The Regional Pulse Crop Diagnostic Laboratory Services

New Reduced Prices and Services Effective from 15 July 2018!!! More tests for less price!

1. Ascochyta-Plus: \$180/sample (Chickpea, Lentil, and Pea)

In this package, we test for Ascochyta (now *Didymella*) pathogens and five other fungal pathogens of economic importance, as listed below:

Pathogens	Disease
Ascochyta (now Didymella) spp	Leaf, stem, & pod blight
Botrytis spp.	Grey mold
Collectotrichum spp.	Anthracnose
Fusarium spp.	Wilt and root rot
Sclerotina spp.	White mold
Stemphylium spp.	Leaf blight

Price: \$180/sample.

Quantity of Seeds for test: ½ lb. for lentil, 1lb. for dry pea, 2 lbs. for chickpea.

Test Time: It usually takes 7-10 days, after we have received the sample.

Rush Fee: \$100 per sample per Ascochyta-Plus test only. We discourage Rush; so, send your samples ahead of time! Rush means your sample will be placed ahead of other non-rush samples on the queue.

Method: Chickpea, dry pea, and lentil: 400 seeds are plated in potato dextrose agar (PDA).

% Infection: 100*(Number of seeds from with a fungal pathogen /Total number of seeds)

2. Smart-B: Costs: \$350 (Chickpea, Lentil, and Pea)

The package includes Ascochyta-Plus and bacterial blight agents. This is a good choice if you are only concerned about fungal and bacterial blight diseases.

Pathogens	Disease
Ascochyta (now Didymella) spp	Leaf, stem, & pod blight
Botrytis spp.	Grey mold
Collectotrichum spp.	Anthracnose
Fusarium spp.	Wilt and root rot
Sclerotinia spp.	White mold
Stemphylium spp.	Leaf blight
Psuedomonas syringae pv pisi & pv	Bacterial blight
syringae	

Price: \$350/sample

Quantity of Seeds for test: 1.5 lb. for lentil, 2.5 lb. for dry pea and chickpea.

Test Time: It usually takes 10-12 days, after we have received the sample. **Rush Fee:** \$100 per sample per Ascochyta-Plus test only. We discourage Rush; so, send your samples ahead of time! Rush means your sample will be placed ahead of other non-rush samples on the queue.

Methods

Fungi: Chickpea, dry pea, and lentil: 400 seeds are plated in potato dextrose agar (PDA).

% Infection: 100*(Number of seeds from with Ascochyta /Total number of seeds) **Bacterial blight test:** Five subsamples of 1000 seeds each are test for the presence of *Psuedomonas syringae* pathovars *pisi* and *syringae*, and maximum likelihood method is used to estimate infection rate (%).

3. Smart-V: Costs: \$330 (Chickpea, Lentil, and Pea)

The package includes Ascochyta-Plus and *Pea seedborne mosaic virus* (PSbMV) tests. We are no longer testing for *Pea enation mosaic virus* (PEMV) because its seed transmissibility is in doubt. This is a good choice if you are only concerned about fungal diseases and Pea seedborne mosaic virus.

Pathogens	Disease
Ascochyta (now Didymella) spp	Leaf, stem, & pod blight
Botrytis spp.	Grey mold
Collectotrichum spp.	Anthracnose
Fusarium spp.	Wilt and root rot
Sclerotinia spp.	White mold
Stemphylium spp.	Leaf blight
Pea seedborne mosaic virus (PSbMV)	Empty pods, seed blemishes, reduced seed yield

Price: \$320/sample

Quantity of Seeds for test: 1.5 lb. for lentil, 2.5 lb. for dry pea and chickpea. Test Time: It usually takes 10-12 days, after we have received the sample.

Rush Fee: \$100 per sample per Ascochyta-Plus test only. We discourage Rush; so, send your samples ahead of time! Rush means your sample will be placed ahead of other non-rush samples on the queue.

Methods

Fungi: Chickpea, dry pea, and lentil: 400 seeds are plated in potato dextrose agar (PDA).

% Infection: 100*(Number of seeds from with Ascochyta /Total number of seeds) **Virus:** Twenty subsamples of 100 seeds each are test for the presence of the virus in Enzyme immunosorbent assay (ELISA), and maximum likelihood method is used to estimate infection rate (%).

4. Comprehensive (\$450) (Chickpea, Lentil, and Pea)

This package includes tests for AscochytaPlus, *Pea seedborne mosaic virus* (PSbMV), and bacterial blight agents (*Psuedomonas syringae* pv *pisi* and pv *syringae*).

