

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
1	Avocado	Root rot	Disease	Fungus (Phytophthora cinnamomi)	Loss of production and death of the tree.	Trunk injection of the systemic fungicide potassium phosphonate, repeated annually	NULL	8,581
2	Avocado	Anthrachnose	Disease	Colletotrichum gloeosporioides	Fruit loss	Copper sprays are required to produce marketable fruit	NULL	8,581
3	Avocado	Fruit flies	Pest	NULL	Superficial damage	Contact insecticide	NULL	8,581
4	Hyacinth Bean	Anthrachnose	Disease	Colletotrichum lindemuthianum	Cause serious crop losses	Spraying with zineb or captan may give reasonable control.	NULL	8,624
5	Hyacinth Bean	Leaf spot	Disease	Cercospora dolichi	NULL	Spraying with fungicides	NULL	8,624
6	Hyacinth Bean	Pod boring larvae (Adisura atkinsoni)	Pest	NULL	NULL	It can be controlled by spraying with Bacillus thuringiensis preparations.	NULL	8,624
7	Job's Tear	Smut	Disease	Ustilago coicis	It destroys the ovaries.	Seed treatment with fungicide or with hot water (60-70°C) for at least 10 minutes before sowing is recommended.	NULL	8,625
8	Job's Tear	Leaf blight	Disease	Bipolaris coicis	NULL	Burning of crop residues, spraying of fungicides and the use of more resistant cultivars.	NULL	8,625
9	Job's Tear	Tar leaf spot	Disease	Phyllachora coicis	NULL	NULL	NULL	8,625
10	Job's Tear	Rust	Disease	Puccinia operata	NULL	NULL	NULL	8,625
11	Job's Tear	Rats	Pest	NULL	NULL	NULL	NULL	8,625
12	Job's Tear	Birds	Pest	NULL	NULL	NULL	NULL	8,625
13	Job's Tear	Grasshoppers	Pest	NULL	NULL	NULL	NULL	8,625
14	Job's Tear	Termites	Pest	NULL	NULL	NULL	NULL	8,625
15	Gembok Bean (Tylosema esculentum)	Fungi	Disease	Alternaria tenuissima	Necrotic lesions	NULL	NULL	8,626
16	Gembok Bean (Tylosema esculentum)	Fungi	Disease	Phoma spp.	Necrotic lesions	NULL	NULL	8,626
17	Niger Seed	Ozonium wilt	Disease	Ozonium texanum var. parasiticum Thirum.	Necrotic lesions develop on stem of well grown plants near the soil level. Whitish fungal mycelium grows on these necrotic areas under high humidity and the branches, leaves, inflorescence etc become soft and start rotting. The diseased stem, breaks.	Treating the seed with Thiram at the rate of 2 g/kg seed before sowing is quite effective to control the disease.	NULL	8,629

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
18	Niger Seed	Collar rot	Disease	Sclerotium rolfsii Sacc.	The tissues of collar region become soft and depressed. White fungus grows on the diseased part and forms mustard seed like sclerotia.	NULL	NULL	8,629
19	Niger Seed	Macrophomina root and stem rot	Disease	Macrophomina phaseolina (Maubl.) Ashby	Typical root rot, stem rot, charcoal rot and leaf blight symptoms are produced. Macrophomina infected roots are light blackish to black in colour, which are covered with black sclerotia and are brittle. The blackening extends from ground level upward on the stem giving black colour to stem.	Deep ploughing in summer, crop rotation, seed treatment with thiram (0.2%) + Carbendazim (0.1%), application of Trichoderma viride @ 2.5 kg/ha mixing with 50 kg FYM in the field before sowing.	NULL	8,629
20	Niger Seed	Damping off/root rot	Disease	Rhizoctonia solani	The fungus attacks stem of the seedling at ground level, makes water soaked soft and incapable of supporting the seedling which falls over and dies. On older seedlings elongated brownish black lesions appear.	The seed should be treated with Thiram or Captan @3.0 g/kg seed. The disease can also be reduced by drenching the plants with Captan 50 WP @0.25% and crop rotation should be followed.	NULL	8,629
21	Niger Seed	Cercospora leaf spot	Disease	Cercospora guizoticola	Disease appears as small straw to brown coloured spots with grey centre on the leaves, spots may coalesce causing defoliation. Later the spots increase in number and size and cover the entire lamina and the leaves start dropping off. Elongated dark brown spots are produced on the stem. The capsules are also affected.	Seed treatment with two foliar sprays of Carbendazim 50WP (0.2%) + Mancozeb (0.1%) can manage the disease.	NULL	8,629

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22	Niger Seed	Alternaria leaf spot/blight	Disease	Alternaria sp.	The disease appears as concentric rings on the leaves, which turns brown with grey centre later on. As the disease advances, the spots become oval or circular and irregular in shape. The infected leaves become dry and lead to the defoliation. Further it, spreads to other plant parts and results in to premature drying of the plant.	Use of resistant varieties.	NULL	8,629
23	Niger Seed	Curvularia leaf spot	Disease	Curvularia lunata	Small circular to irregular brown to reddish brown spots which later coalesce to form larger spots. The leaf turn yellow dries and defoliates.	NULL	NULL	8,629
24	Niger Seed	Powdery mildew	Disease	Sphaerotheca spp.	The diseased leaves turn yellow and drop off. The seed formed on diseased plants are small and shriveled.	The disease can be managed by burning the infected plant parts after the harvesting of the crop. The disease can also be effectively controlled by spraying with sulfex.	NULL	8,629
25	Niger Seed	Rust	Disease	Puccinia guizotiae	Brown pustules diameter appear on the leaves. The lesions consist of densely aggregated brown telio. The uredosori are formed on the lower leaf surface and the corresponding upper surface becomes chlorotic. Later teliospores are formed.	The disease can be managed by spraying crop with Dithane M- 45 as the disease starts appearing.	NULL	8,629
26	Niger Seed	Bacterial leaf spot	Disease	Xanthomonas campestris pv. guizotiae	Small brownish spots are formed on leaves which are surrounded by yellow halo.	The disease can be managed by spraying the crop with Blitox-50.	NULL	8,629
27	Niger Seed	Weed dodder (Cuscuta hyalina)	Weed	NULL	The plants remain stunted, pale yellow and bear a very small number of flowers and fruits.	The Cuscuta seeds can be removed by sieving before sowing. Removal of cuscuta infected Niger seed at the early crop growth.	NULL	8,629

