

Cases of resistance to benzimidazoles (Updated: 24 May 2004)

Scientific name	Group	Common name	Crop(s)	First report	Field (F) or Laboratory (L)
<i>Alternaria alternata</i>	Deuteromycetes	Alternaria rot	Citrus	1977	F
<i>Ascochyta byj</i>	Ascomycetes	Ascochyta blight	Vegetables	1973	L
<i>Aspergillus nidulans</i>	Deuteromycetes	Bearings rot	Banana	1971	L
<i>Botryodiplodia theobromae</i>	Ascomycetes	Botryodiplodia rot	Fruits	1982	L
<i>Botrytis cinerea</i>	Ascomycetes	Grey rot	Grapes / Vines	1971	F & L
<i>Botrytis elliptica</i>	Ascomycetes	Grey rot	Lily	1987	F
<i>Botrytis fabae</i>	Ascomycetes	Chocolate spot	Beans	Not recorded	
<i>Botrytis squamosa</i>	Ascomycetes	Leaf blight	Alliaceae	1982	L
<i>Botrytis tulipae</i>	Ascomycetes	Fire blight of tulip	Tulip	1984	F
<i>Ceratocystis ulmi</i>	Ascomycetes	Dutch elm disease	Elm	1979	L
<i>Cercospora apii</i>	Ascomycetes	Early blight	Celery	1973	F
<i>Cercospora arachidicola</i>	Ascomycetes	Leafspot	Peanut	1974	F
<i>Cercospora beticola</i>	Deuteromycetes	Leafspot	Sugar beet	1973	F & L
<i>Cercospora musae</i>	Ascomycetes	Leafspot	Banana	1973	L
<i>Cercosporidium personatum</i>	Ascomycetes	Late Leafspot	Peanut	1974	F
<i>Cladobotryum dendroides</i>	Deuteromycetes	Cobweb disease	Mushrooms	Not recorded	
<i>Cladosporium carpophilum</i>	Deuteromycetes	Scab	Peach, Nectarine	1978	F
<i>Cladosporium cladosporoides</i>	Deuteromycetes	Fruit rot	Fruits	1972	L
<i>Cladosporium cucumerinum</i>	Deuteromycetes	Cladosporium	Cucurbits	1972	F & L
<i>Cladosporium fulvum</i>	Deuteromycetes	Flower rot	Fruits	1975	F & L
<i>Coccomyces hiemalis</i>	Ascomycetes	Cherry leaf spot	Cherry	1980	F
<i>Colletotrichum coffeanum</i>	Deuteromycetes	Coffee berry disease	Coffee	1976	F & L
<i>Colletotrichum gloeosporioides</i>	Deuteromycetes	Anthracoise	Pome fruit	1982	L
<i>Colletotrichum lindemuthianum</i>	Deuteromycetes	Anthracoise	Bean	1976	F & L
<i>Colletotrichum musae</i>	Deuteromycetes	Anthracoise	Banana	1973	F
<i>Cryptocline cyclaminis</i>	Deuteromycetes	Anthracoise	Cyclamen	1987	F
<i>Cylindrocladium scoparium</i>	Deuteromycetes	Stem canker	Eucalyptus	1988	F
<i>Didymella bryoniae</i>	Ascomycetes	Gummy stem blight	Cucurbits	1983	F

