

A photograph of a lush green field of faba bean plants. The plants are densely packed, showing their characteristic bipinnate leaves and clusters of small white flowers. The background is slightly blurred, emphasizing the foreground vegetation.

Faba Bean Disease Research update

Venkat Chapara, PhD
Plant Pathologist
Langdon Research Extension Center

Major Diseases found on Faba Bean

- Chocolate Brown Spot



Fungicide application timings



Fungicide application timings

Fungicide application A: 100% of plants with an open blossom

Fungicide application B: full bloom and early pod-fill (2 to 4 pods at full length on most plants)

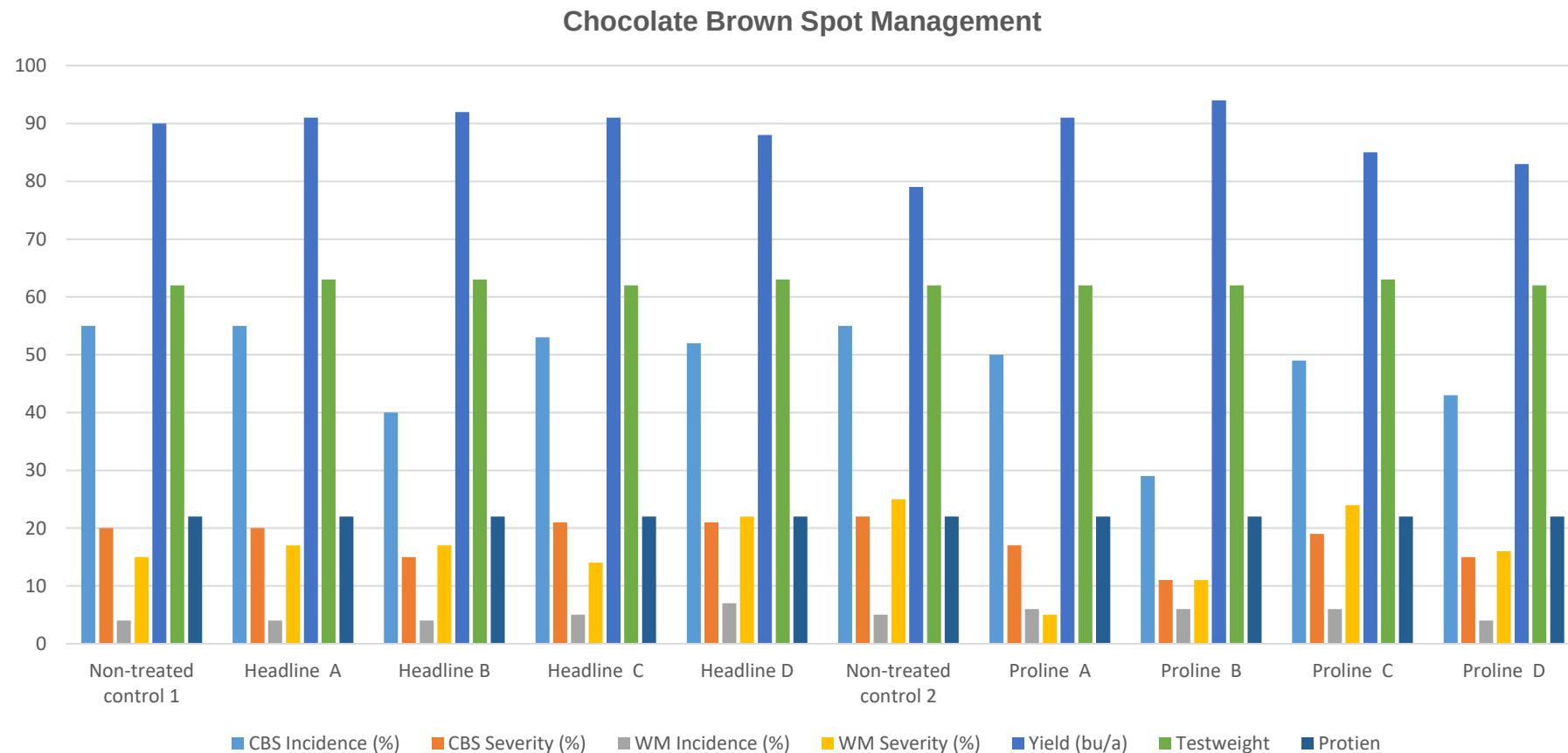
Fungicide application C: mid pod-fill (10 to 12 pods at full length on most plants)

Fungicide application D: late pod-fill (end of bloom)

Evaluation of Chocolate Brown Spot control at various application timings with Headline and Proline

