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 2016

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Further information

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Project title:	Brassicas, leafy salads, oilseed rape and legumes: Developing and evaluating management strategies to mitigate woodpigeon *Columba palumbus* damage to crops.
Project number:	FV 426a
Project leader:	Dr Dave Parrott, National Wildlife Management Centre, Animal and Plant Health Agency
Report:	Annual report, April 2016 (year 1 of 3)
Previous report:	NA
Key staff:	Dr Dave Parrott (APHA), Nigel MacDonald (Austin Consultancy), Rebecca Jones (APHA), Carly Peggie (APHA), Ray Ridley (APHA), David Fouracre (APHA)
Location of project:	Lincolnshire (Year 1, 2015/16)
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 (or expected completion date):	31/03/2018

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 FV 426.

Summary

- The effectiveness of selected deterrents to reduce woodpigeon grazing activity, and by association crop damage, was investigated in trials on fields of Brassica crops, during autumn/winter 2015/16 in south Lincolnshire.

- Two treatments were investigated: (i) gas cannons and life-like mannequins/scarecrows reinforced periodically with a human shooter (seven fields), (ii) hand-held laser and replica woodpigeon wing-markings (one field).

- Numbers of woodpigeons feeding or perched in the trial fields were compared between pre-treatment, treatment (4-12 weeks) and post-treatment periods.

- Assessments of crop damage were made immediately prior to initial deployment of the deterrents, mid-way through the treatment period and at the end of the treatment period.

- The effectiveness of treatment 1 (mannequins/cannons/shooter) varied markedly between fields, from very effective to largely ineffective. Differences are likely due to field-specific features, such as area and proximity to perching opportunities (e.g. tree lines) and/or woodpigeon roost sites.

- The estimated cost of the reinforced mannequin strategy ranged from approximately £18-145 per ha over the individual trial periods; equivalent to approximately £3-29 per ha per week.

- A previous consultation with Brassica growers revealed their own estimates of economic loss due to woodpigeon grazing of £330-£1,250/ha (FV 426a).

- Treatment 2 (laser and wing-markings) appeared to be largely ineffective. Although the laser was consistently successful in lifting woodpigeons off the trial field, this was short-lived with birds (original and/or new arrivals) often repeatedly re-landing

in the field. Numbers of woodpigeons recorded on the field remained largely unchanged throughout the treatment period. It cannot be ruled out that there was some cumulative longer-term effect of the lasers.

- Treatment 2 involved the application of two different lasers: a smaller ‘laser-pointer’ type and a larger, commercial ‘bird-scaring’ laser. Both lasers consistently lifted woodpigeon flocks off the field from up to a distance of 300m away.
- On a control field (no deterrents) woodpigeon presence and numbers increased throughout the ‘treatment’ period.
- Attempts to monitor the movements of a sample of woodpigeons, using radio-tracking, were unsuccessful. Woodpigeons proved very difficult to capture with only six birds trapped and tagged. Only a very few re-locations were achieved in the study area, most likely as a result of birds either leaving the area or shedding the tags.
- Alternative analysis of woodpigeon movements in relation to trial fields, using GIS mapping of visual records of birds is ongoing.
- Year 2 deterrent trials (on OSR) will involve modification of the treatments with, for example, reinforced shooting and laser application more widely dispersed throughout the week.

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.