TIMBER DECAY

WMF PH 6

Decay

Decay in timber is caused by 2 main factors.

- What are they?
- Attack by wood destroying fungi.
- Attack by wood boring insects.

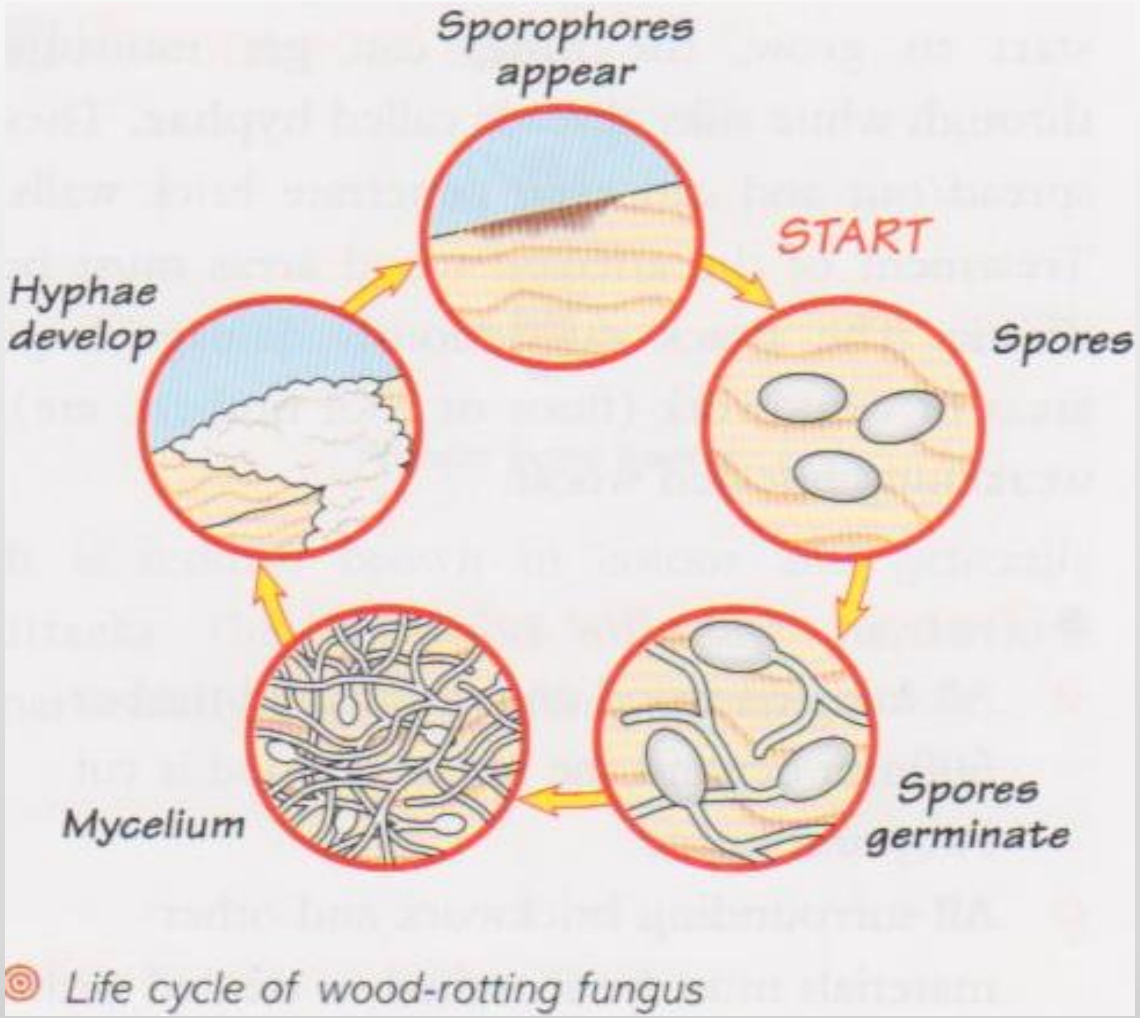
Fungal Attack

- Fungal attack can cause damage by feeding on the cells of the wood.
- As a result, the wood softens and eventually it decays.
- Fungi need certain conditions before they can live on the wood.

These conditions are:

1. Moisture - a moisture content above 20%.
2. Food supply - the wood is the food source.
3. Oxygen - particularly still air.
4. Warmth.

Fungal Attack



- A fungus is formed when spores germinate and send out hyphae.
- The hyphae penetrate the wood in order to feed and get moisture.
- When there are a large number of hyphae together this is called a mycelium(like white cotton wool).
- Fruiting bodies called sporophores are formed.
- These produce tiny spores which are blown by the wind and carried to other wood.
- They germinate and grow into more fungi. (Cycle continues)

Fungal Attack

There are many kinds of wood-rotting fungi, but they can be classified under two headings:

- Wet rot (white rot)
- Dry rot (brown rot).

