



رضا پور مهدی علمدارلو

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مدیریت بیماری‌های کلزا Rapeseed diseases management

Rapeseed growth stage													Disease management strategies
	Cotyledon (A)	First leaf (B1)	Third leaf (B3)	Sixth leaf (B6)	Rosette	Stem elongation (C1-C2)	Bud formation (D1)	Budding (D2)	Bud development (E)	Start of Flowering (F1)	First Pod formation (G1)	Full Podding (G4)	
Seedling damping off	<i>Rhizoctonia sp., Fusarium spp, Pythium spp</i>												Timely cultivation, Healthy seed, Proper drainage, Rotation, Seed treatment with suitable fungicides such as carboxin thiram or metalaxyl compounds.
Downy mildew	<i>Peronospora parasitica</i>												Rotation, Timely cultivation, Seed treatment with suitable fungicides such as metalaxyl-mancozeb.
Clubroot	<i>Plasmodiophora brassicae</i>												Proper drainage, Rotation, Resistant varieties, Adding lime to the soil to increase acidity.
Blackleg	<i>Leptosphaeria maculans</i>												Resistant varieties, Rotation and Stubble management, Suitable fungicides (Flutriafol and Tebuconazole).
Sclerotinia Stem Rot										<i>Sclerotinia sclerotiorum</i>			Sclerotia-free seed planting, Rotation, fungicide application (Tebuconazole and Iprodione-Carbendazim).
Alternaria Blight		<i>Alternaria spp</i>											Healthy seed, Rotation and Stubble management, Suitable fungicides such as Tebuconazole.
White leaf spot			<i>Mycosphaerella capsellae</i>										Rotation and Stubble management, Host weeds control.
Light leaf spot			<i>Pyrenopeziza brassica</i>										Resistant varieties, Rotation and Stubble management, Suitable fungicides such as Carbendazim.
Powdery mildew										<i>Erysiphe cruciferarum</i>			Timely cultivation, Spraying with sulfur fungicide or Karatane.
Viral diseases		<i>Beet western yellows virus, Cauliflower mosaic virus, Turnip mosaic virus</i>											Timely cultivation, weeds control, Controlling insect vectors like aphids.
Verticillium wilt		<i>Verticillium dahlia</i>											Rotation and Stubble management, Host weeds control.