

Insecticidal effect of neem oil (*Azadirachta Indica* L) in the control of aphid (*Brevicoryne brassicae* L., 1758) of cabbage (*Brassica oleracea* L., 1753) in Niger

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ABSTRACT:

Cabbage is a vegetable sheet that is considered as an important crop in Niger and is commonly used to reduce malnutrition and food insecurity in rural areas. Unfortunately, cabbage is often damaged by caterpillar's attacks, especially the aphids. This study was conducted as part of the activities of ICBA's project for scaling up small scale irrigation technologies for improving food security in sub-saharan Africa. The objective of the study was to evaluate the effectiveness of neem oil in reducing the damages caused by aphids on cabbage field. In the laboratory tests, the insecticidal effects of pure neem oil of doses of 50, 100, 150 and 200 µL applied to aphids in petri dishes were compared. Laboratory test results showed that once neem's oil was sprayed on the leaves of the cabbage in plates, aphids' attacks were reduced or stopped. It was found that 100 µL can kill 50% of aphids in 24 h, while 100 µL was enough to eliminate 100% of aphids in 96 h. A block of Fischer randomized field trial was performed to compare the concentrations of 5, 10 and 15% of neem oil. Results showed that concentrations of 15% led to 50% reduction of aphids in three days, and 75% in seven days. The rural producers of Niger could extract neem's oil as they are in all villages and apply it directly in their fields. This would allow fighting aphids' and improve the quality of the production of the cabbage.

Keywords:

Insecticidal, Azadirachtin, Cabbage, Aphid, Niger.