



Brassicas use necrosis selectively

Some brassicas kill off parts of their leaves if certain butterflies lay eggs on them.

Some crops in the brassica family (*Brassicaceae*) have an unusual mechanism for defending themselves against hungry butterfly caterpillars. After butterflies have laid their eggs on a leaf, necrosis occurs (the plant tissue dies). That makes the eggs die too, so no caterpillars can develop. Scientists have known about this 'scorched earth' tactic since the 1980s but recent Wageningen research has provided new insights. The tactic is only used by a closely related group of plants within the brassica family and only for certain butterflies.

Eggs

Nina Fatouros, a researcher in the Bio-systematics group, and her colleagues studied 31 species of this family. They

Specific butterfly species trigger necrosis in brassicas

put a fluid on the leaves that contained the eggs of butterfly species that commonly lay eggs on that plant. Four

closely related plant species developed necrosis after the fluid was applied, but only if the eggs were of the cabbage white butterfly (*Pieris*). This suggests that specific butterfly species trigger the necrosis in brassicas, argues Fatouros in an article in *New Phytologist*. The necrosis is part of an evolutionary arms race between the brassicas and the cabbage whites. AS