

# PLANET FOOD

September 2002

## MUSHROOMS

*Did you know?*

*Mushroom growing is one of the biggest users of peat in this country.*

### 1. EDITORIAL

I would love to be more adventurous about gathering fungi from the woods and eating it. Much of what we see is edible and - according to Antonio Carluccio, who is a real expert on mushrooms - delicious. He says that many Italians have an interest in wild mushrooms and he is not unusual in seeing it as a romantic passion. Although he did agree that over-confidence is also an Italian trait and many are killed through mushroom poisoning!

Gathering wild mushrooms may be a hobby for some. But commercial mushroom growing is a huge industry in the UK and Ireland. One of the major issues for this industry is the vast amount of peat they use. In this month's article, I will be looking at the impacts of peat extraction, why peat is used, whether there are alternatives for mushroom growers and what organic mushroom producers do.

One of the bi-products of mushroom production is the 'spent' compost that is very popular with gardeners, even though they have to put up with mushrooms popping up in their flower beds. My husband decided to exploit this. He bought mushroom compost, put it in our cellar and managed to produce quite a good crop of mushrooms for our own consumption!

### 2. MUSHROOMING AROUND

#### Shiitake and co

Antonio Carluccio vows that he can tell the difference between wild and cultivated mushrooms – the wild ones have more flavour – sometimes accentuated, he says, from being maggot infested! He is currently writing a book on mushrooms and is a great enthusiast for the many different varieties available, as well as their medicinal qualities. Shiitake mushrooms have apparently been found to be effective in treating cancer patients and many others are rich in vitamins. Oyster mushrooms and Chicken of the Woods are commonly found in British woodlands.

Shiitake mushrooms originate from Asia, but there are producers in the UK. Joy Edwards has a small business in the process of being certified as organic. She says that she started growing shiitake at home in the back garden. Initially the idea was to produce logs, to sell to others wanting to grow their own shiitake.

Impregnating logs is an interesting process. The spawn comes in two forms – little wooden plugs or bags of sawdust, with the mycelium grown right the way through it. The plug is then knocked into the wood with a hammer and the sawdust fed into a hole in the log, which are then sealed with beeswax. After that it is a matter of watering the logs and allowing them to dry out. It then takes between one and two years for the fungi to appear.

Some shiitake growers will only use real logs to grow their produce and turn their noses up at those using sawdust blocks instead. The benefits of this are that the mushrooms grow quicker and can be harvested all round. Essentially the fact that the wood is broken up means that the mushrooms can get to the nutrients quicker. And Joy says that the sawdust bricks do harden up so the mushrooms still have to push hard to get through, in a similar way as they do through the bark of a log.

### **For Peat's sake**

Britain has lost 96% of its peatlands over the last 50 years much of it due to horticulture – about 4 million m<sup>3</sup>/year. And one of the big uses of peat in commercial horticulture is by mushroom growers. The reason for the concern over losing peatlands is because they provide a rich and unique habitat for fauna and flora. Peat takes generations to return. 'Digging it up is like ripping out ancient hedgerows just to make sawdust.'<sup>1</sup>

In the past year the UK Government has made significant commitments to stop peat cutting in certain areas, which have been designated as *Sites of Special Scientific Interest*. One of the main sites that has to date resisted designation provides peat for the mushroom growing industry. The peat is used for a 'casing material', a layer which covers the compost and causes the mushrooms to produce fruit bodies.

Replacing peat in growing media will not only safeguard the future of British peatbogs but stop us passing on the impacts of peat extraction to other countries, once ours have been destroyed. At the moment some of the peat exporting countries are baffled by our concerns because they consider that they still have vast quantities available. But the Peatlands Campaign Consortium, which includes organisations like WWF, RSPB, FoE and Plantlife are concerned at the rise in imported peat into this country. They say that the horticulture industry should be looking for alternatives.

One man who is working hard on alternatives is growing media consultant Dr Arnie Rainbow (real name!). He and nursery consultant, John Adlam, have just set up a not-for-profit research company called 'Peatering Out' ('peat' is good for puns). He says that there is a huge amount of inertia in the peat industry, simply because change is inconvenient. But in many areas there are realistic alternatives.

