

MACROFUNGAL (MUSHROOM) DIVERSITY OF UTTAR PRADESH, INDIA**Balwant Singh*¹, Vinay Kumar Singh*²**

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ABSTRACT

The present review expresses the diversity of macrofungal (mushroom) wealth of Uttar Pradesh based of available literatures. Based on literature, a total number of 201 species under 44 family reported in the Uttar Pradesh. In all described macrofungal species, 59 species are edible, 109 species inedible, 4 species choicely edible, 7 species poisonous and remaining 22 species are unknown their edibility. This review will become useful and reveal the capsized data of macrofungal diversity to researchers.

Keywords: Macrofungal, Mushroom, Diversity, Uttar Pradesh.

I. INTRODUCTION

Fungi are the most diverse group of Heterotrophic organisms and second largest biotic community after insects on Earth (Bhandari and Jha, 2017; Choudhary et al., 2015; Panda et al., 2019). They are grouped into a single kingdom of Fungi. Fungi have thalloid body organization without forming tissues and organs (Bhandari and Jha, 2017). Fungi are the parasitic or saprophytic or symbiotic in nature that play key role in terrestrial ecosystems (Bhandari and Jha, 2017; Chandrawati et al. 2014). Fungi are the primary decomposers of lignocellulolytic substrates and the main keepers of great carbon storage in soil and dead organic materials. Their edibility, medicinal properties, mycorrhizal and parasitic association with the forest trees make them economically and ecologically important for investigation (Meena et al., 2020). The term macrofungi is generally applied to the fruiting bodies of fungi belonging to Ascomycetes and Basidiomycetes which are either Epigeous or Hypogeous, large enough to be seen by naked eyes and can be picked by hand (Chandrawati et al. 2014). They economically used in the Pharmacology industry (Medicinal), Mass production and cultivation (Food industry), Biodegradation and Bioremediation (Bhandari and Jha, 2017). Macrofungi helps in recycling matter and maintaining biogeochemical cycle (Pliwal et al., 2013).

Macrofungi are characterized by their distinct macroscopic fruiting bodies of underground mycelium of certain fungi belonging to the class of Basidiomycetes and Ascomycetes (Vishwakarma and Tripathi, 2019; Tripathi et al., 2017). Mushroom is one of the major groups of macrofungi that considered about 70% macrofungal diversity. More than 10000 species of macrofungi (mushroom) are reported and about 2000 species of them considered being edible. All of these, around 25 species are widely accepted as food and only about 12 species are considered as artificially cultivated (Tripathi et al., 2017). Mushroom have been found in fossilized wood that are estimated to be 300 million years old and almost certainly, prehistoric man has used mushroom collected in the wild as food (Singh et al., 2016; Singh et al., 2017). In macrofungi, Mushrooms are seasonal fungi which shows diverse role in nature across the forest ecosystem (Choudhary et al., 2015). Mushrooms have been existing on earth prior to human and have been used as food by humans before civilization of history (Pliwal et al., 2013) and dominantly found during the rainy season high humid condition as well as spring season (Choudhary et al., 2015; Meena et al., 2020).

Indian Macrofungal (Mushroom) Diversity

A number of researches have been done previously in India on Mushroom Diversity. In India, 27000 species of mycoflora reported by researchers in which 1069 species of mushroom are estimates as edible to the human. Many researchers are estimated that over than 2000 species of wild edible mushrooms world widely in whereas in India reported about 283 edible species (Choudhary et al., 2015). According to Panda et al. (2019), The total documented species of mushroom in India is about 1200 in which about 300-315 species of mushroom described as edible. Meena et al. (2020) reported 60 genera belonging to Agaricales, Polyporales and Russulales orders with total number of 132 species in India. (Meena et al., 2020)

Diversity of Macrofungi (Mushroom) of Uttar Pradesh

Uttar Pradesh is the state of India which located in the shadow of Himalayas with many revers in the flow. This state has fully seasonal variation with winter, summer and rain. This region has vast and very rich biodiversity.

Beside the animal and plant diversity, macrofungal (Mushroom) diversity is also reported in very much rich. Based on available researches, Uttar Pradesh reported a total number of 201 macrofungal species belonging to 44 families which express in the Table.1 and Graph-1. In all described macrofungal species, 59 Species are Edible, 109 Species Inedible, 4 Species Choicely Edible, 7 Species Poisonous and remaining 22 Species are Unknown their edibility (Grapg-2).