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28	Chinese Spinach	Stemrot	Disease	Choanephora cucurbitarum	NULL	A wider spacing may reduce the rate of infection.	NULL	8,631
29	Chinese Spinach	Damping-off	Disease	Pythium and Rhizoctonia	NULL	It is controlled by good drainage. Overdense sowing should be avoided.	NULL	8,631
30	Chinese Spinach	White rust	Disease	Albugo bliti	NULL	NULL	NULL	8,631
31	Chinese Spinach	Leaf and stem blight	Disease	Phomopsis amaranthophila	NULL	NULL	NULL	8,631
32	Chinese Spinach	Caterpillars (Hymenia recurvalis, Spodoptera litura, Heliothis armigera)	Pest	NULL	NULL	NULL	NULL	8,631
33	Chinese Spinach	Larvae of the stem borer (Lixus truncatulus)	Pest	NULL	NULL	NULL	NULL	8,631
34	Jicama Yam Bean	Mosaic virus	Disease	Aphids (Aphis spp.) or mealy bugs (Ferrisia virgata) and possibly by seed.	It results in smaller-sized tubers (yield reductions of 20-30%), discoloured leaves and brittle stems.	NULL	NULL	8,632
35	Jicama Yam Bean	Witches' broom disease	Disease	Contamination originating in the indigenous flora.	NULL	NULL	NULL	8,632
36	Teff	Leaf rust	Disease	Uromyces eragrostidis	NULL	Fungicides that control these two diseases have been identified at experimental level, although there are no known cases of field applications.	NULL	8,628
37	Jicama Yam Bean	Rose beetle (Adoretus versutus)	Pest	NULL	NULL	NULL	NULL	8,632
38	Teff	Head smudge	Disease	Helminthosporium miyakei	NULL	Fungicides that control these two diseases have been identified at experimental level, although there are no known cases of field applications.	NULL	8,628
39	Jicama Yam Bean	Bruchids (Bruchus spp.)	Pest	NULL	NULL	NULL	NULL	8,632
40	Teff	Damping off	Disease	Drechslera spp. and Epicoccum nigrum	NULL	Fungicides that control these two diseases have been identified at experimental level, although there are no known cases of field applications.	NULL	8,628
41	Okra	Damping-off	Disease	Macrophomina phaseolina, Pythium aphanidermatum, Rhizoctonia solani	NULL	NULL	NULL	8,633

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42	Okra	Vascular wilt	Disease	Fusarium oxysporum	NULL	NULL	NULL	8,633
43	Teff	Wollo bush-cricket	Pest	Decticoidea brevipennis	NULL	NULL	NULL	8,628
44	Okra	Cercospora blight	Disease	Cercospora abelmoschi, Cercospora malayensis	NULL	NULL	NULL	8,633
45	Teff	Red teff worm	Pest	Mentaxya ignicollis	NULL	NULL	NULL	8,628
46	Okra	Powdery mildew	Disease	Erysiphe cichoracearum, Oidium abelmoschi	NULL	NULL	NULL	8,633
47	Okra	Okra mosaic virus (OkMV)	Disease	Flea beetles (Podagrica)	NULL	This virus can only be controlled through control of the vectors.	NULL	8,633
48	Okra	Okra leaf curl disease (OLCV)	Disease	Whitefly (Bemisia tabaci)	NULL	This virus can only be controlled through control of the vectors.	NULL	8,633
49	Okra	Yellow vein mosaic virus (BYVMV)	Disease	Whitefly (Bemisia tabaci)	NULL	This virus can only be controlled through control of the vectors.	NULL	8,633
50	Teff	Black teff beetle	Pest	Erlangerius niger	NULL	NULL	NULL	8,628
51	Okra	Nematodes (Meloidogyne)	Pest	NULL	NULL	Damage by nematodes is avoided by crop rotation (e.g. with cereals) and by large applications of organic manure.	NULL	8,633
52	Okra	Fruit and stem borers (Earias spp. and Heliothis spp., Pectinophora gossypiella)	Pest	NULL	NULL	NULL	NULL	8,633
53	Teff	Parasitic weed	Weed	Striga hermonthica (Delile)	NULL	Hand weeding and crop rotation, particularly with pulses, are the most common methods in dealing with these weeds in teff; the use of herbicides is very limited.	NULL	8,628
54	Okra	Flea beetles (Podagrica spp.)	Pest	NULL	NULL	NULL	NULL	8,633
55	Okra	Jassids (Empoasca spp.)	Pest	NULL	NULL	NULL	NULL	8,633
56	Teff	Invasive weed	Weed	Parthenium hysterophorus L.	NULL	Hand weeding and crop rotation, particularly with pulses, are the most common methods in dealing with these weeds in teff; the use of herbicides is very limited.	NULL	8,628

