

Ecologie et culture des champignons saprotrophes (poussant naturellement sur bois morts)

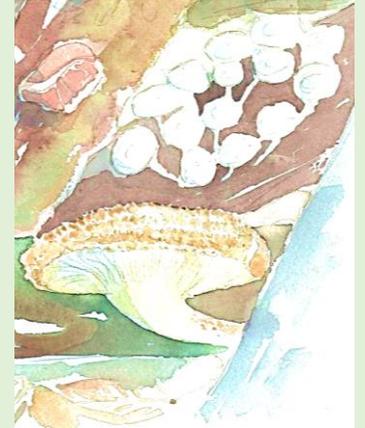
- ❑ Espèces cultivées dans le monde et la Caraïbe
- ❑ Techniques et modèles de production («agriculture familiale, modèles industriels»)
- ❑ Perspective dans la Caraïbe

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Caraïbes
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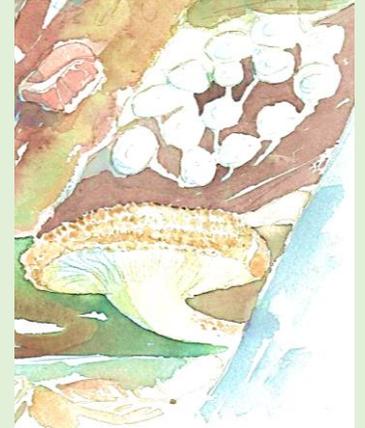
Ecologie des champignons saprotrophes ou saproxyliques comestibles



Ce sont des champignons qui « **recyclent** » les bois morts.
Ils interviennent en **premier** dans la chaîne de
transformation du bois en humus...



Ecologie des champignons saprotrophes ou saproxyliques comestibles



Ces mêmes champignons peuvent être cultivés sur des substrats d'origine agricole qui ressemblent au bois d'un point de vue de leurs compositions : sous-produits agricoles principalement riches en cellulose et lignine et pauvres en sucres solubles et en azote.

*Ces champignons sont dits « **champignons ligno-cellulolytiques** »*



Espèces comestibles en forêt tropicale caraïbénne



Pleurotus djamor



Pleurotes blancs



Lentinus swartzii



Lentinus crinitus



Lentinus concavus



Lentinus sp.



Lentinus calyx



Lentinus bertieri



Les auriculaires *Auricularia* spp.



Auricularia nigricans - Païere koropi



Auricularia fuscusuccinea - Tikoropa koropi



Auricularia delicata - Akaraman enasere



Reddish- brown to brown rubbery wrinkled or veined jelly fungi, growing alone or in clusters on wood in often irregular shapes resembling ears, shells and/or brackets. *Auricularia fuscusuccinea* (up to 7cm) has a smooth cap surface, while *Auricularia nigricans* (formerly known as *A. polytricha*) has a densely haired cap surface with delicate hairs on the inside. *Auricularia delicata* has a striking net-like pattern on the underside and is finely haired on the surface. Wood ears attach sideways, usually without a stem. Taste is mild and bland. Habitat: on dead wood, often in exposed locations such as in fields. Processing & Use: Harvested Wood ears decay relatively slowly. Loved in soups in East Asia!

Auricularia nigricans



Auricularia fuscusuccinea



Auricularia delicata



Auricularia fuscosuccinea





the
Amazon
Conservation
Team

Champignons comestibles sauvages traditionnellement consommés au Suriname

KOROPI ERAPA EETBARE PADDESTOELLEN VAN SURINAME

Kuriya Enapè - Oyster Mushroom Oesterzwam - *Pleurotus spp.*





Usually laterally attached fleshy mushrooms with a cap diameter of 5 to 15 cm. When young, mushrooms can be funnel or spoon shaped. With maturation caps are flattening to shell or fan shape, surface is smooth. Narrow gills decurrent and forking, with several sets of shorter subgills, often running down (decurent) to the point of attachment on wood. Spore color whitish. Stem can be absent or very short, but sometimes well developed. There are several hard to separate species such as *Pleurotus djamor*, *P. abridus*, *P. pulmonarius*, etc. In general Oyster mushrooms are white, their plants to firm flesh having the same color as cap or lighter. *P. djamor* has also pink varieties, especially when young, losing color with age. Growing in clusters, groups and sometimes only one or two when on small pieces of wood. Habitat: On dead standing or fallen trees, dead branches, cassava stems etc. Processing & Use: Taste is pleasant, mild and fungal. Oyster mushrooms are short lived and can not quickly process or dry quickly after harvest. Loved all over the world!