Table.1: Description of Species and their respective family from Uttar Pradesh.

Family	Macrofungi	Edibility	Reference
Agaricaceae	Agaricus angustus	Edible	Chandrawati et al., 2014
Agaricaceae	Agaricus arvensis	Edible	Vishwakarma et al., 2017; Singh et al., 2016
Agaricaceae	Agaricus bisporus	Edible	Ram et al., 2010; Yadav et al., 2016
Agaricaceae	Agaricus compestris	Edible	Singh et al., 2016
Agaricaceae	Agaricus silvaticus	Edible	Vishwakarma & Tripathi, 2019; Singh et al., 2017; Vishwakarma et al., 2017
Agaricaceae	Agaricus trisulpharatus	Edible	Singh et al., 2016
Agaricaceae	Lepiota cristata	Inedible	Vishwakarma & Tripathi, 2019
Agaricaceae	Lepiota naucina	Inedible	Chandrawati et al., 2014
Agaricaceae	Leucoagaricus americanus	Edible	Singh et al., 2016; Vishwakarma et al., 2017
Agaricaceae	Leucoagaricus leucothites	Edible	Singh et al., 2016
Agaricaceae	Leucocoprinus cepestipes	Edible	Singh et al., 2017; Chandrawati et al., 2014; Vishwakarma et al., 2017
Agaricaceae	Macrolepiota procera	Edible	Singh et al., 2016; Vishwakarma et al., 2016; Vishwakarma et al., 2017
Agaricaceae	Macrolepiota rhacodes	Choicely Edible	Singh et al., 2016; Vishwakarma & Tripathi, 2019
Agaricaceae	Agaricus bernardii	Edible	Vishwakarma et al., 2017
Agaricaceae	Agaricus bitorquis	Edible	Vishwakarma et al., 2017
Agaricaceae	Agaricus impudicus	Edible	Vishwakarma et al., 2017
Agaricaceae	Agaricus langei	Edible	Vishwakarma et al., 2017
Agaricaceae	Agaricus placomyces	Inedible	Yadav et al., 2016
Agaricaceae	Agaricus silvicola	Edible	Vishwakarma et al., 2017
Agaricaceae	Chlorophyllum molybdites	Inedible	Vishwakarma et al., 2017
Agaricaceae	Chlorophyllum rhacodes	Edible	Vishwakarma et al., 2017
Agaricaceae	Lepiota aspera	Edible	Vishwakarma et al., 2017
Agaricaceae	Lepiota atrodisca	Inedible	Vishwakarma et al., 2017
Agaricaceae	Lepiota castaneidisca	Inedible	Vishwakarma et al., 2017
Agaricaceae	Lepiota ignivolvata	Inedible	Vishwakarma et al., 2017
Agaricaceae	Leucoagaricus rubrotinctus	Inedible	Vishwakarma et al., 2017
Agaricaceae	Leucocoprinus brebissonii	Inedible	Vishwakarma et al., 2017
Agaricaceae	Lycoperdon giganteum	Choicely	Yadav et al., 2016

