

**Pythium characteristics checklist**

**Isolate designation:**

**Date of inoculation:**

Oogonia produced in single cultures	Catenulate hyphal swellings present
Oogonia not or scarcely produced in single cultures	Globose hyphal swellings present
Oogonial wall ornamented	Filamentous inflated hyphal swellings present
Oospores reticulate	Hyphal swellings large, often 30-40 µm in diameter
Oogonia often irregularly shaped	Hyphal swellings less than 30 µm in diameter
Oogonial wall smooth or occasionally with few projections	
Oogonial projections acute	Chlamydozoospores present
Oogonial projections blunt	
Oogonial projections cylindrical, irregular	Antheridia absent
Oogonial projections conical, sometimes curved	Antheridia mostly hypogynous
Oogonial projections widening or dichotomously branched at tip	Antheridia monoclinal
Oogonial projections mammiform	Antheridia declinal
Oogonial projections less than 3 µm long	
Oogonial projections more than 3 µm long	Antheridial stalks unbranched
	Antheridial stalks branched
Oogonia intercalary	Antheridia often sessile
Oogonia terminal	Antheridia often intercalary
Oogonia often catenulate	
	Antheridia 1-3 per oogonium
Oospores plerotic or nearly so	Up to 15-20 antheridia per oogonium
Oospores aplerotic	
	Antheridia usually entwining the oogonial stalk and base
Oogonial stalks mostly curved toward the antheridia	Antheridia making broad contact with oogonia
Oogonial stalks straight	Antheridia making apical contact with oogonia
Oogonia containing a single oospore	Antheridia large, variable in size, usually with folds and furrows
Oogonia often containing 2	Antheridia usually originating 1-5 µm below the oogonium
Oogonia containing multiple oospores	Antheridia usually originating 15-25 µm below the oogonium
Oogonia on average about 21 µm	Antheridia bell-shaped or lobed
Oogonia on average 30 µm in diameter	Antheridia large, irregular, making broad lengthwise contact with the oogonia near the stalk
Oogonia on average 40 µm or more in diameter	Antheridial stalks swollen
	Antheridial stalks not swollen
	Antheridia applied lengthwise to the oogonia
Oospore wall less than 1 µm thick	Antheridia long cylindrical
Oospore wall 1-2 µm thick;	Antheridia wavy or furrowed
Oospore walls up to 3 µm thick	Antheridia globose or clavate
Oospore wall 2-4 µm thick	
	No growth on cornmeal agar
Oospores uncolored	Growing well on corn meal agar
Oospores yellowish	Daily growth rate on cellulosic substrates 0.5-2 mm
Oospores pale lilac	Daily growth rate 7-10 mm
	Daily growth rate on cellulosic substrates 10-20 mm
Sporangia unknown, sometimes hyphal swellings present	Daily growth rate at 25C, 30 mm
Sporangia globose, ellipsoidal or irregular	
Sporangia sometimes in sympodial succession arising from immediately below a sporangium	Maximum temperature above 40C
Sporangia laterally sessile	Maximum temperature below 40C
Sporangia filamentous, not inflated	
Sporangia filamentous, inflated	Colonies white or colorless
Sporangia filamentous inflated, forming lobes, diverticles, or toruloid	Colonies peach
Sporangia inflated filamentous parts + discrete globose or pyriform elements	
	Colonies yellowish
Sporangia not proliferating	
Sporangia proliferating	Colonies saffron to pale yellow;
Sporangia forming complexes	Aerial mycelium on corn meal agar profusely cottony
	Some aerial mycelium on corn meal agar
Sporangia average 30 X 25 µm	
Sporangia average 87 X 27 µm	
Sporangia over 40 µm diameter	
Sporangia less than 40 µm diameter	
Sporangia up to 130 µm long, transversely attached to the subtending hyphae, papillate	Zoospores observed. Date: