

**CSIR-FRI/MP/OM/1999/003**

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**COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH**



**FOOD RESEARCH INSTITUTE**

**Mass Media Popularization**

**INTERVIEW ON MUSHROOMS**

**By**

**M. OBODAI**

**NARP Newsletter (January-June) last edition**

**1999**

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# CSIR

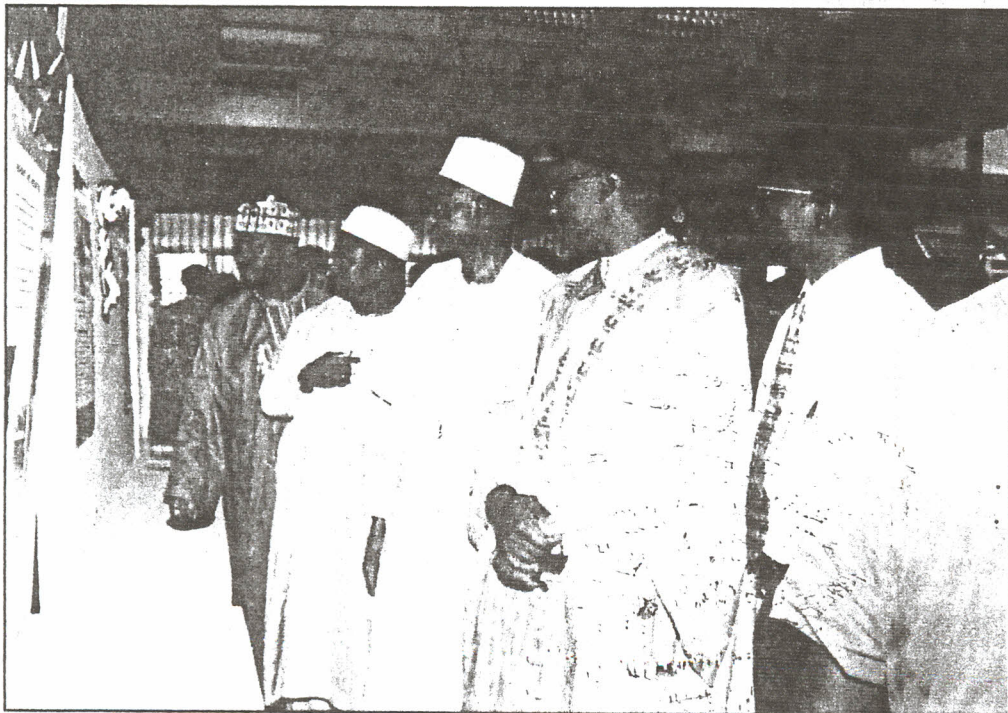
## Newsletter



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- ◆ → 40th Anniversary of CSIR Officially Launched
- ◆ Council Members Tour Institutes
- ◆ CSIR 40th Anniversary Fun Games end
- ◆ STEPRI holds press conference on Biotechnology
- ◆ Send-off party for Mr Mercer-Quarshie
- ◆ CSIR Scientist Profile
- ◆ MEST minister visits Kumasi-based Institutes
- ◆ Short Training course on the use of Internet ends
- ◆ Educational campaign on safe pesticide management
- ◆ INSTI holds workshop for agric policy makers
- ◆ Modern seed processing plant commissioned
- ◆ FRI promotes the cultivation and utilization of mushrooms in Ghana

**Council for Scientific and Industrial Research  
ACCRA GHANA**

# RESEARCH & DEVELOPMENT ACTIVITIES

## FRI PROMOTES THE CULTIVATION AND UTILIZATION OF MUSHROOMS IN GHANA

BY M. OBODAI

Mushrooms have been used as food from time immemorial for their taste and flavour. In recent times, they have been found to be highly nutritious and medicinal. They are rich in high quality protein, minerals and vitamins such as folic acid, but low in fat content. Various compounds have been identified in them; some of which are anti-cancer, anti-viral, anti-hyper/hypotensive and are capable of improving the general immune system of the body.

Traditionally, in Ghana, mushrooms are picked in the wild in the forest regions during the rainy seasons. However, with the introduction of new technologies various varieties of mushrooms are now available for consumption all year round.

### National Mushroom Development Project

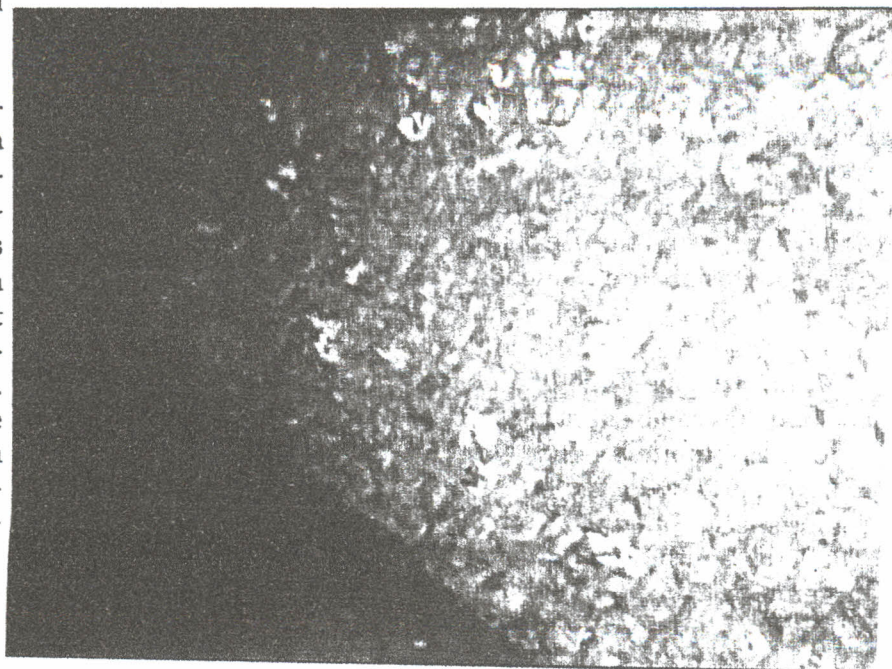
The cultivation and utilization of mushroom among the Ghanaian populace have gained wide acceptance through the efforts of the National Mushroom Development Project (NMDP) of the Food Research Institute of the CSIR. The Project, set up in June 1990, has the primary aim of systematically developing and promoting the intensive cultivation and utilization of mushrooms in Ghana. Over the years, it