Table: 2017 Faba Bean CBS Application Timing Study at Langdon Research Center							
	CBS Incidence (%)	CBS Severity (%)	WM Incidence (%)	WM Severity (%)	Yield (bu/a)	Testweight	Protien
Non-treated control 1	55	20	4	15	90	62	22
Headline A	55	20	4	17	91	63	22
Headline B	40	15	4	17	92	63	22
Headline C	53	21	5	14	91	62	22
Headline D	52	21	7	22	88	63	22
Non-treated control 2	55	22	5	25	79	62	22
Proline A	50	17	6	5	91	62	22
Proline B	29	11	6	11	94	62	22
Proline C	49	19	6	24	85	63	22
Proline D	43	15	4	16	83	62	22
Mean	48	18	4	17	88	62	22
CV%	32	40	88	72	12	0.66	3.6
LSD	18	8.5	4.3	14	12.2	0.48	0.94
<u>P-value@0.05</u>	NS	NS	NS	NS	NS	NS	NS

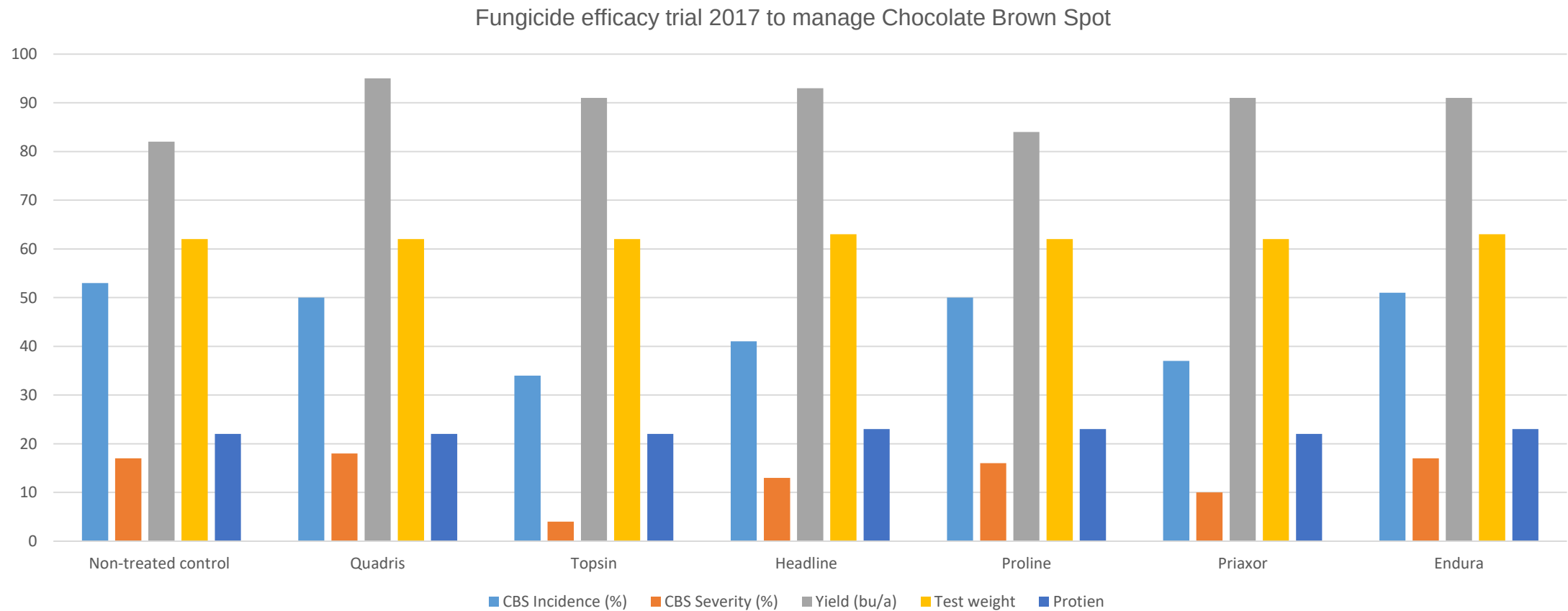
Graphical Representation of Chocolate Brown Spot control at various application timings with Headline and Proline



Efficacy of fungicides to manage chocolate brown spot applied at full bloom and early pod-fill stage

Table: 2017 Faba Bean CBS Fungicide Efficacy Study at Langdon Research Center					
Treatments	CBS Incidence (%)	CBS Severity (%)	Yield (bu/a)	Test weight	Protein
Non-treated control	53	17	82	62	22
Quadris	50	18	95	62	22
Topsin	34	4	91	62	22
Headline	41	13	93	63	23
Proline	50	16	84	62	23
Priaxor	37	10	91	62	22
Endura	51	17	91	63	23
Mean	45	14	89	62	22
CV%	43	63	16	0.65	5
LSD	18	10	12.2	0.48	1.3
<u>P-value@0.05</u>	NS	NS	NS	NS	NS

Graphical Representation of efficacy of six fungicides to manage chocolate brown spot when sprayed at full bloom and early pod-fill stage.