HOW TO IDENTIFY AND TREAT WET AND DRY ROT.

Permagard Products 1.54m

Wet Rot (Coniophora puteana)

- Wet rot usually occurs outdoors, and it rots fence posts, window frames, logs, doors etc.
- The affected wood becomes very moist and slimy. A white residue is sometimes present.
- Internally there is a damp musty smell.
- Timber can be soft and spongy.
- Darkened timber.
- Paint or varnish flakes off.

Image courtesy of Aquacraftltd.

Wet Rot (Coniophora puteana)

Wet rot soffit

Wet rot around taps and sink

Wet rot under shower

Image courtesy of Room H20

Wet Rot

Wet rot usually affects very wet timber and can cause decay in surrounding material like plaster, grout and sealants, wallpaper and carpet.

- What situations can cause wet rot?
- Leaking gutters and pipes.
- Condensation.
- Leaking plumbing, baths or showers.
- Penetrating damp.

Wet Rot In Joists 4.48m

Dry Rot (Serpula lacrymans)

- The most common type of fungal attack.
- Most difficult fungus to eradicate from timber.
- Dry rot attacks the cellulose found mainly in sapwood.
- The timber
  1. Loses strength and weight.
  2. Develops cracks with & across the grain.
  3. Becomes so dry and powdery that it can crumble in your hand.

Dry Rot (Serpula lacrymans)

Dry Rot on internal door jamb.

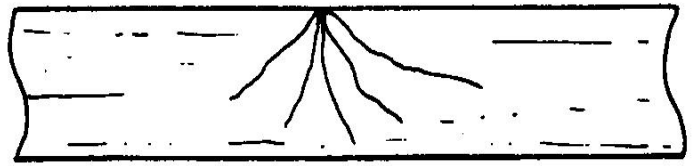
Dry Rot Fruiting Body.

Dry Rot

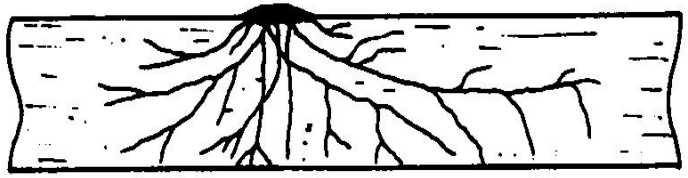
- Dry rot needs certain conditions before they can thrive on the wood.
- These conditions are:

1. Moisture - a moisture content above 20%.
1. Little or no ventilation.
2. Warm humid atmosphere.

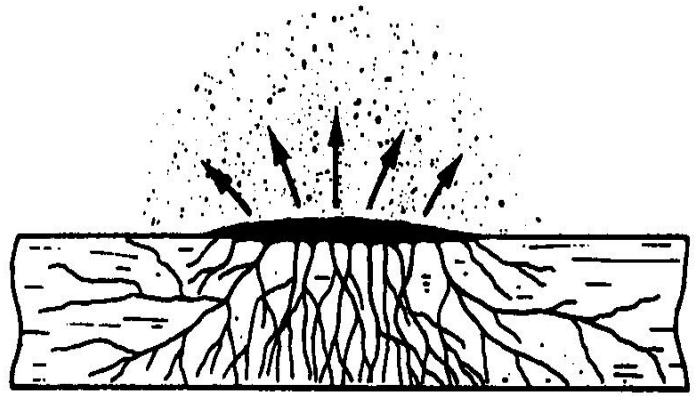
Note mycelium can travel through a meter thick wall and can carry moisture to nearby sound timber. This then increases the moisture content to above 20% so spores can germinate.



Dry rot attack stage 1: spores land on damp timber and send out hyphae



Dry rot attack stage 2: hyphae branch out and form mycelium, and a fruiting body starts to grow



Dry rot attack stage 3: fruiting body ripens and starts to eject millions of spores into the air

Dry Rot

Prevention

- Always keep timber dry.
- Ensure good ventilation.
- Use well seasoned timber.
- Use preservative treated timbers in vulnerable positions.

Dry Rot

Dry Rot

Eradication

- Remove damp source.
- Provide ventilation.
- All affected timber removed (+ 1M) and burned.
- All affected timber and waste removed from site.
- All replacement timbers treated.
- Surrounding brickwork and walls must be surface heated and treated to kill off any mycelium and spores.

- PJ Barret Timber Decay Specialists

How to Identify Wet Rot or Dry Rot

- Wood Rot Identification and Elimination

Dry Rot Out Break 4.48m

Dry Rot what does it look like? 4.21m

Revision Questions

- Scan the QR Code and answer the questions