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57	Teff	Cosmopolitan weed	Weed	Convolvulus arvensis L.	NULL	NULL	NULL	8,628	
58	Proso Millet	Downy mildew	Disease	Sclerospora graminicola	NULL	NULL	NULL	8,634	
59	Finger Millet	Blast	Disease	Pyricularia setariae	NULL	NULL	NULL	8,634	
60	Finger Millet	Leaf blight	Disease	Cochliobolus nodulosus	NULL	NULL	NULL	8,634	
61	Foxtail Millet	Blast	Disease	Pyricularia setariae	NULL	NULL	NULL	8,634	
62	Foxtail Millet	Rust	Disease	Uromyces setariae-italicae	NULL	NULL	NULL	8,634	
63	Foxtail Millet	Smut	Disease	Ustilago crameri	NULL	NULL	NULL	8,634	
64	Foxtail Millet	Downy mildew	Disease	Sclerospora graminicola	NULL	NULL	NULL	8,634	
65	Taro (Cocoyam)	Taro blight	Disease	Phytophthora colocasiae	It causes purple to brown circular water-soaked lesions.		This disease is partially controlled by use of copper- or phosphor-based fungicides, but spraying is tedious and costly. Increasing plant spacing or intercropping reduces losses.	NULL	8,635
66	Taro (Cocoyam)	Taro soft rot	Disease	Pythium	It causes wilting and chlorosis of leaves.		Control is possible by use of healthy planting material, crop rotation and treating planting materials with fungicide.	NULL	8,635
67	Taro (Cocoyam)	Sclerotium rot	Disease	Sclerotium rolfsii	It causes stunting of the plant, rotting of corm and formation of many spherical sclerotia in the corm.		Control is by soil drenching.	NULL	8,635
68	Fonio	Rust	Disease	Puccinia oahuensis	NULL	NULL	NULL	8,636	
69	Taro (Cocoyam)	Dark brown spots	Disease	Cladosporium colocasicola and Phyllosticta colocasiae	NULL	NULL	NULL	8,635	
70	Taro (Cocoyam)	Alomae virus disease	Disease	Combined infestation by the taro large bacilliform virus and the taro small bacilliform virus	NULL	NULL	NULL	8,635	
71	Taro (Cocoyam)	Root-knot nematodes (Meloidogyne spp.)	Pest	NULL	NULL		Control is by treating planting material with water at 40°C for 50 minutes, by the use of disease-free material or by soil fumigation.	NULL	8,635
72	Taro (Cocoyam)	Hercotrips indicus thrips	Pest	NULL	It causes silvery discoloration of the leaves and can result in severe leaf shedding.	NULL	NULL	8,635	

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73	Taro (Cocoyam)	Taro beetles (Papuana spp.)	Pest	NULL	Young plants wilt and die but older plants usually recover.	It can be controlled by applying insecticide in the planting holes.	NULL	8,635
74	Taro (Cocoyam)	Leafhoppers	Pest	NULL	NULL	Biological control and insecticide dusting are effective control measures.	NULL	8,635
75	Malabar Spinach	Root-knot nematodes (Meloidogyne spp.)	Pest	NULL	NULL	The damage is reduced by the application of a high dose of organic manure. Crop rotation with non-susceptible crops such as maize or amaranth is recommended.	NULL	8,638
76	Malabar Spinach	Necrotic leaf spots	Disease	Cercospora basellae and Acrothecium basellae	NULL	NULL	NULL	8,638
77	Malabar Spinach	Rust	Disease	Puccinia spp.	It causes yellow-orange spots on the leaves.	Removal of all infected leaves is recommended in order to reduce the inoculum rate.	NULL	8,638
78	Chayote	Root-knot nematodes	Pest	NULL	NULL	Application of large amounts of organic manure to the planting holes reduces damage.	NULL	8,639
79	Chayote	Powdery mildew	Disease	Erysiphe cichoracearum	NULL	NULL	NULL	8,639
80	Chayote	Downy mildew	Disease	Pseudoperonospora cubensis	NULL	NULL	NULL	8,639
81	Chayote	Leaf spot	Disease	Mycosphaerella sp.	NULL	NULL	NULL	8,639
82	Chayote	Spider mites	Pest	NULL	NULL	NULL	NULL	8,639
83	Chayote	Leaf beetles	Pest	NULL	NULL	NULL	NULL	8,639
84	Swamp Cabbage	White rust	Disease	Albugo ipomoeae-panduratae	It causes white patches which diminish the market quality.	NULL	NULL	8,640
85	Swamp Cabbage	Damping off	Disease	Pythium sp.	NULL	NULL	NULL	8,640
86	Swamp Cabbage	Caterpillars (Spodoptera litura and Diacrisia strigatula)	Pest	NULL	NULL	NULL	NULL	8,640
87	Swamp Cabbage	Aphids	Pest	NULL	NULL	NULL	NULL	8,640
88	Winged Bean	False rust/orange gall	Disease	Synchytrium psophocarpi	NULL	NULL	NULL	8,608
89	Winged Bean	Dark leaf spot	Disease	Pseudocercospora psophocarpi	NULL	NULL	NULL	8,608
90	Winged Bean	Powdery mildew	Disease	Erysiphe cichoracearum	NULL	NULL	NULL	8,608
91	Winged Bean	Web blight	Disease	Rhizoctonia solani	NULL	NULL	NULL	8,608
92	Winged Bean	Flower blight	Disease	Choanephora cucurbitarum	NULL	NULL	NULL	8,608