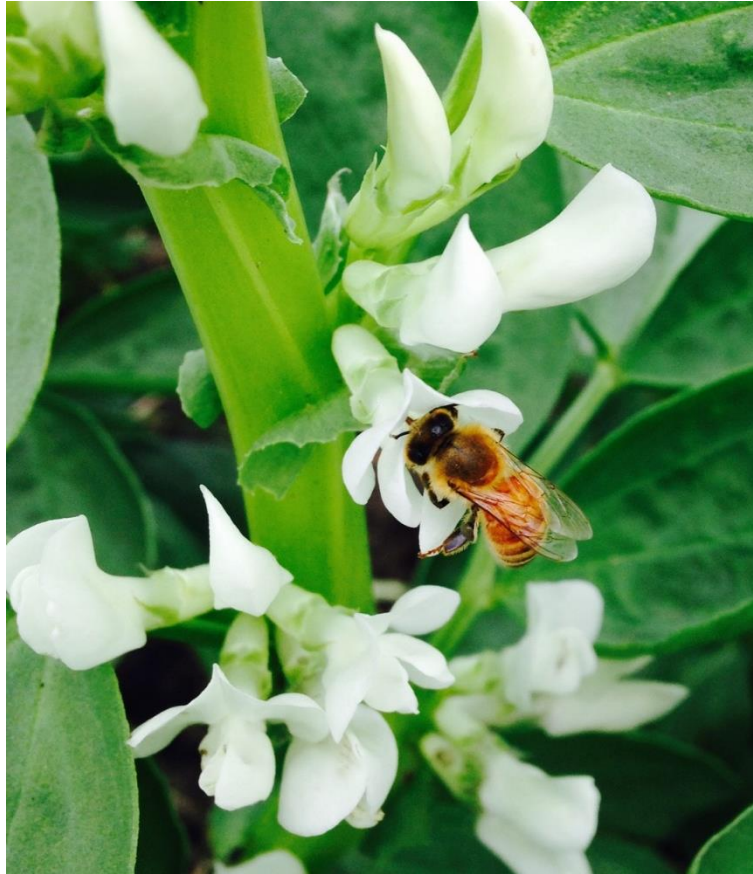
Summary

- Chocolate Brown Spot
- White Mold
- One spray needed at least
- Proline was better than headline in the application timing study
- Full bloom and early pod set stage is appropriate for spray
- In the efficacy study Topsin had better control
- Second spray might be needed if wet weather persists



Acknowledgements

- Funded by Crop Protection Product Harmonization Board and SBARE
- To Amanda Arens and Many People



3/14/2018 First Report of White Mold Caused by *Sclerotinia sclerotiorum* on Faba Beans in North Dakota | Plant Disease | North Dakota State Univ. Welcome Guest User

APS Journals The premier source for peer-reviewed plant pathology research

Journals Home Books Home APS Home IS-MPMI Home My Profile Subscribe Search

plant disease

Editor-in-Chief: Alison E. Robertson
Published by The American Phytopathological Society

Home > Plant Disease > Table of Contents > Abstract
Previous Article | Next Article

Accepted for publication
<https://doi.org/10.1094/PDIS-12-17-1954-PDN>

First Report of White Mold Caused by *Sclerotinia sclerotiorum* on Faba Beans in North Dakota

Dr. Venkataramana Chapara
NDSU, Plant Pathology, Langdon, North Dakota, United States, 7015663685;
venkata.chapara@ndsu.edu

Dr. Kishore Chittem, PhD
North Dakota State University, Plant Pathology, 306 Walster Hall, NDSU Dept#7660, PO Box 6050, Fargo, North Dakota, United States, 58108; kishore.chittem@ndsu.edu

Dr. Luis Del Rio Mendoza
North Dakota State University, 3323, Plant Pathology, Fargo, North Dakota, United States, 7013645469; luis.delriomendoza@ndsu.edu

PDF Print | PDF with Links

Faba bean (*Vicia faba* L.), is a pulse crop grown for its nutritional value for both human and animal consumption worldwide. In addition to its nutritional value in terms of high protein content ($\approx 28\%$), faba bean improves soil fertility by fixing atmospheric nitrogen (Sahile 2011). With the decline in the total hectares planted to field pea (*Pisum sativum* L.) due to root rots, faba bean research has recently been initiated to determine its adaptability to North Dakota agroecosystems and the feasibility of using it as an alternative to field pea. Faba bean plants exhibiting white mold symptoms; characterized by white cottony mycelium of the pathogen growing on stems and bleached disease tissues on the cultivar 'Tabasco' were observed at the early pod filling stage in research plots during late July, 2017 at Langdon, North Dakota with a general incidence of 6%. Dark,

plant disease

About the current issue's cover
ISSN: 0191-2917
e-ISSN: 1943-7692

SEARCH
Enter Keywords
MPMI
Phytopathology
Plant Disease
search
Advanced Search

Resources
Subscribe
About Plant Disease
First Look
Most Downloaded Articles
Journals Impact
Submit a Manuscript
Customer Care
About My Password
Rights and Permissions
Plagiarism and Ethics
Advertise
e-Xtra
Open Access
ORCID Registry