

Title of the Technology: Mushroom fortified millet cookies

General Part-1

Technology Code:- :

Organization Details.

Subject Matter Division : Horticultural Science

Organization Name : ICAR-Directorate of Mushroom Research, Solan

Regional Station if any : : Not Applicable

AICRP name if any (AICRP) :

Principal Inventor : Anuradha Srivastava

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Details of Inventors.

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Co-Inventor Name : Dr. Ved Prakash Sharma)

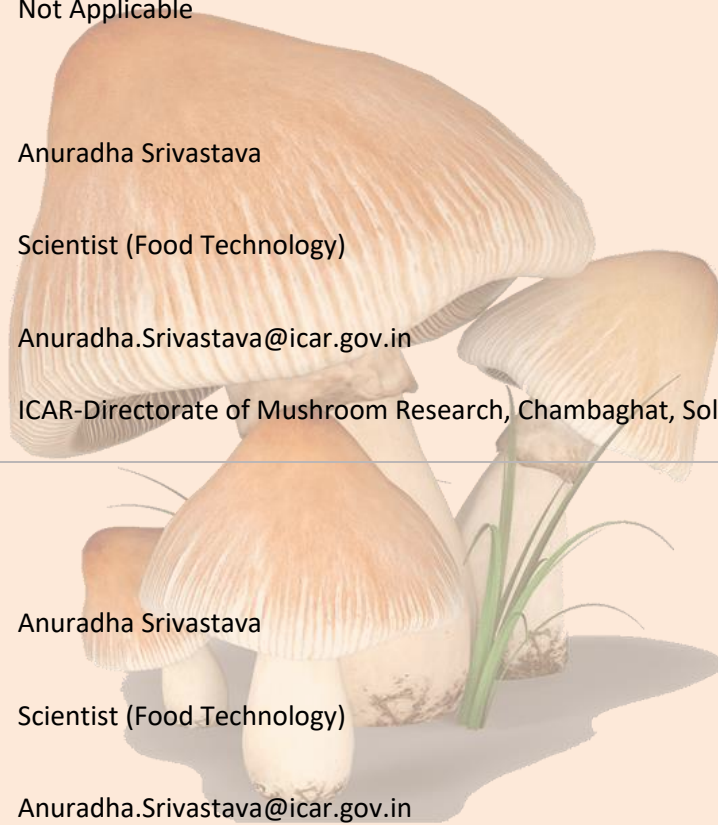
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Technology Name : Mushroom fortified millet cookies

Technology Details.

Major resource : Product and Process

Minor Subject : Agriculture



Classification

Minor Subject Sub Classification : Agricultural research

Technology Group : Product technology

Technology Related To : Novel mushroom product industry

Complete Details of Technology:

Mushrooms and millets both are health foods which complement each other very well. Millet-Mushroom integration is the idea that food influences our health in complex and highly interactive ways. Mushroom millet cookies can be developed by combining the nutritional and health benefits of both mushrooms and millets. Mushroom millet cookies were formulated combining sorghum (jowar) flour and oyster mushroom powder in 80:20 ratios along with other ingredients such as; sugar, butter, milk powder, baking powder, ammonium bicarbonate and essence. These cookies are rich in Vitamin D, proteins, fiber and minerals. These are gluten free product good for celiac patients, have slow releasing carbohydrates and are rich in antioxidants. These mushroom fortified sorghum cookies contained 9.48% protein, 56.30% carbohydrate, 30.22% fat, 2.01% ash, 535 kcal energy and 9.7mg Vitamin D/100g. The shelf life of these cookies was found 6 months at room temperature.

Brief Description of Technology Including Salient Features:

Mushroom millet cookies with enhanced nutritional profile and health benefits were developed by the combining oyster mushroom powder with sorghum millet flour (80:20). These cookies are rich in Vitamin D, proteins, fiber and minerals. The mushroom millet cookies can prevent vitamin deficiency (Vitamin D, C and B). These are gluten free product good for celiac patients, have slow releasing carbohydrates and are rich in antioxidants. The shelf life of these cookies was found 6 months at room temperature.

Benefits/Utility :

With an increase in urbanization, industrialization and subsequent changes in life style, there is a demand for convenient as well as nutritious food products. The integration of foods plays a vital role in contributing nutrients to the body and to nurture the well-being. If the foods are eaten together they can enhance nutrient power to provide even greater health benefits. Mushrooms and millets both are health foods which complement each other very well. Mushroom millet cookies will not only promote the utilization of both mushrooms and millets but will also provide

new nutrient rich, healthier and delicious convenient food item. These cookies are rich in Vitamin D, proteins, fiber and minerals. These are gluten free product good for celiac patients, have slow releasing carbohydrates and are rich in antioxidants.

Precaution With The Technology

Sorghum flour used for making mushroom millet cookies should be freshly milled otherwise it may develop bitterness due to rancidity. Oyster mushroom should be dried properly at controlled temperature of 50°C in order to preserve the nutritional and sensory qualities of mushroom powder. Mushroom millet cookies should be packed in airtight packs flushed with inert gas in order to preserve the quality and to prevent rancidity.

Impact, If Adopted

Social Impact

Both mushrooms and millets are smart foods as they are good for health, good for the environment and good for farmers. Thus a nutritious and healthy food product developed using these two will not only improve the nutritional status and general health of the population but will also promote the cultivation of both mushrooms and millets among farmers. Moreover, with increasing health awareness and demand of nutritious and convenient snack food items among the consumers, these mushroom millet cookies will also help snack food manufacturing companies with a viable business idea.

TargetUsers/Stake holders : Mushroom entrepreneurs interested in development of healthy and nutritious snack items

Technology Contact.

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Keyword for Technology : Mushroom, millets, cookies, healthy



Technology Development Details Part-2

Project Details :Development of mushrooms and millets based value added products
(Through which technology was developed) (Project code- DMR-2019-2)

Technology Validated by :Institute

Technology Validation
Details.

Subject Matter Division :Horticultural Science

Organization Name(if within ICAR) :ICAR-Directorate of Mushroom Research,Solan

Organization Name(if outside:--
ICAR,Please enter)

Year of Release/Adoption(YYYY) : 2020

Country :India

Through Technology Transfer:YES

Is There Any Other Process/Product/Technology that Is Critical Or Contributes To The Successful Use Of Technology :

Minimum Temperature :

Maximum Temperature :

Average Temperature :



Applies To (Regional Differentiation)Inform Part-3

Location.

Zone(As per the planning commission) : Not Applicable

Sub zone(As per the planning commission) : Not Applicable

AgroEcological Zone(NBSS & LUP) : Not Applicable

AgroEcological Sub Zone(NBSS & LUP) : Not Applicable

State Name : Not Applicable

District Name : Not Applicable

Soil Type/Resource Type.

Soil Order :

Soil Sub Order :

Soil great group :

Soil great sub group :

Commodity Details.

Commodity :

Commodity Type :

Commodity Name :

Publication Related To Technology Part-4

