



MINUTES OF A MEETING HELD AT THE RESEARCH STATION, THORNHAUGH ON TUESDAY 15TH AUGUST 2006, COMMENCING AT 10.30AM

Present:

Mr. M Ambrose	John Innes Centre
Ms E Bardsley	Bayer CropScience Ltd
Mr. P Barrett	Askew & Barrett (Pulses) Ltd
Dr. T Bruce	Rothamsted Research
Mr. P Busfield	Dunns (Long Sutton) Ltd
Mr. M J Dickinson	Premier Foods Ltd
Dr. C Domoney	John Innes Centre
Prof. N Ellis	John Innes Centre
Miss A Jackson	Frontier Agriculture Ltd
Mr. J Martin	BEPA and Dalmark Grain Ltd
Mr J Moses	H Moses and Son
Mr T Moses	H Moses and Son
Mr. T Mudge	PVGA Ltd
Mr. R Newham	HDC
Mr. J F Oldfield	Raynham Farming Co. Ltd
Mr. D O'Sullivan	NIAB
Miss S Pettitt	Salvesen Logistics Ltd
Prof. J Pickett	Rothamsted Research
Mr. R Pinder	Raymond Caudwell Produce
Mr. D Ralph	Premier Foods Ltd
Mrs. L Smart	Rothamsted Research
Mr. P Smith	Wherry & Sons Ltd
Mr. R Starling	BEPA and Innoseeds Ltd
Mr. K Williamson	Premier Foods Ltd

In attendance:

Dr. A J Biddle
Mr G P Gent (Chairman)
Dr S A Landrock-White

Apologies received

from:

Dr. D Cooper	DEFRA
Mr. B Harris	BBSRC
Mr. M Hayward	Swaythorpe Growers Ltd
Dr. S Popple	DEFRA
Prof. P Street	DEFRA
Mr. L Wadhams	Rothamsted Research

1. Introduction

The Chairman welcomed participants and said that the meeting had been called as a matter of urgency because of severe problems with bruchid beetle in both field and broad beans. He reminded participants that bruchids have also become established as a pest of peas in France and that this should be borne in mind through the discussions. A review of the bean bruchid problem had been circulated and he invited comments on this, particularly the economic analysis. He also said that the level of interest and participation was most encouraging and that minutes

would be produced to circulate to DEFRA and BBSRC personnel, who unfortunately were not able to attend.

2. Commercial impact of the pest

a) General

Anthony Biddle (AJB) outlined the significance of the pest in the UK. Damage by bean bruchid is proving to be a major problem in UK beans this year. Many broad beans for processing had been rejected and quality of many field beans was reduced to a level which is unacceptable for export for human consumption. Current control measures are clearly not effective and the pest threatens the future production of beans in the UK. He said that through the combination of broad beans, winter beans and spring beans there was now an extended flowering period which created ideal conditions for bruchid breeding. This was also aided by the expansion of the crop, with the total UK bean area now being close to 200,000ha and production spread from the major arable and mixed farming areas of England to Central Scotland. Broad beans are a much smaller crop, with only 1,000ha being grown for processing and a similar quantity for fresh market. He mentioned that there was one natural pest of bruchids, a parasitic wasp and evidence of this could be seen through a much smaller exit hole. (Outside the meeting, Paddy Barrett said that there appeared to be more dead beetles in beans after the 06 harvest than usual. He thought that this could be due to the very rapid crop maturation).

b) Pulses

Angie Jackson (AJ) discussed the markets for UK beans and the importance of bruchid free samples for export to the Middle East, primarily Egypt. She said that there was a potential market for 400,000t for UK beans, but only 130,000t had been exported from the 2005 crop, primarily because of bruchid infestation and she expected even greater problems from the 2006 crop. For the Middle East market UK beans have to compete against crops from France and Australia. A positive development was the acceptance of Wizard winter beans for the export markets, but early indications are that some of these are heavily infested with bruchids.

