

Poster 21 – DURBAN Project - Management of grass strips in cropland to increase common vole control by vertebrate predators

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In cropland, common vole (*Microtus arvalis*) outbreaks can reduce yields in areas managed for soil conservation. At low densities, common voles are mainly found in the grass strips where their predation may be limited by high grass cover and the absence of perches for raptors. It is therefore possible to manage the grass strips at low vole densities to limit their increase and consequently, the colonisation of agricultural parcels. Several studies have sought to assess the ability of predators to limit vole population and consequent crop damages but the majority of these were short term and therefore not able to evaluate the long-term sustainable suppression of rodent pest population. The project DURBAN aims to enhance common vole predation by both carnivorous mammals and raptors by (1) limiting the height of the cover only in the parts of grass strips colonised by common voles, (2) installing perches for raptors in these grass strips. Twelve experimental plots (from 2 to 5 parcels under conservation agriculture per plot) corresponding to 6 “control” and 6 “managed” plots were defined. In each plot, common vole densities in grass strips and parcels were assessed twice a year (February and November) and the grass strips with vole density > 30% (transect index method) were managed as reported above, mowing and installation of perches for raptors. The time spent by raptors and the visitation rate of carnivores were assessed in each plot ten times and four times per year, respectively. The results obtained during the first two years of DURBAN on population dynamic of voles in both grass strips and parcels and on the activity of predators will be presented at the conference.