Pana Koropi - Wood ear - Judasoren - *Auricularia spp.*





Reddish-brown to brown velvety webbed or veined jelly fungi, growing alone or in clusters on wood in often irregular shapes resembling ears, shells and/or brackets. *Auricularia fuscoviridis* (go by Toni) has a smooth cap surface, while *Auricularia nigricans* (formerly known as *A. polytrichal*) has a densely haired cap surface with delicate hairs on the inside. *Auricularia delicata* has a striking net-like pattern on the underside and is finely haired on the surface. Wood ears attach sideways, usually without a stem. Taste is mild and bland. Habitat: on dead wood, often in exposed locations such as in fields. Processing & Use: Harvested Wood ears decay relatively slowly. Loved in soups in East Asia!





Inka Koropi - Honeycomb Polypore Honingraathoutzwam - *Favolus brasiliensis*





Tough, fleshy white mushroom with angular and deeply pitted honeycomb shaped radially elongated pores on the underside. Cap is rounded, kidney to spatulate-shaped, 1 to 5 (6) cm in diameter. Cap with bumps mirroring the pores below. Surface can be smooth, or may have minute hairs, sometimes with stiff tufts toward stem base. Cap margins fringed with hairs. With age cap flattens, flesh turns yellowish and becomes tougher. Stems attached laterally, sometimes centrally or nearly absent. Formerly this mushroom was known as *Polygonum tenagipes*. Habitat: On dead stumps or branches, occasionally in large numbers. Processing & Use: Harvested polypores hold up quite well. The stems can be too tough to eat, extended cooking will render them softer.

Tënèn koropi - Chanterelle Hananekam - *Cantharellus guyanensis*



Bright orange to orange-cream-colored cap with wavy thin ridged in margin. Cap surface smooth. The underside of the cap is covered by white cross-veined gill-like folds that run down the stem irregularly. Stem dull yellow to orange with white base. Flesh rubbery and firm with a fruity odor. Habitat: On ground associated with *Tremella (Diolepora) guianensis* (Basidiolous) and possibly other tree species. Growing year after year in same patch with same tree species!

Processing & Use:
Best preserved by frying or blanching for a few minutes in boiling water and then freezing or drying will make them storable. Drying without first blanching can render them bitter. Chanterelles are some of the best mushrooms in the world.

Mura Mana - Jungle Cup Regenwoudkelkzwam - *Cookeina spp.*





Brightly colored bowl-shaped cup fungus with white stem. Cap color can vary from yellowish, orange, red to pinkish. Color can change with age and water content. Outer and smooth inner surface of cup have the same color. Outside surface of *C. speciosa* is hairless, while *C. sulcipes* has a few short hairs on the cap rim. *Cookeina nicholsonii* is covered in shaggy bristly white to brownish hairs. Texture of flesh is firm and elastic. Habitat: On dead stumps or branches, occasionally in large numbers. Processing & Use: Harvested Jungle cups hold up well and decay slowly, still dry quickly after collection. Mura mana is traditionally eaten by Trio people. It has a mild taste and pleasantly crunchy texture, which can be enhanced by frying them in oil.