		Edible	
Albaratrellaceae	Albatrellus flettii	Edible	Singh et al., 2019
Amanitaceae	Amanita cokeri	Poisonous	Singh et al., 2016; Vishwakarma et al., 2017
Amanitaceae	Amanita fulva	Edible	Singh et al., 2016
Amanitaceae	Amanita virosa	Poisonous	Vishwakarma et al., 2017; Singh et al., 2017
Auriculariaceae	Auricularia auricula-judae	Edible	Vishwakarma et al., 2017; Singh et al., 2016; Vishwakarma & Tripathi, 2019
Auriculariaceae	Auricularia mesenterica	Inedible	Vishwakarma et al., 2017
Auriculariaceae	Auricularia polytricha	Edible	Yadav et al., 2016
Bolbitiaceae	Bolbitius coprophilus	Inedible	Vishwakarma et al., 2017
Bolbitiaceae	Bolbitius vitellinus	Poisonous	Vishwakarma et al., 2017
Bolbitiaceae	Cococybe cyanopus	-	Yadav et al., 2016
Bolbitiaceae	Panaeolus ater	Inedible	Singh et al., 2016
Cantharellaceae	Cantharellus minor	Inedible	Vishwakarma et al., 2017
Cantharellaceae	Cantharellus cibarius	Inedible	Singh et al., 2019
Cantharellaceae	Cantharellus subalbidus	Edible	Singh et al., 2019; Vishwakarma et al., 2017
Clavariaceae	Clavulinopsis laeticolor	Inedible	Vishwakarma et al., 2017
Clavariaceae	Coprinus pellucidus	Inedible	Vishwakarma et al., 2017
Coprinaceae	Coprinus atramentarius	Edible	Singh et al., 2016
Coprinaceae	Coprinus comatus	Inedible	Singh et al., 2018; Vishwakarma et al., 2017; Singh et al., 2016; Vishwakarma & Tripathi, 2019; Chandrawati et al., 2014
Coprinaceae	Coprinus congregates	Inedible	Singh et al., 2018
Coprinaceae	Coprinus disseminates	Inedible	Singh et al., 2018; Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Coprinaceae	Coprinus domesticus	Inedible	Singh et al., 2018; Vishwakarma et al., 2017; Singh et al., 2016
Coprinaceae	Coprinus extintorius	Inedible	Singh et al., 2018; Singh et al., 2016
Coprinaceae	Coprinus hemerobius	Inedible	Singh et al., 2018
Coprinaceae	Coprinus heterosetulosus	Inedible	Singh et al., 2018
Coprinaceae	Coprinus impatiens	Inedible	Singh et al., 2018
Coprinaceae	Coprinus lagopus	Inedible	Singh et al., 2018; Vishwakarma et al., 2017
Coprinaceae	Coprinus leiocephalus	Inedible	Singh et al., 2018
Coprinaceae	Coprinus micaceus	Inedible	Singh et al., 2018
Coprinaceae	Coprinus radiates	Inedible	Singh et al., 2018
Coprinaceae	Coprinus truncorum	Inedible	Singh et al., 2018; Vishwakarma et al., 2017
Cordycipitaceae	Cordyceps canadensis	Inedible	Singh et al., 2019
Coriolaceae	Coriolus hirsutus	Inedible	Singh et al., 2017