At Horticultural Research International in Wellesbourne, Professor Ralph Noble has been specifically researching alternatives to peat in mushroom casing. He says the key problem is finding something that has the qualities of peat - in terms of its lack of nutritional content and water retention – at a competitive price. He has had some success – see article below on 'The Mushroom House'.

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<sup>1</sup> Observer Magazine, 17 Mar 02

### **3. THE MUSHROOM HOUSE AT HANBURY HALL**

#### **Interview with Neil Cook, Head Gardener National Trust**

The National Trust have been restoring the Gardens at Hanbury Hall in the last few years. They discovered a ‘mushroom house’, built and used in 1860 buried in a spinney behind the Orangery and decided to clean it and open it up to the public.

Then one of the fundraisers for Hanbury Hall met a mushroom entrepreneur, whose company, Oakfield Farm Products Ltd, offered to sponsor mushroom growing in the mushroom house again. This proved successful and the produce was sold in the National Trust tea room. But then the peat issue raised its head. The National Trust have made a commitment to phase out the use of peat in all its properties. It has even launched its own brand of ‘peat-free’ compost.

Neil Cook, who runs Hanbury Hall Gardens, for the National Trust, started researching alternatives for the mushroom house. What he found was that there were pretty well no mushroom growers who do not use peat for casing. Neil then discovered Ralph Noble from HRI, Wellesbourne (see above) who came up with a 50% reduced peat mix.

But over last winter, Neil encouraged a student, who had contacted him, to do a thesis on peat-free casing for mushrooms. They tried one third bracken compost, one third coal tailings waste (a cheap waste material from the coal industry) and one third fine grade bark with a bit of lime added. This was apparently messy to handle but the mushrooms loved it. The recipe has now been refined to about 30% coal tailings waste and 70% bark with sugar beet lime added. And this proved to be good to handle with no real problems and similar productivity to peat.

Next year all the mushrooms at Hanbury Hall will be grown in with ‘peat-free’ casing. They may be the only ones in the country to use this method – but we hope not.

### **MUSHROOMS TILL LATE**

#### **Interview with Marie Flanagan at Watergate Mushroom Farm**

If you want a date with Marie Flanagan you have to try afternoons. I was astonished that her small mushroom farm requires pickers, 7 days a week, 52 weeks of the year, between 8am and 12am in the mornings and between 6pm and 11pm in the evenings.

Watergate Farm, in North Devon, was set up in 1999 and only produces organic mushrooms – common or garden white closed and chestnut mushrooms. Contrary to my expectations, the mushrooms do not need to grow in the dark. They grow in climatically controlled polytunnels – temperature is the critical factor.

The organic compost is delivered to the farm already impregnated. It is essentially made up of chicken manure and straw. But Marie says that she can never get enough of it. Indeed she would grow more mushrooms if she could. The Soil Association have recently strengthened their standards so that all the straw used in compost must be organic. But organic straw is in short supply. This means that there is a strong demand for waste organic compost – Watergate Farm sell theirs to gardeners.

But organic standards do not require alternatives to peat for their mushroom growers. Their standards bodies are continually reviewing their policy on peat, and it is restricted for some purposes. But for mushroom growers, it is felt that there are no practical alternatives. The organic movement have to make sure that they do not disadvantage their members by imposing standards that are impractical or over-costly. And they believe that overseas peat can be extracted sustainably.

#### **4. WHAT YOU CAN DO.....**

- 1. ASK YOUR SUPERMARKET ABOUT THEIR POLICY ON PEAT IN HORTICULTURE**
- 2. ENCOURAGE THE ORGANIC MOVEMENT TO BE MORE ROBUST IN THEIR ANTI-PEAT STANCE.**
- 3. SUPPORT 'PEATERING OUT' THE NEW ORGANISATION CAMPAIGNING ON THIS ISSUE.**

#### **5. MUSHROOM CONTACTS**

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