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93	Winged Bean	Root-knot nematodes (Meloidogyne spp.)	Pest	NULL	It may cause stunted growth and yellowing of leaves.	NULL	NULL	8,608
94	Winged Bean	Bean pod-borer (Maruca testulalis)	Pest	NULL	NULL	NULL	NULL	8,608
95	Asystasia	Fungus	Disease	Colletotrichum dematium	It causes necrosis, defoliation and stunted growth.	NULL	NULL	8,641
96	Proso Millet	Smut	Disease	Sphacelotheca destruens and Ustilago spp.	NULL	NULL	NULL	8,650
97	Proso Millet	Anthracnose	Disease	Colletotrichum graminicola	NULL	NULL	NULL	8,650
98	Proso Millet	Leaf blast	Disease	Pyricularia grisea	NULL	NULL	NULL	8,650
99	Proso Millet	Ergot	Disease	Claviceps spp.	NULL	NULL	NULL	8,650
100	Proso Millet	Rust	Disease	Puccinia and Uromyces spp.	NULL	NULL	NULL	8,650
101	Proso Millet	Leaf blight	Disease	Helminthosporium sp.	NULL	NULL	NULL	8,650
102	Proso Millet	Foot rot	Disease	Sclerotium rolfsii	NULL	NULL	NULL	8,650
103	Proso Millet	Shootfly (Atherigona miliaceae)	Pest	NULL	NULL	NULL	NULL	8,650
104	Proso Millet	Stem borers (Chilo partellus, Chilo suppressalis and Sesamia inferens)	Pest	NULL	NULL	NULL	NULL	8,650
105	Quinoa	Damping off	Disease	Sclerotium rolfsii	NULL	NULL	NULL	8,652
106	Quinoa	Downy mildew	Disease	Peronospora farinosa	NULL	NULL	NULL	8,652
107	Quinoa	Stalk rot	Disease	Phoma exigua var. foveata	NULL	NULL	NULL	8,652
108	Quinoa	Leaf spot	Disease	Ascochyta hyalospora	NULL	NULL	NULL	8,652
109	Quinoa	Grey mold	Disease	Botrytis cinerea	NULL	NULL	NULL	8,652
110	Quinoa	Bacterial blight	Disease	Pseudomonas sp.	NULL	NULL	NULL	8,652
111	Quinoa	Flea beetles	Pest	NULL	NULL	NULL	NULL	8,652
112	Quinoa	Sugarbeet root aphid (Pemphigus populivinae)	Pest	NULL	NULL	NULL	NULL	8,652
113	Quinoa	Quinoa plant bug (Melanotrachus sp.)	Pest	NULL	NULL	NULL	NULL	8,652
114	Quinoa	Beet armyworm (Spodoptera exigua)	Pest	NULL	NULL	NULL	NULL	8,652
115	African Rice	Rice blast	Disease	Pyricularia grisea	NULL	NULL	NULL	8,656
116	African Rice	Rice yellow mosaic virus (RYMV)	Disease	NULL	NULL	NULL	NULL	8,656
117	African Rice	African rice gall midge (Orseolia oryziphora)	Pest	NULL	NULL	NULL	NULL	8,656
118	Love-Lies-Bleeding	Fungal diseases	Disease	Alternaria	NULL	NULL	NULL	8,658
119	Love-Lies-Bleeding	Fungal diseases	Disease	Mycoplasma	NULL	NULL	NULL	8,658
120	Love-Lies-Bleeding	Fungal diseases	Disease	Sclerotinia spp.	NULL	NULL	NULL	8,658
121	Love-Lies-Bleeding	Leaf-eating caterpillars	Pest	Sclerotinia spp.	NULL	NULL	NULL	8,658
122	Love-Lies-Bleeding	Stem-boring larvae of weevils	Pest	NULL	NULL	NULL	NULL	8,658

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123	Finger Millet	Head blast	Disease	Magnaporthe grisea	All aerial parts are affected from seedling to maturity.	Control methods include crop rotation and the use of tolerant or resistant cultivars.	NULL	8,664
124	Finger Millet	Dark brown leaf blight	Disease	Bipolaris nodulosa	NULL	NULL	NULL	8,664
125	Finger Millet	Foot and root rot	Disease	Bipolaris nodulosa	NULL	NULL	NULL	8,664
126	Finger Millet	Seedling blight and head blight	Disease	Helminthosporium leucostylum	NULL	NULL	NULL	8,664
127	Finger Millet	Shoot fly (Atherigona soccata)	Pest	NULL	NULL	NULL	NULL	8,664
128	Finger Millet	Stem borers	Pest	NULL	NULL	NULL	NULL	8,664
129	Finger Millet	Phytophagous ladybird (Epilachna similis)	Pest	NULL	NULL	NULL	NULL	8,664
130	Finger Millet	Wild finger millet (Eleusine indica)	Weed	NULL	NULL	NULL	NULL	8,664
131	Finger Millet	Brachiaria deflexa	Weed	NULL	NULL	NULL	NULL	8,664
132	Finger Millet	Guizotia scabra	Weed	NULL	NULL	NULL	NULL	8,664
133	Purple Amaranth	Stemrot	Disease	Choanephora cucurbitarum	NULL	Spraying with fungicides such as maneb or carbatene reduces the losses, but is seldom applied.	NULL	8,668
134	Purple Amaranth	Damping-off	Disease	Pythium aphanidermatum	NULL	It is controlled by good drainage. Overdense sowing should be avoided.	NULL	8,668
135	Purple Amaranth	White rust	Disease	Albugo candida	NULL	NULL	NULL	8,668
136	Purple Amaranth	Caterpillars	Pest	NULL	NULL	Many commercial growers now spray with insecticides regularly, up to twice a week, instead of using the traditional control method of spreading wood ash to dispel insects. In order to avoid harmful residues, the use of less toxic chemicals is strongly recommended. Biological insecticides derived from Bacillus thuringiensis (Bt) are fairly effective against caterpillars.	Caterpillars (Spodoptera litura, Helicoverpa armigera, Hymenia recurvalis)	8,668

