



Grower Summary

FV 426a

Brassicas, leafy salads, oilseed rape and legumes: Developing and evaluating management strategies to mitigate woodpigeon *Columba palumbus* damage to crops.

Annual 2017

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AHDB Horticulture is a Division of the Agriculture and Horticulture Development Board.

Project title: Brassicas, leafy salads, oilseed rape and legumes: Developing and evaluating management strategies to mitigate woodpigeon *Columba palumbus* damage to crops.

Project number: FV426A

Project leader: Dr Dave Parrott, National Wildlife Management Centre, Animal and Plant Health Agency

Report: Annual report, April 2017 (year 2 of 3)

Previous report: Annual 2016

Key staff: Dr Dave Parrott (APHA), Rebecca Jones (APHA), David Fouracre (APHA), Nigel MacDonald (Austin Consultancy)

Location of project: Lincolnshire (Year 2, 2016/17)

Industry Representative: Andy Richardson (Allium and Brassica Centre), Stephen Francis (Fen Peas Ltd), Dermot Tobin (PDM Produce UK Ltd.)

Date project commenced: 01/05/2015

Date project completed 31/03/2018
(or expected completion date):

GROWER SUMMARY

Headline

The key message from research findings will not be evident until the project is completed in 2018. Then, a successful outcome will provide best-practice guidance in respect to an integrated woodpigeon management strategy aimed at reducing woodpigeon grazing and associated crop damage to levels acceptable to growers.

Background

The woodpigeon is recognised as a major agricultural pest in the UK, feeding on a range of arable crops including horticultural brassicas, leafy salads, oilseed rape and legumes. Existing woodpigeon management practices, across all crops, are frequently ineffective and often costly, particularly for high value horticultural brassicas and lettuce. The current research project focusses on developing and evaluating management strategies that integrate the most promising deterrent techniques (current and novel) and other measures (e.g. shooting) – taking forward the current knowledge on woodpigeon management reviewed in FV426.

Summary

Population management (shooting)

- The effectiveness of shooting and impact on woodpigeon abundance within an 8,200ha area in Lincolnshire was evaluated over a 10-week period April to mid-June 2016.
- There were four categories of land with: (i) shooting undertaken by APHA staff only, (ii) shooting undertaken by APHA staff and landowner appointees, (iii) shooting undertaken only by landowner appointees, and (iv) no shooting. Landowners/growers provided shooting returns - this included a number of returns from land outside the study area.
- Over the 10-week trial, 2137 woodpigeons were reported shot in total, 1575 within the study area.
- Of the 2137 woodpigeons reported shot, APHA marksmen accounted for 955 (45%) (60% of the 1575 shot within the study area). Of the 955 woodpigeons shot by APHA marksmen 57% involved shotguns and 43% air rifles. Four landowners/growers reported total bags of: (i) 639 (30%), (ii) 251 (12%), (iii) 134 (6%) and (iv) 158 (7%); all involved shotguns only. No other landowners/growers reported shooting returns.

- Within the study area, apart from weeks three and ten, in each of which over 300 woodpigeons were shot, weekly bags averaged 117 birds (72-182).
- Numbers of woodpigeons observed in the study area decreased from a mean of 1661 in the first two weeks of April, thence remaining relatively steady over the following 8 weeks fluctuating around a mean of 728 (387-1386), i.e. there was not a continuous decline in woodpigeon numbers over the trial.
- The landowner/grower returns reflected a number of different approaches to shooting woodpigeons: (i) full-time pest control: exhibited consistent effort to shoot woodpigeons across the 10-week treatment period; (ii) early period shooting: shot woodpigeons during each of the first four weeks only. A lack of vulnerable crops during the latter half of the trial, removing the impetus to undertake further control; (iii) sporadic shooting (keepering): generally every second week during the first six weeks of the trial; again ceasing in the latter period of the study, and (iv) sporadic shooting (sport shooting) – generally one day every second week throughout the 10-week trial.
- There was little, or no, apparent cooperation between neighbouring growers, with individual growers restricting shooting effort on their land to vulnerable periods in the growing cycle of their own crops.
- For sport shooting, the spatial and temporal distribution of hunting appears to be dictated by the convenience and protectionism of shooters' 'patches', with the onus on ensuring good days' bags for those with shooting rights; access to hunt by others being denied. An effect of sport shooting is that during the period between successive shoots, woodpigeons have access to holdings that serve as safe havens.
- Sport shooters were also resistant to what they perceived as overly intense shooting management, seeking to retain healthy populations for sport.
- There are similar issues associated with landowners/growers shooting independently of neighbours.
- The current approach to shooting woodpigeons in the study area is not consistent with maximising either population management or overall crop protection. Effort focussed at the scale of the needs of individual holdings and the aspirations of sport shooters constrains the overall impacts of wider control. A more effective approach to population management would require greater cooperation between growers, a strategic approach focussed at the landscape-scale and removal of the 'protectionism' of shooters 'patches'.

Roost management (hand-held laser)

- A small-scale investigation (January 2017) tested whether a low-powered, hand-held laser could disperse woodpigeons from a habitual winter night time roost.
- The trial involved three sequential one week phases (pre-treatment, treatment, post-treatment) with a laser deployed at a roost at dusk on each of five consecutive evenings during the treatment period. A second untreated roost 6km away was simultaneously monitored for comparison.
- At the laser treatment roost, the median number of woodpigeons declined by 78% at dusk counts and 98% at dawn counts during the treatment period compared to the pre-treatment period. At the control roost; numbers increased by 68% and decreased by 6% respectively.
- By the end of the 5-day post-treatment period numbers of woodpigeons at the laser roost recovered to pre-treatment levels.
- During the treatment phase, numbers of woodpigeons observed during the day in a 1km² area surrounding the roost increased by 25% at the laser roost and by 83% at the control roost.
- Low-powered, hand-held lasers have a potential use in disrupting woodpigeon roosts but indications are that repeated applications are required.

Financial Benefits

The financial benefits of the research will not be evident until the project is completed in 2018.

Action Points

Action points derived from the research findings will not be evident until the project is completed in 2018.