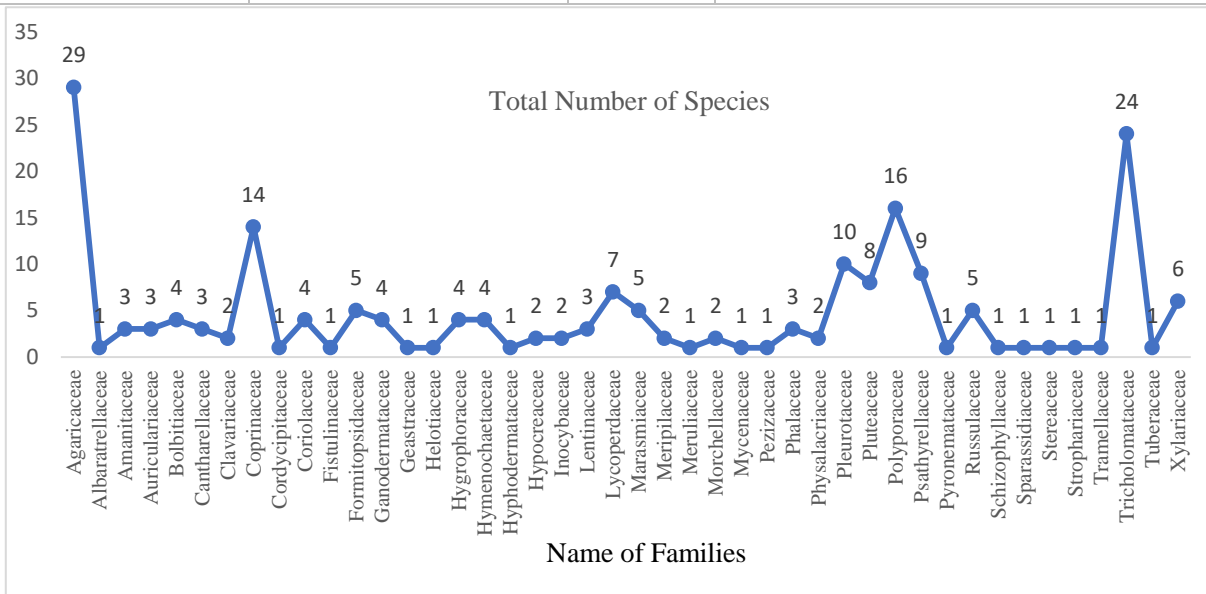
Coriolaceae	Coriolus versicolor	Inedible	Chandrawati et al., 2014
Coriolaceae	Heterobasidion annosum	Inedible	Chandrawati et al., 2014
Coriolaceae	Ischnoderma benzoniunum	Inedible	Chandrawati et al., 2014
Fistulinaceae	Fistulina hepatica	-	Vishwakarma & Tripathi, 2019
Fomitopsidaceae	Fomitopsis cajanderi	Inedible	Vishwakarma et al., 2017
Fomitopsidaceae	Fomitopsis pinicola	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019; Singh et al., 2019
Fomitopsidaceae	Laetiporus sulphureus	Edible	Singh et al., 2019; Vishwakarma et al., 2017
Fomitopsidaceae	Postia caesia	Inedible	Singh et al., 2019
Fomitopsidaceae	Postia stiptica	Inedible	Vishwakarma et al., 2017; Singh et al., 2019
Ganodermataceae	Ganoderma applanatum	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019; Chandrawati et al., 2014; Singh et al., 2019
Ganodermataceae	Ganoderma lucidum	Inedible	Chandrawati et al., 2014; Vishwakarma & Tripathi, 2019; Singh et al., 2017; Vishwakarma et al., 2017; Yadav et al., 2016
Ganodermataceae	Ganoderma praelongum	Inedible	Singh et al., 2019; Ram et al., 2010
Ganodermataceae	Ganoderma tsugae	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Geastraceae	Geastrum rufescens	Inedible	Chandrawati et al., 2014; Vishwakarma et al., 2017
Helotiaceae	Ascocoryne sarcoides	Inedible	Vishwakarma et al., 2017
Hygrophoraceae	Hygrocybe acutopunicea	Poisonous	Singh et al., 2019
Hygrophoraceae	Hygrocybe miniata	Edible	Singh et al., 2019
Hygrophoraceae	Hygrophorus cossus	Inedible	Singh et al., 2017
Hygrophoraceae	Hygrophorus eburneus	Edible	Vishwakarma et al., 2017
Hymenochaetaceae	Coltricia cinnamomea	Inedible	Vishwakarma et al., 2017
Hymenochaetaceae	Inonotus cuticularis	Inedible	Singh et al., 2019; Vishwakarma et al., 2017
Hymenochaetaceae	Inonotus hispidus	Inedible	Vishwakarma et al., 2017
Hymenochaetaceae	Inonotus radiatus	Inedible	Vishwakarma et al., 2017
Hyphodermataceae	Hyphodontia sambuci	Inedible	Singh et al., 2019
Hypocreaceae	Hypomyces lactifluorum	-	Yadav et al., 2016
Hypocreaceae	Hypomyces loctiflies	-	Ram et al., 2010
Inocybaceae	Inocybe dulcamara	Poisonous	Vishwakarma et al., 2017
Inocybaceae	Inocybe fastigiata	Poisonous	Vishwakarma et al., 2017
Lentinaceae	Lentinus conatus	Edible	Vishwakarma et al., 2017
Lentinaceae	Lentinus squarrosulus	Edible	Vishwakarma et al., 2017
Lentinaceae	Lentinus tigrinus	Inedible	Vishwakarma et al., 2017
Lycoperdaceae	Bovista plumbea	Edible	Singh et al., 2017; Vishwakarma et al., 2017