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137	Purple Amaranth	Larvae of the stem borer <i>Lixus truncatulus</i>	Pest	NULL	The basal part of the plant containing the pupae swells and plant growth is much retarded.	Many commercial growers now spray with insecticides regularly, up to twice a week, instead of using the traditional control method of spreading wood ash to dispel insects. In order to avoid harmful residues, the use of less toxic chemicals is strongly recommended.	NULL	8,668
138	Machurian Wild Rice	Green leaf hopper (<i>Nephotettix bipunctatus</i>)	Pest	NULL	NULL	NULL	NULL	8,670
139	Machurian Wild Rice	Brown plant hopper (<i>Nilaparvata lugens</i>)	Pest	NULL	NULL	NULL	NULL	8,670
140	Machurian Wild Rice	Paddy army worm (<i>Mythimna separata</i>)	Pest	NULL	NULL	NULL	NULL	8,670
141	Machurian Wild Rice	Paddy swarming caterpillar (<i>Spodoptera mauritia</i>)	Pest	NULL	NULL	NULL	NULL	8,670
142	Winged Bean	False rust	Disease	<i>Synchytrium psophocarp</i>	NULL	NULL	NULL	8,671
143	Winged Bean	Dark leaf spot	Disease	<i>Pseudocercospora psophocarp</i>	NULL	NULL	NULL	8,671
144	Winged Bean	Web blight	Disease	<i>Rhizoctonia solani</i>	NULL	NULL	NULL	8,671
145	Winged Bean	Flower blight	Disease	<i>Choanephora cucurbitarum</i>	NULL	NULL	NULL	8,671
146	Winged Bean	Root-knot nematodes (<i>Meloidogyne</i> spp.)	Pest	NULL	Root-knot nematodes (<i>Meloidogyne</i> spp.) may cause stunted growth and yellowing of leaves.	NULL	NULL	8,671
147	Winged Bean	Bean pod-borer (<i>Maruca testulalis</i>)	Pest	NULL	NULL	NULL	NULL	8,671
148	Malabar Spinach (<i>Basella rubra</i>)	Root-knot nematodes (<i>Meloidogyne</i> spp.)	Pest	NULL	NULL	The damage is reduced by the application of a high dose of organic manure. Crop rotation with non-susceptible crops such as maize or amaranth is recommended.	<i>Basella rubra</i> is synonym to <i>Basella alba</i> .	8,638
149	Malabar Spinach (<i>Basella rubra</i>)	Necrotic leaf spots	Disease	<i>Cercospora basellae</i> and <i>Acrothecium basellae</i>	NULL	NULL	<i>Basella rubra</i> is synonym to <i>Basella alba</i> .	8,638
150	Malabar Spinach (<i>Basella rubra</i>)	Rust	Disease	<i>Puccinia</i> spp.	It causes yellow-orange spots on the leaves.	Removal of all infected leaves is recommended in order to reduce the inoculum rate.	<i>Basella rubra</i> is synonym to <i>Basella alba</i> .	8,638

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151	Bitter Gourd	Cucurbit aphid-borne yellows	Disease	NULL	NULL	NULL	NULL	8,676
152	Bitter Gourd	Cercospora leaf spot	Disease	Cercospora citrullina	NULL	It is controlled by pruning of affected leaves and by spraying fungicides such as benomyl, cupravit or daconil.	NULL	8,676
153	Bitter Gourd	Downy mildew	Disease	Pseudoperonospora solanacearum	NULL	It is controlled by wide spacing giving good ventilation and by fungicides such as maneb, ridomil or dithane.	NULL	8,676
154	Bitter Gourd	Powdery mildew	Disease	Erysiphe cichoracearum	NULL	It is controlled by fungicides such as maneb, ridomil and dithane or with sulphur dust.	NULL	8,676
155	Bitter Gourd	Bacterial wilt	Disease	Ralstonia, fusarium wilt, and root-knot nematodes	Infection with bacterial wilt causes quite sudden wilting while the plant is still green.	NULL	NULL	8,676
156	Bitter Gourd	Aphids	Pest	NULL	Heavy aphid infestation can lead to strongly stunted growth and reduced fruit set.	NULL	NULL	8,676
157	Bitter Gourd	Fruit flies (Dacus cucurbitae)	Pest	NULL	NULL	NULL	NULL	8,676
158	Bitter Gourd	Leaf beetles (Epilachna spp.)	Pest	NULL	NULL	NULL	NULL	8,676
159	Bitter Gourd	Caterpillars (Spodoptera spp., Heliothis armigera)	Pest	NULL	NULL	NULL	NULL	8,676
160	Bitter Gourd	Mites	Pest	NULL	NULL	NULL	NULL	8,676
161	African Cabbage	Powdery mildew	Disease	Sphaerotheca fuliginea, Oidiopsis taurica	NULL	NULL	NULL	8,694
162	African Cabbage	Leaf spot	Disease	Cercospora uramensis	NULL	NULL	NULL	8,694
163	African Cabbage	Cabbage aphid (Brevicoryne brassicae)	Pest	NULL	It causing stunted growth and wrinkling of the leaves and growing tips	NULL	NULL	8,694
164	African Cabbage	Hurricane bug (Bagrada spp.)	Pest	NULL	NULL	It can be effectively controlled with insecticides.	NULL	8,694
165	African Cabbage	Pentatomids (Acrosternum gramineum and Agonoselis nubilis)	Pest	NULL	NULL	NULL	NULL	8,694
166	African Cabbage	Flea beetles	Pest	NULL	NULL	NULL	NULL	8,694
167	African Cabbage	Root-knot nematodes (Meloidogyne spp.)	Pest	NULL	NULL	NULL	NULL	8,694
168	African Cabbage	Weaver birds	Pest	NULL	NULL	NULL	Young seeds are eaten by weaver birds.	8,694

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
169	African Cabbage	American bollworms	Pest	NULL	NULL	NULL	NULL	8,694
170	Potherb Fameflower	White leaf spot	Disease	Pleospora spp.	NULL	NULL	NULL	8,697
171	Potherb Fameflower	Leaf mosaic	Disease	Unknown virus	NULL	NULL	NULL	8,697
172	Blue Clitoria	Fungal leaf diseases	Disease	Rhizoctonia microsclerotia	NULL	NULL	C. ternatea is affected by fungal leaf diseases (e.g. Cercospora, Colletotrichum, Oidium and Rhizoctonia).	8,698
173	Blue Clitoria	Fungal leaf diseases	Disease	Corticium solani	NULL	NULL	C. ternatea is affected by fungal leaf diseases (e.g. Cercospora, Colletotrichum, Oidium and Rhizoctonia).	8,698
174	Blue Clitoria	Meloidogyne incognita	Pest	NULL	NULL	NULL	NULL	8,698
175	Blue Clitoria	Leaf-eating caterpillars	Pest	NULL	NULL	NULL	NULL	8,698
176	Lesser Yam	Leaf spots	Disease	Cercospora spp. and Glomerella spp	NULL	NULL	NULL	8,699
177	Lesser Yam	Leaf necrosis	Disease	Cercospora spp. and Glomerella spp	NULL	NULL	NULL	8,699
178	Lesser Yam	Yam beetle (Heteroligus spp.)	Pest	NULL	It attacks the tubers.	It can be controlled with insecticidal dusts, or by planting as late as possible in the season.	NULL	8,699
179	Lesser Yam	Yam scale (Aspidiella hartii)	Pest	NULL	It infest the tubers, especially during storage.	NULL	NULL	8,699
180	Lesser Yam	Mealy bugs	Pest	NULL	It infest the tubers, especially during storage.	NULL	NULL	8,699
181	Lesser Yam	Root-knot nematode (Meloidogyne spp.)	Pest	NULL	It cause wartiness of the harvested tubers.	NULL	NULL	8,699
182	Lesser Yam	Yam nematode (Scutellonema bradys)	Pest	NULL	It cause wartiness of the harvested tubers.	NULL	NULL	8,699
183	Smooth Loofah	Fruitfly	Pest	NULL	The eggs hatch into small larvae then start eating the fruits.	Cut and burn the infected parts. After removal of the infected fruits, spray insecticide recommended by the authorize dealer.	NULL	8,700

