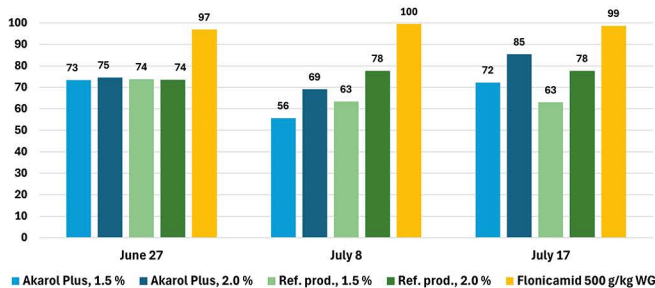
Number of the peach aphid (*Myzus persicae*)



Number of buckthorn-potato aphid (*Aphis nasturtii*)



Reduction of aphid population (%)



Infection [%] of plants with potato virus Y and S, in the DAS-ELISA laboratory test

Object	Viral infection (%)	
	PVY	PVS
Control	28.6	4.5
Akarol Plus, 1.5 %	18.9	0.0
Akarol Plus, 2.0 %	18.6	1.1
Ref. prod., 1.5%	16.4	1.08
Ref. prod., 2.0%	23.3	1.1
Fonicamid 500 g/kg WG	5.2	1.08

Mean total yield of potato tubers and their fraction distribution

Object	Fraction distribution by number and weight [kg]*								Total yield**
	< 30 mm		30 - 60 mm		> 60 mm		sum 30-60 mm		
	no.	kg	no.	kg	no.	kg	no.	kg	
Control	6.3	0.14	178.7	14.4	10.3	2.3	195.3	16.8	39.4
Akarol Plus, 1.5 %	12.3	0.25	160.3	14.5	7.7	1.65	180.3	16.4	37.8
Akarol Plus, 2.0 %	4.3	0.1	181.7	14.5	7	1.6	193	16.1	36.7
Ref. prod., 1.5%	5.7	0.12	194.3	14.1	1.7	0.36	201.7	14.6	33.8
Ref. prod., 2.0%	5.7	0.13	184	14.2	8	1.6	197.7	15.9	34.9
Fonicamid 500 g/kg WG	6.7	0.15	193	15.2	5	1.1	204.7	16.4	37.6

*no statistically significant differences, LSD = n.s. (Tukey's test); **no statistically significant differences, Stat Rudnicki test, one-way analysis, T-Tukey test. The study was conducted in 2025 by the Plant Breeding and Acclimatization Institute – National Research Institute, Bonin, Poland.



During the assessment period (27 June-17 July 2025), the **greatest reduction** in the population of the **peach potato aphid** and the **buckthorn-potato aphid** was most frequently recorded on plants sprayed with the adjuvant **Akarol® Plus** at a concentration of **2.0%** (compared with the reference product and the second tested concentration - 1.5%). Application of Akarol® Plus during the peak pest pressure window (27 June-17 July) resulted in a **2- to 4-fold reduction** in the population of the **peach potato aphid** and a **2- to 8-fold reduction** in the population of the **buckthorn-potato aphid**. Additionally, unsprayed plants (control) showed the highest infection by **Potato virus Y (PVY)** and **Potato virus S (PVS)**, while the use of **Akarol® Plus** in protection treatments **contributed to reducing the level of viral infection** in daughter tubers.



Aphids constitute a group of pests that cause both direct and indirect damage to crop plants. Their feeding activity may result in substantial yield losses due to their high reproductive potential, as they are capable of producing numerous generations within a single growing season. The application of oil-based products represents a fundamental and highly important measure for reducing aphid population density in crop plantations. Direct damage caused by aphids involves the extraction of plant sap, which leads to leaf curling, chlorosis, and overall weakening of plants. Moreover, the honeydew excreted by aphids promotes the development of sooty mould fungi. Indirect damage associated with aphid infestations primarily results from the transmission of plant viruses from infected plants during feeding.

Choosing Akarol® Plus offers multiple benefits:

- a great choice for early preventive treatments - especially effective in controlling populations of mites, aphids, and hemipteran insects;
- high-quality, readily biodegradable paraffin oil - 720 g/L;
- safe for plants, with no risk of phytotoxicity due to a highly refined, practically colorless and sulfur free oil;
- consistent emulsion performance in the sprayer, independent of water hardness;
- enhanced adhesion of insecticides to the plant surface;
- protects pesticides from being washed off by rain and dew;
- minimizes spray drift for more precise application.

