

2006 GUIDELINES FOR TOLERANCES OF SEED-BORNE DISEASES IN PULSE SEED INTENDED FOR PLANTING:

(These are guidelines only and should be considered along with farming practices and level of disease risk for the situation.)

CROP	DISEASE (Pathogen)	TOLERANCE AND FACTORS AFFECTING THE LEVEL	SEED TREATMENTS AVAILABLE ^{1, 2}
LENTIL	<p>ASCOCHYTA</p> <p><i>(Ascochyta lentis)</i></p>	<p>Up to five per cent ascochyta infection may be tolerable in the Brown and Dark Brown soil zones of Saskatchewan, if weather patterns are normal.</p> <p>A seed treatment should be used if infection levels are close to or exceed five per cent.</p> <p>Seed should be avoided if infection levels exceed 10 per cent. High infection levels are usually indicative of other quality issues.</p> <p>Use seed with zero per cent ascochyta infection if planting in the Black soil zone of Saskatchewan.</p>	<p>Apron Maxx RTA® (active ingredients: fludioxonil ^C, metalaxyl-M ^S)</p> <p>Crown® (active ingredients: carbathiin ^S, thiabendazole ^{S,C})</p>
	<p>ANTHRACNOSE</p> <p><i>(Colletotrichum truncatum)</i></p>	<p>Anthracnose is not highly seed-borne and levels are rarely over one per cent. Infected lentil stubble serves as a greater inoculum source.</p> <p>Do not use anthracnose-infected seed if it is being planted in a field where lentil has never been grown.</p>	None.
	<p>SEED ROT and DAMPING OFF</p> <p><i>(Pythium species)</i></p>	<p><i>Pythium</i> is soil-borne and not tested for at seed testing labs.</p> <p>Most lentil varieties contain tannin in the seed coat, which has fungicidal properties against <i>Pythium</i>. Seed treatment is recommended only for low tannin lentils.</p>	<p>Allegiance FL®, Apron FL® (active ingredient: metalaxyl ^S)</p> <p>Apron Maxx RTA® (active ingredients: fludioxonil ^C, metalaxyl-M ^S)</p>
	<p>SEED ROTS and SEEDLING BLIGHTS</p> <p><i>(Botrytis, Sclerotinia, Rhizoctonia, and Fusarium species)</i></p>	<p><i>Sclerotinia</i>, <i>Rhizoctonia</i> and <i>Fusarium</i> are primarily soil-borne. <i>Botrytis</i> and <i>Fusarium</i> are also often seed-borne and can be tested for at seed testing labs.</p> <p>Up to 10 per cent infection (<i>Sclerotinia</i> + <i>Botrytis</i>) may be tolerable, but will result in significant seedling blight if a seed treatment is not used.</p>	<p>Apron Maxx RTA® (active ingredients: fludioxonil ^C, metalaxyl-M ^S)</p> <p>Crown® (active ingredients: carbathiin ^S, thiabendazole ^{S,C})</p> <p>Maxim 480FS®⁴ (active ingredient: fludioxonil ^C)</p> <p>Vitaflo 280®</p>

		<p>The importance of seed-borne <i>Fusarium</i> in seed rot and seedling blight in pulses is not known. Some labs will notify growers if greater than five per cent <i>Fusarium</i> infection occurs. If present, add the <i>Fusarium</i> value to the <i>Sclerotinia</i> + <i>Botrytis</i> value above (not to exceed 10 per cent).</p>	<p>(active ingredients: carbathiin^S, thiram^C)</p>
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- ¹ New seed treatments are continually being registered. Contact the Agriculture Knowledge Centre at 1-866-457-2377, your local agri-retailer, or industry representative for updated information on seed treatments registered in pulses. SAF's Guide to Crop Protection is available online at: <http://www.agr.gov.sk.ca/Docs/crops/cropguide00.asp> Always refer to the product label before applying product to the seed.
- ² The level of seed-borne infection is not the only factor to consider in whether or not to apply a seed treatment, as most seed treatments are also effective against soil-borne pathogens. Refer to product label for details.
- ³ Saskatchewan Crop Insurance Corporation will not support claims for ascochyta loss that are made on chickpea fields that had over 0.3 per cent seed infection, and no seed treatment was used. Refer to the SCIC website at: saskcropinsurance.com/programs/2006/Specialized/NewCrops/Terms_Conditions/chickpeas.pdf
- ⁴ Maxim 480FS® is only available to commercial seed treaters.
- ^C Active ingredient has contact mode of action.
- ^S Active ingredient has systemic mode of action.