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
184	Smooth Loofah	Thrips	Pest	NULL	NULL	Spraying at night was found to be effective in controlling thrips. In case of severe cases, spray for two consecutive nights using different chemicals at a time.	NULL	8,700
185	Smooth Loofah	Caterpillar	Pest	NULL	NULL	Spray with insecticides.	NULL	8,700
186	Smooth Loofah	Downey Mildew	Disease	NULL	Spots that are irregular in shape usually appear in the surface of the leaves. The spots increase rapidly in size until the whole leaf dies.	1. Plant resistant varieties. 2. Restrain nitrogen fertilization and irrigation. 3. Fungicide application if symptom is becoming severe. 4. Do clean cultural management practices. 5. Practice crop rotation.	NULL	8,700
187	Celosia	White rust	Disease	Albugo bliti	White rust (Albugo bliti) forms white pustules on the underside of the leaves.	NULL	NULL	8,702
188	Celosia	Alternaria leaf spot	Disease	Alternaria spp.	Cause dark spots on the leaves	NULL	NULL	8,702
189	Celosia	Charcoal rot	Disease	Macrophomina phaseolina	Cause dark spots on the leaves	NULL	NULL	8,702
190	Celosia	Stem rot	Disease	Choanephora cucurbitarum	NULL	NULL	NULL	8,702
191	Celosia	Damping-off	Disease	Rhizoctonia solani	NULL	NULL	NULL	8,702
192	Celosia	Meloidogyne spp.	Pest	NULL	Causing galls on roots, unthrifty growth, small and chocolate-coloured leaves	NULL	NULL	8,702
193	Celosia	Caterpillars (Hymenia recurvalis)	Pest	NULL	NULL	The use of appropriate pesticides can control them. Spraying should start at detection of the caterpillars and should be applied once a week for three weeks.	NULL	8,702
194	Mashua	Tropaeolum mosaic potyvirus (TropMV)	Disease	Aphid (Myzus persicae)	NULL	NULL	NULL	8,703
195	Mashua	Acroconidiella leaf spot	Disease	Acroconidiella tropaeoli	NULL	NULL	NULL	8,703
196	Mashua	Oca nematode (Thecavermiculatus andinus)	Pest	NULL	NULL	NULL	NULL	8,703
197	Mashua	Potato nematode (Nacobbus aberrans)	Pest	NULL	NULL	NULL	NULL	8,703
198	Mashua	Copitarsia turbata	Pest	NULL	NULL	NULL	NULL	8,703

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
199	Mashua	Leaf miner (Philonorycter sp.)	Pest	NULL	NULL	NULL	NULL	8,703
200	Mashua	Copitarsia spp.	Pest	NULL	NULL	NULL	NULL	8,703
201	Mashua	Andean weevil (Premnotrypes vorax)	Pest	NULL	NULL	NULL	NULL	8,703
202	Mashua	Copitarsia turbata	Pest	NULL	It attacks aerial stems.	NULL	NULL	8,703
203	Mashua	Phyllonoryeter spp.	Pest	NULL	It mines the leaves.	NULL	NULL	8,703
204	Mashua	Thysanoptera spp.	Pest	NULL	It mines the leaves.	NULL	NULL	8,703
205	Cabbage-tree	Caterpillar	Pest	NULL	In just a week, it can devour the leaves of the trees of an entire village.	NULL	NULL	8,704
206	Marrow	Powdery mildew	Disease	Erysiphe cichoracearum or Sphaerotheca fuliginea	NULL	NULL	NULL	8,706
207	Marrow	Necrotic leaf spots	Disease	Alternaria or Ulocladium spp.	NULL	NULL	NULL	8,706
208	Marrow	Downy mildew	Disease	Pseudoperonospora cubensis	It induces only localized small yellow lesions.	NULL	NULL	8,706
209	Marrow	Leaf spot	Disease	Didymella bryoniae	It causes leaf spot mostly on senescent petioles only.	NULL	NULL	8,706
210	Marrow	Wet rot	Disease	Choanephora cucurbitacearum	It first invades the corolla, then the blossom-end of the fruit.	NULL	NULL	8,706
211	Marrow	Fruit rot	Disease	Rhizoctonia solani or Sclerotium rolfsii	NULL	Plastic mulch may give good control of these soil-linked diseases, provided water can freely drain off from the mulch.	NULL	8,706
212	Marrow	Root diseases	Disease	Root-knot nematodes (Meloidogyne spp.)	NULL	A good control measure is manuring with organic matter under the plants.	NULL	8,706
213	Marrow	Papaya ringspot potyvirus-W (PRSV-W)	Disease	NULL	NULL	NULL	NULL	8,706
214	Marrow	Squash mosaic virus (SqMV)	Disease	Cucurbit beetles (Epilachna, Diabrotica, Acalymma spp.)	NULL	NULL	NULL	8,706
215	Marrow	Cucumber mosaic virus (CMV)	Disease	NULL	NULL	NULL	NULL	8,706
216	Marrow	Watermelon mosaic potyvirus-2 (WMV2)	Disease	NULL	NULL	NULL	NULL	8,706
217	Marrow	Zucchini yellow mosaic potyvirus (ZYMV)	Disease	NULL	NULL	NULL	NULL	8,706
218	Marrow	Aphis gossypii	Pest	NULL	NULL	NULL	NULL	8,706
219	Marrow	Epilachna spp.	Pest	NULL	NULL	NULL	NULL	8,706
220	Marrow	Bemisia argentifolia	Pest	NULL	NULL	NULL	NULL	8,706