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<i>Didymella lycopersici</i>	Ascomycetes	Stem rot	Tomato	Not recorded	
<i>Drechslera oryzae</i>	Deuteromycetes	Brown spot	Rice	1987	L
<i>Elsinoë fawcetti</i>	Ascomycetes	Scab	Citrus	1980	F
<i>Elsinoë veneta</i>	Ascomycetes	Anthracoise	Raspberry	1988	F
<i>Erysiphe cichoracaerum</i>	Ascomycetes	Powdery mildew	Cucurbits	1970	F
<i>Erysiphe graminis</i>	Ascomycetes	Powdery mildew	Cereals	1973	F
<i>Erysiphe polygoni</i>	Ascomycetes	Powdery mildew	Peas	1984	F
<i>Erythronium spp.</i>	Ascomycetes	Yellow fawn	Lily	Not recorded	
<i>Fulvia fulva</i>	Deuteromycetes	Leaf mold	Tomato	Not recorded	
<i>Fusarium nivale</i>	Deuteromycetes	Pink snow mold	Wheat	1983	F
<i>Fusarium culmorum</i>	Deuteromycetes	Fusariose	Potato / Pink	Not recorded	
<i>Fusarium oxysporium f. sp. dianthi</i>	Deuteromycetes	Fusariose	Oeillet	1973	L
<i>Fusarium oxysporium f. sp. gladioli</i>	Deuteromycetes	Fusariose	Gladiolus	1974	F
<i>Fusarium oxysporium f. sp. lycopersici</i>	Deuteromycetes	Fusariose	Tomato	1982	L
<i>Fusarium oxysporium f. sp. tulipae</i>	Deuteromycetes	Fusariose	Tulip	1973	L
<i>Fusarium oxysporium f. sp. Melonis</i>	Deuteromycetes	Fusariose	Melon	1971	L
<i>Fusarium roseum</i>	Deuteromycetes	Fusariose	Rosa	1976	F
<i>Fusarium solani f. sp. pisi</i>	Deuteromycetes	Fusariose	Solanacea	1973	F
<i>Fusarium sulphureum</i>	Deuteromycetes	Fusariose	Potato	Not recorded	
<i>Fusicladium effusum</i>	Deuteromycetes	Scab	Pecan	1970's	F
<i>Gibberella fujikuroi</i>	Ascomycetes	Fusariose	Sprinkle	1988	F
<i>Gloeosporium spp.</i>	Ascomycetes	Fruit rot	Apple	Not recorded	
<i>Guignardia citricarpa</i>	Ascomycetes	Black spot	Citrus	1985	F
<i>Helminthosporium solani</i>	Deuteromycetes	Silver scurf	Potato	Not recorded	
<i>Hypomyces rosellus</i>	Ascomycetes	Cobweb disease	Mushrooms	1976	F
<i>Leveillula taurica</i>	Ascomycetes	Powdery mildew	Artichoke	1982	F
<i>Minilinia cinerea</i>	Ascomycetes	Brown rot	Rosa	1973	L
<i>Monilinia fructicola</i>	Ascomycetes	Brown rot	Pome fruit	1976	F & L
<i>Monilinia fructigena</i>	Ascomycetes	Brown rot	Pome fruit	1973	F & L
<i>Monilinia laxa</i>	Ascomycetes	Brown rot	Pome fruit	1981	F
<i>Mycogone perniciosa</i>	Ascomycetes	Wet bubble	Mushrooms	1976	F
<i>Mycosphaerella brassicicola</i>	Ascomycetes	Ring spot	Brassicas	Not recorded	
<i>Mycosphaerella citri</i>	Ascomycetes	Greasy spot	Citrus	1980	F
<i>Mycosphaerella fijiensis</i>	Ascomycetes	Black spot	Banana	1982	F