Lycoperdaceae	Bovista pusilla	Inedible	Vishwakarma et al., 2017; Singh et al., 2017
Lycoperdaceae	Calocybe gambosa	Edible	Vishwakarma et al., 2017; Vishwakarma et al., 2016; Singh et al., 2017
Lycoperdaceae	Calocybe indica	Edible	Yadav et al., 2016; Vishwakarma et al., 2017; Vishwakarma et al., 2016; Singh et al., 2017
Lycoperdaceae	Lycoperdon perlatum	Edible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Lycoperdaceae	Lycoperdon pyriformae	Edible	Chandrawati et al., 2014; Yadav et al., 2016; Vishwakarma & Tripathi, 2019
Lycoperdaceae	Lycoperdon spadiceum	Inedible	Chandrawati et al., 2014
Marasmiaceae	Lentinus edodes	-	Yadav et al., 2016
Marasmiaceae	Lentinus russaticeps	-	Yadav et al., 2016
Marasmiaceae	Marasmius curreyi	Inedible	Vishwakarma et al., 2017
Marasmiaceae	Marasmius pulcherripes	Inedible	Vishwakarma et al., 2017
Marasmiaceae	Marasmius sicci	Inedible	Vishwakarma et al., 2017
Meripilaceae	Abortiporus biennis	Inedible	Singh et al., 2017; Vishwakarma et al., 2017
Meripilaceae	Grifola frondosa	Edible	Vishwakarma et al., 2017; Chandrawati et al., 2014; Vishwakarma & Tripathi, 2019
Meruliaceae	Phlebia cornea	Inedible	Singh et al., 2019
Morchellaceae	Morchella angusticeps	-	Vishwakarma & Tripathi, 2019
Morchellaceae	Morchella esculenta	-	Vishwakarma & Tripathi, 2019
Mycenaceae	Favolaschia pustulosa	Inedible	Vishwakarma et al., 2017
Pezizaceae	Peziza ampliata	Inedible	Singh et al., 2019
Phalaceae	Mutinus caninus	Inedible	Singh et al., 2017; Chandrawati et al., 2014; Vishwakarma et al., 2017
Phallaceae	Phallus duplicatus	Choicely Edible	Singh et al., 2016
Phallaceae	Phallus duplicatus	Inedible	Vishwakarma et al., 2017
Physalacriaceae	Armillaria ponderosa	-	Ram et al., 2010; Yadav et al., 2016
Physalacriaceae	Flammulina velutipes	-	Yadav et al., 2016
Pleurotaceae	Pleurotus cystidiosus	Edible	Vishwakarma et al., 2017
Pleurotaceae	Pleurotus dryinus	Inedible	Vishwakarma et al., 2017
Pleurotaceae	Pleurotus eryngii	-	Yadav et al., 2016
Pleurotaceae	Pleurotus flabellatus	Edible	Vishwakarma et al., 2017; Yadav et al., 2016
Pleurotaceae	Pleurotus florida	Edible	Vishwakarma et al., 2017; Yadav et al., 2016
Pleurotaceae	Pleurotus onesti	-	Yadav et al., 2016
Pleurotaceae	Pleurotus ostreatus	Edible	Vishwakarma et al., 2017; Yadav et al., 2016; Vishwakarma & Tripathi, 2019
Pleurotaceae	Pleurotus porrigens	-	Yadav et al., 2016
Pleurotaceae	Pleurotus pulmonarius	-	Yadav et al., 2016