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
221	Marrow	Pickle worm (Diaphania nitidalis)	Pest	NULL	NULL	NULL	NULL	8,706
222	Marrow	Melon worm (Diaphania hyalinata)	Pest	NULL	NULL	NULL	NULL	8,706
223	Marrow	Fruit flies (Dacus cucurbitae)	Pest	NULL	NULL	NULL	NULL	8,706
224	Marrow	Spider mites (Tetranychus spp.)	Pest	NULL	NULL	NULL	NULL	8,706
225	Star Gooseberry	Chinese rose beetle (Adoretus sinicus)	Pest	NULL	NULL	NULL	NULL	8,709
226	Star Gooseberry	Slugs	Pest	NULL	NULL	NULL	NULL	8,709
227	Yautia	Root rot	Disease	Pythium myriothylum	The outer leaves of the plant gradually go yellow from margin to mid rib and finally the leaf dies. The roots of the plant also die.	Use fungicide (Acrobate) as soil drench.	NULL	8,710
228	Black Mulberry	Powdery mildew	Disease	Phyllactinia corylea and Uncinula geniculata	A white powdery coating on the lower leaf surface.	It can be treated with sulphur dust, copper oxychloride, karathane and imazalil.	NULL	8,711
229	Black Mulberry	Popcorn disease	Disease	NULL	The fruit swells to resemble popped corn.	Collecting and burning infected fruit help control it.	NULL	8,711
230	Breadfruit	2-spotted leaf hopper	Pest	NULL	NULL	NULL	NULL	8,712
231	Breadfruit	Rastrococcus invadens	Pest	NULL	NULL	NULL	NULL	8,712
232	Breadfruit	Rosellinina spp.	Pest	NULL	NULL	NULL	NULL	8,712
233	Breadfruit	Anthracnose	Disease	Colletotrichum	Fruits may be affected.	It can be controlled by prompt harvest of mature fruits and removal of diseased fruits.	NULL	8,712
234	Breadfruit	Soft rot	Disease	Rhizopus	Fruits may be affected.	It can be controlled by prompt harvest of mature fruits and removal of diseased fruits.	NULL	8,712
235	Pineapple Guava	Guava moth	Pest	NULL	Premature fruit drop, fruit flesh will be brown and rotting.	Pheromone traps can catch adult guava moths.	NULL	8,734
236	Black Nightshade	Black aphids (Aphis fabae Scop.)	Pest	NULL	Large numbers of the aphids can infest the underside of the leaves causing leaf curl, while the young apices of similarly infested plants can fail to develop.	NULL	NULL	8,672
237	Black Nightshade	Flea beetles (Epilachna hirta)	Pest	NULL	NULL	NULL	NULL	8,672
238	Black Nightshade	Root knot nematodes	Pest	NULL	NULL	NULL	NULL	8,672

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
239	Black Nightshade	Yellow vein clearing	Disease	NULL	Affected leaves become yellowish green with a dark green colouration developing near the veins.	NULL	NULL	8,672
240	Black Nightshade	Fungal diseases	Disease	NULL	Affected leaves then show a light-green or yellowish coloration on the upper side, while a greenish-grey 'mould' develops on the undersides.	NULL	NULL	8,672
241	Chaya	Tomato hornworms	Pest	NULL	NULL	NULL	NULL	8,801
242	Chaya	Broad Mite Pests	Pest	NULL	NULL	NULL	NULL	8,801
243	Chaya	Cassava Common Mosaic Virus	Disease	NULL	NULL	NULL	Chaya is a host of CCMV (Cassava Common Mosaic Virus) although plant materials are available from none-infected sources.	8,801
244	Paper Mulberry	Pseudomonas syringe	Pest	NULL	NULL	NULL	NULL	8,800
245	Paper Mulberry	Phytophthora boehmeriae	Pest	NULL	NULL	NULL	NULL	8,800
246	Paper Mulberry	Dendryphiella broussonetiae	Pest	NULL	NULL	NULL	NULL	8,800
247	Paper Mulberry	Crown gall (Agrobacterium tumefaciens)	Pest	NULL	NULL	NULL	NULL	8,800
248	Guava	Fruit flies	Pest	NULL	NULL	NULL	The Mediterranean, Oriental, Mexican and Caribbean fruit flies cause major problems, in that they infest ripe fruit with their larvae, making them inedible.	8,818
249	Dogfruit	Pod-borers Mussidia pectinicornella	Pest	NULL	NULL	NULL	NULL	8,831
250	Dogfruit	Pod-borers Cryptophlebia ombrodelta	Pest	NULL	NULL	NULL	NULL	8,831
251	Akee	Wilt and dieback	Disease	Verticillium dahliae	NULL	NULL	NULL	8,832
252	Soursop	Fruit flies (Anastrepha suspensa)	Pest	NULL	NULL	NULL	NULL	8,836
253	Moringa	Mites	Pest	NULL	Mite attack may lead to yellowing of leaves	NULL	NULL	8,837
254	Moringa	Termites	Pest	NULL	NULL	Heaping ashes around the base of seedlings.	NULL	8,837
255	Moringa	Aphids	Pest	NULL	NULL	NULL	NULL	8,837
256	Moringa	Leaf miner	Pest	NULL	NULL	NULL	NULL	8,837
257	Moringa	Whiteflies	Pest	NULL	NULL	NULL	NULL	8,837