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<i>Mycosphaerella fragariae</i>	Ascomycetes	Leaf spot	Strawberry	1974	F
<i>Mycosphaerella melonis</i>	Ascomycetes	Leaf spot	Strawberry	1982	F & L
<i>Mycosphaerella musicola</i>	Ascomycetes	Yellow spot	Banana	1982	F
<i>Neurospora crassa</i>	Ascomycetes	Red mold	Bread	1971	L
<i>Oidiopsis taurica</i>	Ascomycetes	Powdery mildew	Artichoke	Not recorded	
<i>Oidium begoniae</i>	Ascomycetes	Powdery mildew	Begonia	Not recorded	
<i>Penicillium brevicompactum</i>	Deuteromycetes			1971	L
<i>Penicillium corymbiferum</i>	Deuteromycetes	Rot	Crocus	1971	F & L
<i>Penicillium digitatum</i>	Deuteromycetes	Green rot	Citrus / Pome fruit	1974	F & L
<i>Penicillium expansum</i>	Deuteromycetes	Green rot	Pome fruit	1977	F & L
<i>Penicillium fructigenum</i>	Deuteromycetes			1975	F
<i>Penicillium italicum</i>	Deuteromycetes	Blue rot	Citrus	1974	F & L
<i>Penicillium oxalicum</i>	Deuteromycetes	Stem rot	Cucurbits	Not recorded	
<i>Penicillium sclerotigenum</i>	Deuteromycetes	Yellow yam		1984	F
<i>Pezicula alba</i>	Deuteromycetes	Ripe spot	Pome fruits	1986	F
<i>Phoma clematidina</i>	Ascomycetes	Wilt	Clematis	Not recorded	
<i>Phoma tracheiphila</i>	Ascomycetes	Malsecco	Citrus	1978	F
<i>Phomopsis citri</i>	Ascomycetes	Stem-end rot	Citrus	1982	L
<i>Podosphaera leucotricha</i>	Ascomycetes	Powdery mildew	Fruit trees	1986	L
<i>Polyscylatum pustulans</i>	Deuteromycetes	Skin spot	Potato	Not recorded	
<i>Pseudocercospora herpotrichoides</i>	Deuteromycetes	Eye spot	Oats	1983	F & L
<i>Pyrenopeziza brassicae</i>	Ascomycetes	Light leaf spot	Oilseed rape	1987	L
<i>Rhyncosporium secalis</i>	Deuteromycetes	Leaf blotch	Barley	Not recorded	
<i>Rhizoctonia solani</i>	Basidiomycetes	Brown rhizoctonia	Solanacea	1984	F
<i>Sclerotinia fructicola</i>	Deuteromycetes	Brown rot	Stone fruits	1976	F
<i>Sclerotinia homeocarpa</i>	Deuteromycetes	Dollar spot	Grass	1974	F
<i>Sclerotinia sclerotium</i>	Deuteromycetes	Sclerotiniose	Oilseed rape	1997	F
<i>Sclerotium spp.</i>	Basidiomycetes	Stem rot	Alliaceae/Potato/Carrot	Not recorded	
<i>Septoria apiicola</i>	Deuteromycetes	Leaf spot	Celery	1975	F
<i>Septoria leucanthemi</i>	Deuteromycetes	Leaf spot	Chrysanthemum	1976	F
<i>Septoria tritici</i>	Deuteromycetes	Leaf spot	Cereals	1985	L
<i>Sphaerotheca fuliginea</i>	Ascomycetes	Powdery mildew	Cucurbits	1969	F
<i>Sphaerotheca humili</i>	Ascomycetes	Powdery mildew	Ornamental flowers	1975	F
<i>Sphaerotheca pannosa</i>	Ascomycetes	Powdery mildew	Rosa / Peach tree	1975	F
<i>Sporobolomyces roseus</i>	Basidiomycetes	Pink yeast	Rosa	Not recorded	

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<i>Stagonospora curtisii</i>	Deuteromycetes	Leaf scorch	Ornamental flowers	1985	F
<i>Talaromyces flavis</i>	Deuteromycetes		Fruits	1984	L
<i>Tapesia yallundae</i>	Ascomycetes	Eyespot	Cereals	Not recorded	
<i>Tapesia acuformis</i>	Ascomycetes	Eyespot	Cereals	Not recorded	
<i>Trichoderma harzianum</i>	Deuteromycetes	Green mold	Mushrooms	1973	F & L
<i>Uncinula necator</i>	Ascomycetes	Powdery mildew	Grapes / Vines	1980	F
<i>Ustilago hordei</i>	Basidiomycetes	Barley covered smut	Barley	1974	L
<i>Venturia inaequalis</i>	Ascomycetes	Scab	Pome fruit	1973	F & L
<i>Venturia nashicola</i>	Ascomycetes	Scab	Pome fruit	1979	L
<i>Venturia pirina</i>	Ascomycetes	Scab	Pome fruit	1976	F & L
<i>Verticillium albo-atrum</i>	Deuteromycetes	Verticillium	Pome fruits	1983	L
<i>Verticillium dahliae</i>	Deuteromycetes	Verticillium	Pome fruit / Solanacea	1976	F & L
<i>Verticillium fungicola</i>	Deuteromycetes	Verticillium	Mushrooms	1975	F & L
<i>Verticillium malthousei</i>	Deuteromycetes	Verticillium	Mushrooms	1973	F
<i>Verticillium tricorpus</i>	Deuteromycetes	Wilt	Tomato	Not recorded	