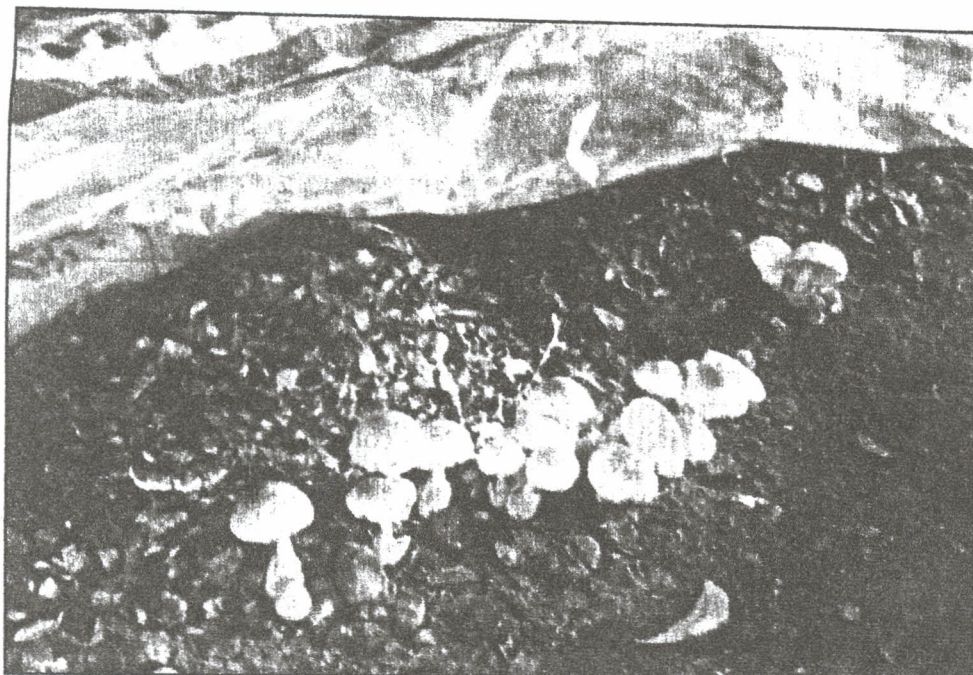
has successfully been able to raise the cultivation and utilization of mushrooms to the extent that mushrooms are no longer a seasonal item collected and sold by the rural folks in mid-March and early September, but can now be obtained in some supermarkets, groceries and shops all year round.

### Varieties

With the introduction of the plastic bag and low-bed technologies, four species of edible and medicinal mushrooms have been introduced and accepted by the Ghanaian populace. These are the oysters (*Pleurotus* spp.), the wood ear (*Auricularia* spp.), monkey seat (*Ganoderma* spp.) and the oil-palm or straw mushrooms (*Volvariella volvacea*). These technologies were adapted from Taiwan and modified to suit Ghanaian conditions.

Fresh oyster mushrooms growing on composted sawdust in a cropping house.





Oil palm mushroom ("domo") growing on cocoyam peelings.

### Research Activities

Research work in the area of cultivation, carried out by the FRI has shown that oyster mushrooms grown on sawdust from "wawa" wood (*Triplochiton scleroxylon*) require only 28 days of composting for best yields as compared with 60 days for other woods. Additionally, various organic and inorganic additives such as rice bran, wheat bran, groundnut chaff, Epson salt, NKP (25:15:5) fertilizer, urea and leaves of *Leuceana* have been tested and used to improve the yield of mushrooms obtained from compost bag.

Research is also being carried out to improve the storage qualities or shelf-lives of mushrooms. Drying methods such as sun-drying, the use of solar dryers, power-driven conventional dryers, and the use of appropriate packaging materials are being used to preserve them. Studies have so far shown that mushrooms dried to a moisture content of about 8-10% and packaged in high density polyethylene pouches can be kept at room condition for as long as 6 months.

Agar and sawdust cultures of various mushrooms species obtained from Mauritius, USA, Thailand, South Korea etc. are preserved in refrigerator at the National Mycelium Bank of the FRI. To date, 74 cultures have been re-

ceived, and these are revived and tested annually. Screening of their yield performance and flushing rates has been an on-going project by the NMDP.

### Technology Transfer

Over the years more than 6000 people (comprising youth groups, NGOs, churches, pensioners and individuals) have benefited from training programmes organized by the FRI. The participants have not been from only Ghana, but also from neighbouring countries such as Nigeria, Togo, Cote d'Ivoire and Liberia. To date, over 15 compost-bag-producing centres, with current producing capacity of about 30,000 bags per month have been set up in the Greater Accra, Volta, Brong Ahafo, Eastern and Western regions of Ghana.

Fresh oyster mushroom production has also increased from a few kilos in 1992 to the current level of between 100 - 300 kilos per day.

For more information, prospective farmers may contact:

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