We recommend this package the most!

Pathogens	Disease
Ascochyta (now Didymella) spp	Leaf, stem, & pod blight
Botrytis spp.	Grey mold
Collectotrichum spp.	Anthracnose
Fusarium spp.	Wilt and root rot
Sclerotinia spp.	White mold
Stemphylium spp.	Leaf blight
Pea seedborne mosaic virus (PSbMV)	Empty pods, seed blemishes, reduced seed yield
Psuedomonas syringae pv pisi & pv syringae	Bacterial blight

Price: \$500/sample

Quantity of Seeds for test: 2.5 lb. for lentil, 5 lb. for dry pea and chickpea. Test Time: It usually takes 10-12 days, after we have received the sample.

Rush Fee: \$100 per sample per Ascochyta-Plus test only. We discourage Rush; so, send your samples ahead of time! Rush means your sample will be placed ahead of other non-rush samples on the queue.

Methods

Fungi: Chickpea, dry pea, and lentil: 400 seeds are plated in potato dextrose agar (PDA).

% Infection: 100*(Number of seeds from with Ascochyta /Total number of seeds)

Virus: Twenty subsamples of 100 seeds each are test for the presence of the virus in Enzyme immunosorbent assay (ELISA), and maximum likelihood method is used to estimate infection rate (%). For bacterial blight test, 5 subsamples of 1000 each are tested for the presence of *Psuedomonas syringae* pathovars *pisi* and *syringae*.

Bacterial blight test: Five subsamples of 1000 seeds each are test for the presence of *Psuedomonas syringae* pathovars *pisi* and *syringae*, and maximum likelihood method is used to estimate infection rate (%).

5. Nematode tests (\$35) (all crops)

We offer test for seedborne or contaminated nematodes of *Ditylenchus* and *Heterdoera* spp.

Test	Seed Quantity	Price/sample
Ditylenchus spp (stem and bulb	1 pound	\$35
nematodes) and Heterodera		
spp.(pea cyst nematodes)		

Note: Test Time: It usually takes 2 days from the date of receipt to complete test. **Rush Fee:** \$35 per sample for nematode test. We discourage Rush, so send your samples ahead of time! Rush means your sample will be placed ahead of other non-rush samples on the queue

6. Blackleg Testing (\$150) (Canola)

Pathogens	Disease
Leptosphaeria maculans (Phoma lingam)	Aggressive blackleg (phoma stem canker)
Leptosphaeria biglobosa (Phoma herbarum)	Non-aggressive blackleg (phoma stem canker)

Price: \$150/sample

Quantity of Seeds for test: 1lb of canola seeds

Test Time: It usually takes 12-14 days, after we have received the sample.

Rush Fee: \$100 per sample per test. We discourage Rush; so, send your samples ahead of time! Rush means your sample will be placed ahead of other non-rush samples on the queue.

Method

Fungi: Canola: 1000 seeds treated with 0.2% 2,4-Dichlorophenoxyacetate (2,4D) to prevent seed germination. Seeds will be placed on moistened blotters in petri plate; 50 seeds/plate

% Infection: 100*(Number of seeds from with each blackleg pathogen /Total number of seeds) and incubated at 20^o C for 11 days.

Differentiation: Leptosphaeria maculans versus Leptosphaeria biglobosa Morphology: Size of pycnidia, presence of papilla, and the color of pycnidia exudate ISTA 7-004. Detection of Phoma lignam

7. Other Individual Pathogen Tests (Chickpea, lentil, and dry peas)

We also offer individual pathogen test included in the Price list below:

Test for Individual Fungal Agent(s) of:	
Ascochyta/Mycospharella spp	\$180 for <u>one</u>
Aspergillus spp.	or more of these
Botrytis spp.	fungal pathogen
Collectotrichum spp.	tests.
Fusarium spp.	

Rhizoctonia solani	
Sclerotinia spp.	
Stemphylium	
Individual Virus Tests	
Pea seed-borne mosaic virus (PSbMV)	\$180
Pea enation mosaic virus (PEMV)	\$150
Alfalfa mosaic virus (AMV)	\$150
Cucumber mosaic virus (CMV)	\$150
Bean yellow mosaic virus (BYMV)	\$150
Barley stripe mosaic virus (BSMV)	\$100
Bacterial Test	
Pseudomonas syringae pv pisi	
Pseudomonas syringae pv syringae	\$200
Phytoplasma Test	
Aster yellows phytoplasma	\$150