Tarepi Arokè - Fringed Sawgill Harig Taaiplaat - *Lentinus crinitus*





Several similar species of hairy *Lentinus (L. crinitus, L. berrieri & L. swartzii)* are firm to leathery mushrooms with a funnel-shaped cap growing on wood. Cap color ranges from beige & light brown to dark or gray brown. The cap is thin fleshed and *L. berrieri* and *L. swartzii* have fringed cap margins. Cap of *Lentinus crinitus* lacks hairs in the center. Gills have saw like edges and are crowded and decurrent, mostly white, sometimes turning yellow-brown with age. *Lentinus berrieri* is very similar but has a more yellow-brown appearance. Habitat: These *Lentinus* are common wood decayers, sometimes growing in sunny locations. Processing & Use: Its tough texture requires extended cooking. A. boil in water for a few minutes before frying or use in soup. Otherwise drying and pulverizing produces a tasty mushroom powder.

Tikorijan Koropi Akato - Arched Sawgill Witte Trechtersaaiplaat - *Lentinus concavus*





White to cream colored firm mushrooms with smooth surfaced cap, growing in big clusters on dead wood. 3 to 8 cm long tough stems grow from 2-3 cm wide base. Forging, uneven gills run part way down the stem with widely semi-toothed gill edges. Cap center depressed when young maturing to deeply funnel shaped. Habitat: On dead wood in sun or shade. Processing & Use: Stems are often too tough to cook. Caps require extended cooking, for example boil in water before frying or use in soup with extended simmering.

Collecting & Eating Mushrooms

Only eat a mushroom when you are absolutely sure that the mushroom is a safe edible mushroom.

Best way to learn your mushrooms is learning from people who know mushrooms.

Check every single mushroom when picking and processing.

Different kinds of mushrooms can grow intermixed in the same spot!

Pick only fresh mushrooms, old or rotten edible mushrooms might make you sick.

When picking for the market only pick mushrooms in prime condition.

Process your mushrooms as quickly as possible for drying.

Do not store fresh mushrooms in closed plastic bags, they need to breathe.

Keep mushrooms out of the sun except for drying.

When storing dried mushrooms use airtight containers and store in a dark dry place.



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Cookeina sp.



Culture actuelle de ces espèces

- ❑ Pleurotes et auriculaires
- ❑ Lentins : stade expérimentation



Espèces comestibles saprotrophes, naturellement présentes en forêts tempérées et cultivées



Les pleurotes

Les pholliotes



*Pholliota
nameko*
(Enoki)



*Pholliota
adiposa*



Pholliota aegerita
Pholiotte du peuplier



Grifola frondosa Maitake



*Stropharia
rugosoannulata*
« King stropharia »

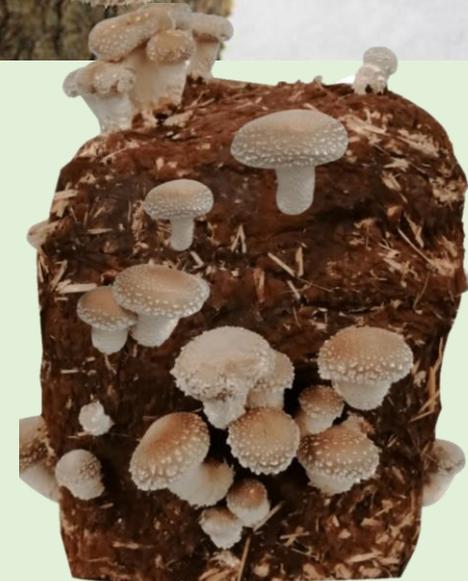
Tremella fuciformis
Snow fungi



Lentinus edodes
Shii-take



Flamulina velutipes
Collybie à pied velouté



A watercolor illustration of a forest scene. In the background, a person stands on a path. The foreground is filled with various plants, including mushrooms and what appears to be a basket of produce. The overall style is soft and artistic, with a color palette dominated by greens and earthy tones.

□ Techniques et modèles de production

La culture des champignons en Europe

La production européenne de champignons correspond essentiellement à deux filières assez distinctes : la filière très industrielle et bien organisée du « **champignon de Paris** » et celle des « champignons spéciaux » : **Pleurote et Shii-take** principalement. Cette deuxième filière est très peu structurée et présente de nombreuses faiblesses.