Export standards are usually based on bruchid infestation levels of around 1% and early indications show samples way above this figure with 20-30% levels of infestation being recorded.

c) Broad Beans

Frank Oldfield (JFO) outlined the history of broad bean production for freezing and canning at Raynham in North Norfolk. He said that 200– 250ha of the crop had been grown successfully for the past 30 years and that bruchid control measures had been applied according to PGRO advice. Bruchid problems only occurred in 2006 when most of the crop was rejected for processing, resulting in major problems to both Raynham Farms and Premier Foods. The broad beans were drilled from March to May so that crops could be harvested over an extended period. Bruchid infestation was found in all crops. One of the points to be resolved related to the source of the bruchids for the harvesting of the crop as broad beans prevented the pest from completing its lifecycle.

3. Discussion

John Pickett (JP) endorsed the PGRO control measures as best available at the time, but possibly not ever fully effective. There was considerable disquiet about

the build up of the pest at Raynham as an example of how widespread the pest is becoming, even where the harvesting of broad beans breaks the bruchid lifecycle. There was also a discussion on the area where bruchids were a significant pest in both broad and field beans. It was agreed that currently this did not extend beyond South Yorkshire. This indicated that broad bean production in Humberside could be vulnerable even though there were no reported problems in 2006. AJB said that spread to the North would depend on field bean bridges and there were natural breaks in arable farming that could protect Scottish field and broad bean producers.

There was concern about the incidence of the pest over the entire drilling period of the broad beans at Raynham and the Chairman said that consideration had been given to the possibility of reducing infestation through autumn sowing. This was not being pursued because of the infestation on winter beans and the very high levels recorded from an autumn sown multiplication plot at the John Innes Centre HQ site. John Moses said that he was aware of bruchids as a pest of broad beans and that he was concerned about the levels of infestation observed over several years. However, like Raynham, he had suffered crop loss through rejection in 2006. He was also aware of bruchids in fresh beans. Field beans for export for human consumption were also more severely damaged this year and the reduction in export quality beans will seriously damage the future for UK export beans.

AJB also suggested that more information was needed on the over-wintering stage of the pest, both in relation to habitat and vulnerability to seasonal weather patterns. A number of participants stated their concern that emphasis at DEFRA on environmental management rather than crop production could have aided bruchid survival.

There was also discussion about alternative insecticides and JP said that there had to be evidence of their effectiveness before any development work could be undertaken. Also, there will be a need to obtain approval for use through PSD. It was therefore unlikely that any new approaches for control could be put in place for the 2007 season. However, a survey could be conducted in continental Europe and if a treatment is being used there currently, this could be used with crops grown in 2007.

4. New ideas – new concepts

Noel Ellis (NE) described the work to introduce resistance to the pea bruchid in Australia and the concept of neo-plastic growths on pods to inhibit egg laying or egg development. He said that some of this work could be transferred to beans, although the genetics of beans were less well understood than those for peas. Beans are now fully integrated in the work of the Pulse Crop Genetic Improvement Network (PCGIN). He emphasised the usefulness of European contacts and said that Frederic Muel of the European Protein Crops Association, (AEP) would be attending a meeting at PGRO on the 29th September 2006. This would allow an appraisal of the control measures for both pea and bean bruchids on the continent and all delegates were invited to this meeting.

This was followed by AJB who made recommendations that a monitoring system should be established, together with the screening of additional insecticides and application methods.

5. Funding arrangements

The Chairman mentioned the possibility of HDC funding for a desk study of current European practices and Ross Newham confirmed that about £3K was available for this purpose.

AJB also drew attention to the project which had been submitted to DEFRA, but rejected and there was a discussion on the possibility of working with Peter Street the LINK Co-ordinator, the aim of the project was to develop a pheromone based monitoring system. The Chairman said that industry funds could come through the PGRO pulse levy, but this would have to be approved by the organisation's expert panel and the sum involved would need to be less than £100K p.a., i.e. 50% of the total of approaching £200K. JP reported that a proposal will be made to the BBSRC for funding for the fundamental science relating to Bruchid behaviour, although acceptance of this is still very uncertain at this stage. Alongside the monitoring work, insecticide screening would also be carried out. It was also proposed that a LINK proposal would be developed and discussions will start with Professor Street. The meeting fully endorsed these approaches.

The Chairman then thanked all contributors and participants and closed the meeting at 3.00pm.