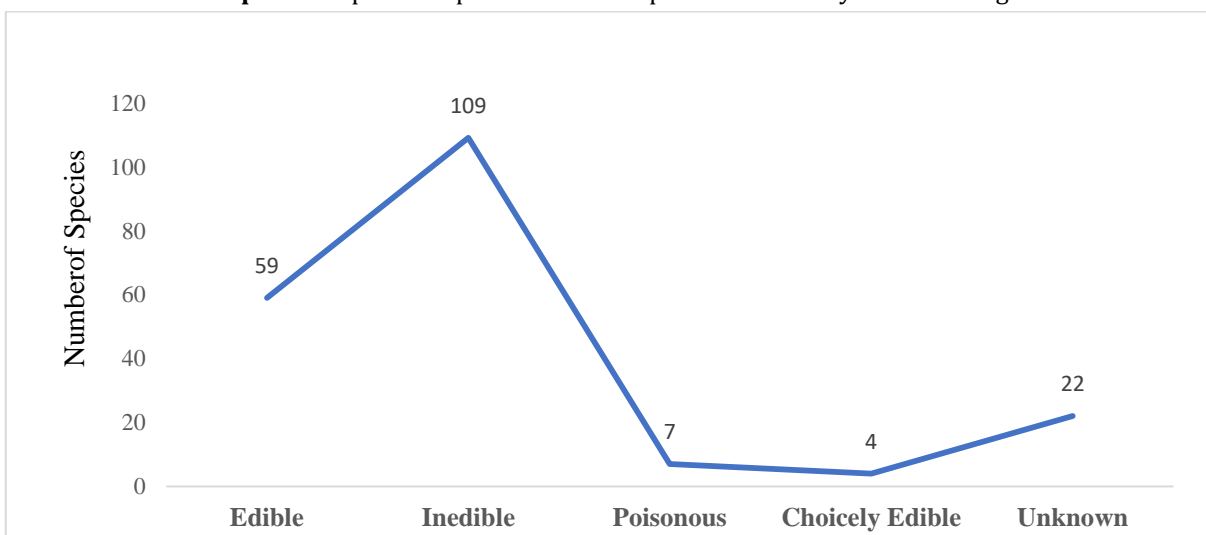
Pleurotaceae	Pleurotus sajor-caju	-	Yadav et al., 2016
Pluteaceae	Pluteus luteovirens	Inedible	Vishwakarma et al., 2017
Pluteaceae	Pluteus petasatus	Edible	Vishwakarma et al., 2017
Pluteaceae	Pluteus rimulosus	Inedible	Vishwakarma et al., 2017
Pluteaceae	Volvariella bombycina	Edible	Vishwakarma et al., 2017
Pluteaceae	Volvariella esculenta	-	Yadav et al., 2016
Pluteaceae	Volvariella indica	Edible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Pluteaceae	Volvariella taylori	Edible	Vishwakarma et al., 2017
Pluteaceae	Volvariella volvacea	Edible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019; Yadav et al., 2016
Polyporaceae	Fomes fomentarius	-	Vishwakarma & Tripathi, 2019
Polyporaceae	Fomes hemitephrus	Inedible	Vishwakarma et al., 2017
Polyporaceae	Funalia trogii	Inedible	Singh et al., 2019; Vishwakarma et al., 2017
Polyporaceae	Lenzite sepiaria	Inedible	Singh et al., 2019; Vishwakarma et al., 2017
Polyporaceae	Lenzites betulina	-	Vishwakarma & Tripathi, 2019
Polyporaceae	Lenzites betulina	Inedible	Vishwakarma et al., 2017
Polyporaceae	Microporus xanthopus	Inedible	Vishwakarma et al., 2017
Polyporaceae	Polyporus alveolaris	Inedible	Vishwakarma et al., 2017
Polyporaceae	Polyporus brumalis	Inedible	Singh et al., 2019; Vishwakarma et al., 2017
Polyporaceae	Polyporus umbrellatus	Inedible	Chandrawati et al., 2014
Polyporaceae	Pycnoporus cinnabarinus	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Polyporaceae	Trametes elegans	Inedible	Vishwakarma et al., 2017
Polyporaceae	Trametes gibbosa	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Polyporaceae	Trametes hirsutus	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019; Singh et al., 2019
Polyporaceae	Trametes suaveolens	Inedible	Singh et al., 2019
Polyporaceae	Trametes versicolor	Edible	Singh et al., 2017; Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Psathyrellaceae	Coprinellus micaceus	Edible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Psathyrellaceae	Coprinopsis atramentaria	Edible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Psathyrellaceae	Coprinopsis cothurnata	Inedible	Vishwakarma et al., 2017
Psathyrellaceae	Coprinopsis ephemeroide	Inedible	Vishwakarma et al., 2017
Psathyrellaceae	Coprinopsis foetidella	Inedible	Vishwakarma et al., 2017
Psathyrellaceae	Coprinopsis friesii	Inedible	Vishwakarma et al., 2017
Psathyrellaceae	Panaeolus ater	Inedible	Vishwakarma et al., 2017