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
258	Moringa	Caterpillar (Eupterote molifera)	Pest	NULL	Defoliation	Requires spraying to control it.	NULL	8,813
259	Moringa	Root rot	Disease	Diplodia sp.	NULL	NULL	NULL	8,813
260	Cherry Guava	Fruit flies	Pest	NULL	NULL	NULL	NULL	8,847
261	Cherry Guava	Scale insects	Pest	NULL	NULL	NULL	NULL	8,847
262	Cherry Guava	Beetles (Coleoptera)	Pest	NULL	NULL	NULL	NULL	8,847
263	Cherry Guava	Thrips (Selenothrips)	Pest	NULL	NULL	NULL	NULL	8,847
264	Indian Mulberry	Whiteflies	Pest	NULL	It causes a buildup of sooty mold on the leaves	It can be controlled with sprays of insecticidal soaps and oils	NULL	8,851
265	Indian Mulberry	Scales	Pest	NULL	It causes a buildup of sooty mold on the leaves	It can be controlled with sprays of insecticidal soaps and oils	NULL	8,851
266	Indian Mulberry	Aphids	Pest	NULL	NULL	NULL	NULL	8,851
267	Indian Mulberry	Leaf miner	Pest	NULL	It cause severe damage to the leaves.	NULL	NULL	8,851
268	Indian Mulberry	Leaf spot	Disease	Colletotrichum sp.	NULL	Sanitation (picking up or removing severely diseased leaves) or by periodic application of approved fungicides.	NULL	8,851
269	Indian Mulberry	Stem, leaf and fruit blights	Disease	Phytophthora sp and Sclerotium rolfsii	NULL	NULL	NULL	8,851
270	Indian Mulberry	Black flag disease	Disease	Phytophthora sp	It significantly inhibit leaf growth and fruit development.	NULL	NULL	8,851
271	Indian Mulberry	Root knot disease	Disease	Root-knot nematodes (Meloidogyne spp.)	NULL	Use soil-less media or only heat-treated soil for seedlings. Also use proper irrigation, fertilizer and compost in order to minimize the damage.	NULL	8,851
272	Indian Mulberry	Dodder (Cuscuta spp.)	Weed	NULL	NULL	NULL	NULL	8,851
273	Indian Mulberry	Cassytha filiformis	Weed	NULL	NULL	NULL	NULL	8,851
274	Passionfruit	Passion vine mite (Brevipalpus phoenicis)	Pest	NULL	It defoliate the younger portions of the vines but not the terminus, and make brown blemishes on the fruits.	NULL	NULL	8,854
275	Passionfruit	Passion vine bug (Leptoglossus australis)	Pest	NULL	It feeds on flowers and young, green fruits in Queensland.	NULL	NULL	8,854
276	Passionfruit	Stinkbug (Nezara viridula)	Pest	NULL	NULL	NULL	NULL	8,854

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
277	Passionfruit	Brown stinkbug (Boerias maculata)	Pest	NULL	NULL	NULL	NULL	8,854
278	Passionfruit	Black stinkbug (Anoplocnemis sp.)	Pest	NULL	NULL	NULL	NULL	8,854
279	Passionfruit	Small black stinkbug (Leptoglossus membranaceus)	Pest	NULL	NULL	NULL	NULL	8,854
280	Passionfruit	Thrips (Thysanoptera sp.)	Pest	NULL	It injure and cause stunting of young seedlings in nurseries.	NULL	NULL	8,854
281	Passionfruit	Tobacco white fly (Bemisia tabaci)	Pest	NULL	It may lead to galls on the leaves.	NULL	NULL	8,854
282	Passionfruit	Leaf beetles (Haltica sp.)	Pest	NULL	NULL	NULL	NULL	8,854
283	Passionfruit	Weevils (Systates spp.)	Pest	NULL	NULL	NULL	NULL	8,854
284	Passionfruit	Scales (Pseudaulacaspis pentagona, Chrysomphalus ficus, Parasaissetia nigra)	Pest	NULL	NULL	NULL	NULL	8,854
285	Passionfruit	Leaf hopper (Scolypopa australis)	Pest	NULL	NULL	NULL	NULL	8,854
286	Passionfruit	Mealybug ladybird (Cryptolaemus montrouzieri)	Pest	NULL	NULL	NULL	NULL	8,854
287	Passionfruit	Brown spot	Disease	NULL	NULL	NULL	NULL	8,854
288	Pitahaya	Stem rot	Disease	Xanthomonas campestris, Fusarium oxysporium, Pantoea sp., Erwinia caratovora	Yellowing of tissues followed by softening and smelly rotting of tissues. Advanced attack showed total rotting of fleshy succulent parts of stem leaving the main veins intact.	Pruning of infected parts, Copper compound sprays and nutrition.	NULL	8,858
289	Pitahaya	Anthrachnose	Disease	Colletotrichum gloesporoides	Red brown concentric lesions with ascervuli developed near ribs of vine, in particular where the spines emerged from the rib edge.	Fungicidal sprays like mancozeb, maneb would be able to control	NULL	8,858
290	Pitahaya	Beetles	Pest	NULL	Beetles occasionally attacks the young succulent stem and may caused necrosis	Fruit bagging	NULL	8,858
291	Pitahaya	Ants	Pest	NULL	Ants feed on sap from fruits and may caused blemishes.	Fruit bagging	NULL	8,858

PWD Control Id	Crop ID	Pwd Name	Pwd Type	Causal Agent	Symptoms	Control	Notes	Metadata Id
292	Pomegranate	Leaf footed bugs	Pest	NULL	Leaf footed bugs can penetrate the rind to suck out juice, causing an internal fungus infection in part of the fruit.	It is best to harvest damaged fruit as it appears, remove the infected parts, and consume the rest. The eggs of leaf-footed bugs can be spotted on the underside of leaves and removed. The bugs can also be contained by attracting small birds to feed on them.	NULL	8,866
293	Fava (Faba) Bean	Chocolate Spot	Disease	Botrytis fabae	Dark, chocolate-colored spots on leaves and stems; defoliation in severe cases.	Use fungicides, rotate crops, and ensure good air circulation.	Monitor during wet conditions as the disease thrives in humidity.	9,795
294	Fava (Faba) Bean	Aphid Infestation	Pest	Black bean aphid (Aphis fabae)	Yellowing leaves, stunted growth, and sticky honeydew on plants.	Introduce natural predators like ladybugs, use insecticidal soap, and monitor plant health regularly.	Early detection and biological control are effective strategies.	9,796