La chaîne de production industrielle des pleurotes et shiitake

Laboratoire
d'obtention
de nouvelles
« souches »
commerciales =
«variétés »



Entreprise
production
de « blanc »



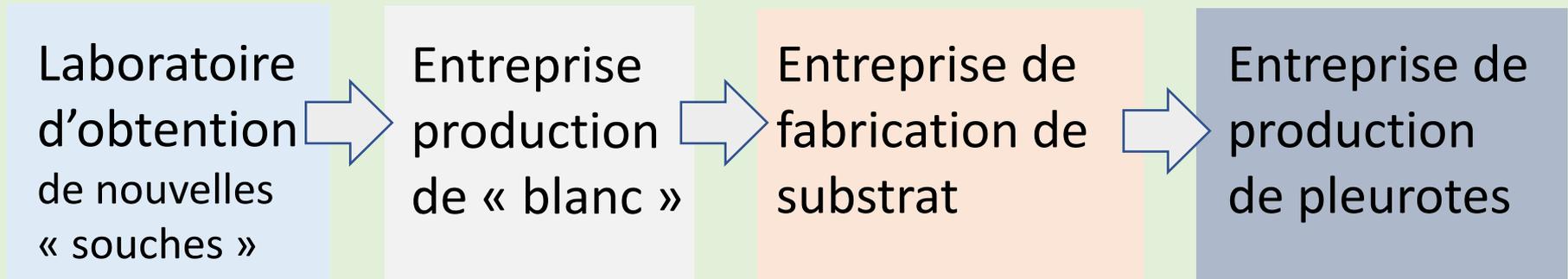
Entreprise de
fabrication de
substrat



Entreprise de
production
de pleurotes



La chaîne de production industrielle des pleurotes et shiitake



Force : savoir-faire technologique basé sur une longue expérience

Faiblesses :

1. Pas de démarche de qualité entre les étapes de la filière.
2. Produits très standardisés : pas de différenciation possible par la diversité d'espèces, la qualité ou l'origine des champignons.
3. R&D + innovation faibles et très spécialisées sur les processus déjà existants

Modèles très industriels. Basés sur des procédés de stérilisation complète des substrats.



Modèles très industriels. Exemple de la Chine.







Autres modèles technico-économiques actuels

Laboratoire
d'obtention
de nouvelles
« souches »



Entreprise
production
de « blanc »



Entreprise agricole diversifiée
Ex: maraichage et champignons.
Modèles agroécologiques.