Psathyrellaceae	Panaeolus papilionaeus	Inedible	Vishwakarma et al., 2017
Psathyrellaceae	Psathyrella automata	Inedible	Vishwakarma et al., 2017
Pyronemataceae	Cheilymenia stercorea	Inedible	Singh et al., 2019
Russulaceae	Russula aquosa	-	Vishwakarma & Tripathi, 2019
Russulaceae	Russula emetic	-	Vishwakarma & Tripathi, 2019
Russulaceae	Russula emeticella	Edible	Singh et al., 2016
Russulaceae	Russula sororia	Edible	Vishwakarma et al., 2017
Russulaceae	Russula violacea	-	Yadav et al., 2016
Schizophyllaceae	Schizophyllum commune	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Sparassidiaceae	Sparassis crispa	Edible	Singh et al., 2019; Vishwakarma & Tripathi, 2019; Vishwakarma et al., 2017
Stereaceae	Stereum hirsutum	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019
Strophariaceae	Pholiota adipose	Inedible	Singh et al., 2019
Tramclaceae	Traamella foliacea	Inedible	Singh et al., 2017
Tricholomataceae	Clitocybe discolor	Inedible	Singh et al., 2019
Tricholomataceae	Clitocybe inversa	Inedible	Vishwakarma et al., 2017
Tricholomataceae	Clitocybe phyllophila	Edible	Singh et al., 2019
Tricholomataceae	Clitocybe vibecina	Poisonous	Vishwakarma et al., 2017
Tricholomataceae	Collybia erythropus	Edible	Singh et al., 2019
Tricholomataceae	Collybia fuscopurpurea	Inedible	Singh et al., 2019; Vishwakarma et al., 2017
Tricholomataceae	Collybia fusipes	Inedible	Chandrawati et al., 2014
Tricholomataceae	Lepista flaccid	Inedible	Vishwakarma et al., 2017
Tricholomataceae	Lepista inversa	Edible	Singh et al., 2017
Tricholomataceae	Lepista luscina	Edible	Vishwakarma et al., 2017
Tricholomataceae	Lepista nuda	Edible	Chandrawati et al., 2014
Tricholomataceae	Marasmius oreades	Edible	Chandrawati et al., 2014
Tricholomataceae	Marasmius rotula	Inedible	Chandrawati et al., 2014
Tricholomataceae	Mycena alcalina	Inedible	Chandrawati et al., 2014
Tricholomataceae	Mycena capillaripes	Inedible	Singh et al., 2017
Tricholomataceae	Mycena cinerella	Inedible	Singh et al., 2017
Tricholomataceae	Mycena inclinata	Inedible	Chandrawati et al., 2014
Tricholomataceae	Mycena pearsoniana	Inedible	Chandrawati et al., 2014
Tricholomataceae	Omphalina ericetorum	Inedible	Singh et al., 2019; Vishwakarma et al., 2017
Tricholomataceae	Omphalina postii	Inedible	Vishwakarma et al., 2017
Tricholomataceae	Termitomyces giganteum	Edible	Chandrawati et al., 2014
Tricholomataceae	Termitomyces heimii	Edible	Chandrawati et al., 2014; Singh et al., 2016; Vishwakarma & Tripathi, 2019; Vishwakarma et al., 2017
Tricholomataceae	Termitomyces robustus	Edible	Chandrawati et al., 2014

Tricholomataceae	Tricholoma equestre	-	Yadav et al., 2016
Tuberaceae	Tuber aestivum	Edible	Vishwakarma et al., 2017; Singh et al., 2016; Vishwakarma et al., 2016; Chandrawati et al., 2014
Xylariaceae	Daldinia concentrica	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019; Singh et al., 2016
Xylariaceae	Daldinia vernicosa	Inedible	Singh et al., 2017; Singh et al., 2016
Xylariaceae	Xylaria carpophyla	Inedible	Singh et al., 2019; Chandrawati et al., 2014
Xylariaceae	Xylaria hypoxylon	Inedible	Vishwakarma et al., 2017; Vishwakarma & Tripathi, 2019; Singh et al., 2017; Chandrawati et al., 2014
Xylariaceae	Xylaria longipes	Inedible	Singh et al., 2017; Vishwakarma et al., 2017
Xylariaceae	Xylaria polymorpha	Inedible	Vishwakarma & Tripathi, 2019



Graph-1: Graphical Representation of Species and Family of Macrofungi.



Graph-2: Graphical Representation of Edibility of Macrofungal Species.

II. CONCLUSION

In present literature survey and study, it reveal that the macrofungal diversity in Uttar Pradesh is very rich and vast. Many macrofungal species are edible to human beings and it will become a mile-stone for society for their food and economy in upcoming future. Uttar Pradesh is the largest state in population of India. So, Known edible macrofungi (mushrooms) species may become an answer of food security. In this study of macrofungal diversity, much more survey and research are required because of less awareness to the macrofungal (mushroom) species, variety and their economic values in a vast areas of Uttar Pradesh.

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