

PROBLEM

Fungi play an important role in decomposing animal dung and recycling the nutrients it contains. The spores of these 'coprophilous' fungi are eaten along with the animals food, the fungal hyphae grow in the dung and fruiting bodies are produced on the surface of the pellet. Various fungi appear in succession. You might investigate the succession observed on different kinds of dung. Alternatively, the fungi that grow on dung from a free running animal could be compared with those from a caged animal fed with pellets. You might wish to determine which of the fungi are phototrophic (i.e. shoot their spores towards the light) or how far the spores of various fungi can be shot.

INFORMATION

1. Fresh dung is best and rabbit and horse are particularly good. It would be interesting however to find out what grows on dung of less well known animals such as kangaroos or koalas.
2. Dung is placed in a glass or plastic dish with a cover. It should be kept moist but not soaking wet. Small pellets can be placed on damp filter paper, larger pieces such as horse can be sprinkled with water directly. Insects should be excluded as many larvae feed on fungi.
3. Incubate the dish at room temperature and examine it daily. Some species may not appear for three to four weeks and may then continue to be active for several days.
4. A dissecting microscope or hand lens should be used to examine the fungi. For some it may be necessary to break open the fruiting body and mount it in water for examination under the microscope.
5. The fungi can be grouped into Classes using the classification in "Web of Life".

DESIGN OF EXPERIMENT

1. Is the succession of fruiting a reflection of the rate of growth and fruiting of fungi already in the dung or is it a progressive colonization of the dung? How would you test this?
2. How will you determine if some fungi are phototrophic?
3. How will you determine how far the spores can be shot?
4. What precautions will you take to avoid catching any diseases or parasites while handling dung?

REFERENCES

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