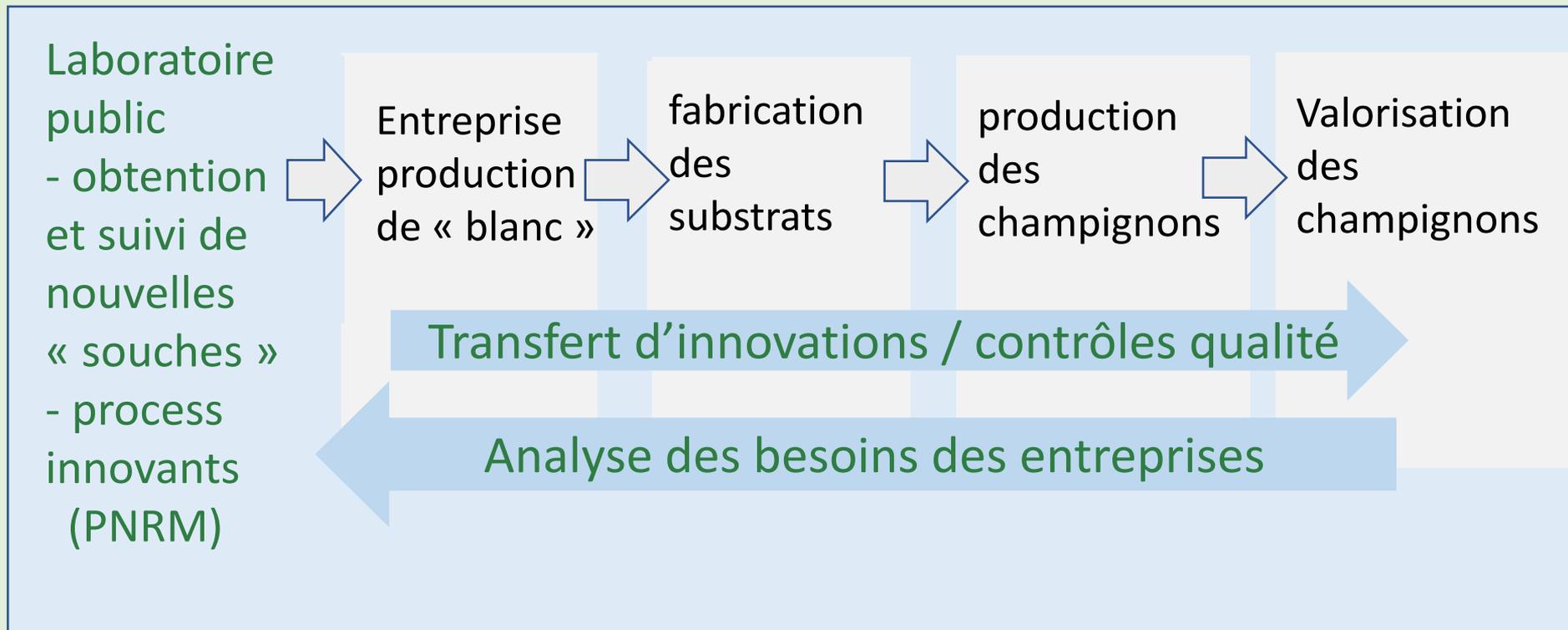
Autres modèles technico-économiques actuels





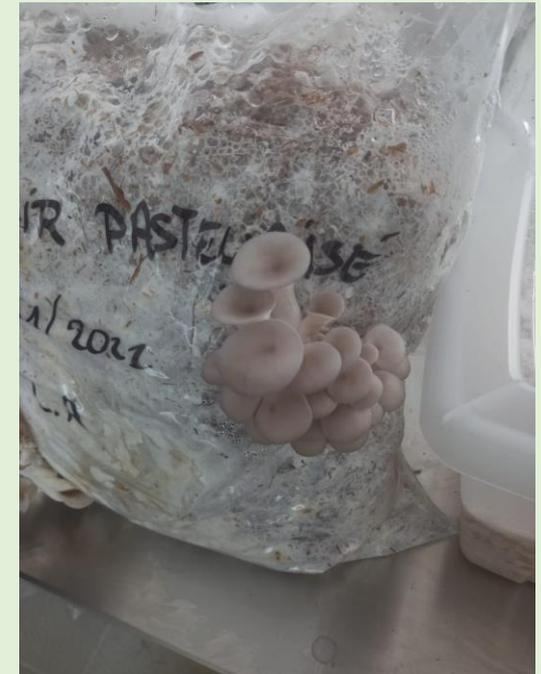
□ Perspectives dans la Caraïbe

Une démarche de qualité à travers la chaîne de valeur



Un réseau d'échange entre laboratoires publiques : Martinique, Cuba (CEBI)...

Les travaux en cours de R&D + innovation au PNRM



Autre piste de développement : produits agroalimentaires innovants

- Champignons / légumes
- Champignons / algues
- Champignons / truite
- Champignons / volaille ou veau
- Secs / poudres

« tartinades », terrines, « galettes »



Autres perspectives

kits à produire des champignons

Contenants :

Bambous

Poteries

Mycomatériaux...



Compostage du carton



Mélanges autres matières ?





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Conclusions :

1. Une grande ressource en termes de biodiversité, ressource qui reste à découvrir
2. Un modèle de filière à mettre en place, avec une démarche de qualité exemplaire
3. Une filière qui répondra à une demande croissante en champignons

Merci beaucoup pour votre attention !

