

菇菌園有限公司
THE MUSHROOM INITIATIVE LIMITED



年報 2018 ANNUAL REPORT



信念 Belief

我們相信人類是大自然的一份子，我們應該尊重大自然，保護大自然。

We believe that as a part of nature, we should respect nature and make environmental protection our main concern.

願景 Vision

我們的願景是建立一個生物多樣的世界，各界彼此敬重地永續生活下去。

Our vision is to build a biodiverse world in which all beings live sustainably with respect for one another.

Vision



使命 Mission

我們希望透過菇菌圓的工作，讓更多人認識到菇菌對環境保護的重要性，從而可持續地生活。

Mission

We commit ourselves to promoting the role of fungi in environmental conservation and sustainable living.

目標

1. 菇菌及教育方面：

- 通過教育菇菌在大自然的「圓」作用（循環和物質再生），聯繫社會各界人士，包括社區團體、環保主義者、熱愛大自然的個人及公共範疇人士，實踐與自然和諧共存；
- 利用適合的廢物栽培食用菇菌，鼓勵保育環境及減少廢物；
- 促進市民認識真菌對環境保育及廢物回收的作用；
- 進行菇菌研究及保育活動；
- 推廣及使用本地菇菌。

2. 環境保護方面：

- 我們透過利用真菌及微生物，致力恢復土壤健康，重建各種陸上生態系統，增加其碳封存的能力，為緩解氣候變化作出貢獻；
- 研究土壤生態，尤其是真菌及微生物的重要性，在農業生產，以至森林復育的植林項目中，運用科學知識來開展和實踐各類工作，作為本地及世界各地社群的示範，以喚起人類對減緩氣候變的關注，鼓勵全球人民共同努力，為恢復並維持地球的生態共同奮鬥。





Objectives

The objectives of The Mushroom Initiative are:

1. Fungi and education:

- Use fungi education as a way to build networks between communities, environmentalists, private and public sectors to achieve harmony with nature;
- Encourage environmental protection and waste reduction through the cultivation of edible fungi and related products using organic waste substrates;
- Promote awareness of the role of fungi in environmental conservation and waste recycling;
- Conduct research and activities related to conservation;
- Promote and utilize fungi, with a focus on native species;

2. Environmental protection:

- Restore soil through the use of fungi and microorganisms, rebuild terrestrial ecosystems and enhance the carbon sequestration capacities of these ecosystems to contribute to climate change mitigation;
- Study the importance of soil ecology, especially the role of fungi and microorganisms, and implement demonstration projects, from agricultural production to forest restoration, to build local and global climate change mitigation networks for actions.

We hope the people of the world can work together to fight for the restoration and conservation of our planet's ecology.



「菇菌圓」的源起



1. 「菇菌圓」於2009年，正式註冊為香港的非牟利機構，並獲稅務局批核《稅務條例》第88條屬公共性質的免稅資格，成為慈善機構。

2. 在大埔林村建立菇菌實驗基地，培植有機

環保菇，以菇菌為媒界，傳遞大自然的圓融和諧、循環不息、萬物連結互助的精神和環保的訊息。

3. 由2009年成立至今，每年均取得「香港有機資源中心」的有機認證。
4. 2013年榮獲「香港有機資源中心認證有限公司」嘉許，獲「有機農場傑出管理獎」以表揚「菇菌圓」在香港有機農業的優秀管理工作上的貢獻。
5. 「菇菌圓」的經費一直沒有政府的資助，所有的收入都是靠社會大眾和個別熱心人士的募捐。2012年起，「菇菌圓」與「華中農業大學菌種實驗中心」開展四年的合作計劃 "3 in 1 Benefits: Regenerate Food Waste Compost to eco-mushroom, Vegetable and Meat"，計劃於2016年11月完成，由香港一私人慈善基金贊助。
6. 2016年，「菇菌圓」與香港中文大學食物研究中心開展一項合作項目，以研究菇菌種植及應用。
7. 2017年7月，「菇菌圓」的泰國菇菌與社區植林計劃開始。
8. 2018年，泰國菇菌與社區植林計劃陸續擴大規模，相關計劃亦在印尼展開，而越南項目的前期準備工作亦進展良好。
9. 2018年夏，菇菌圓展開了再生農業項目，目的在恢復農田土壤的生態系統，改善泥土質素，增加其碳封存以回應氣候問題。

Keynotes of TMI

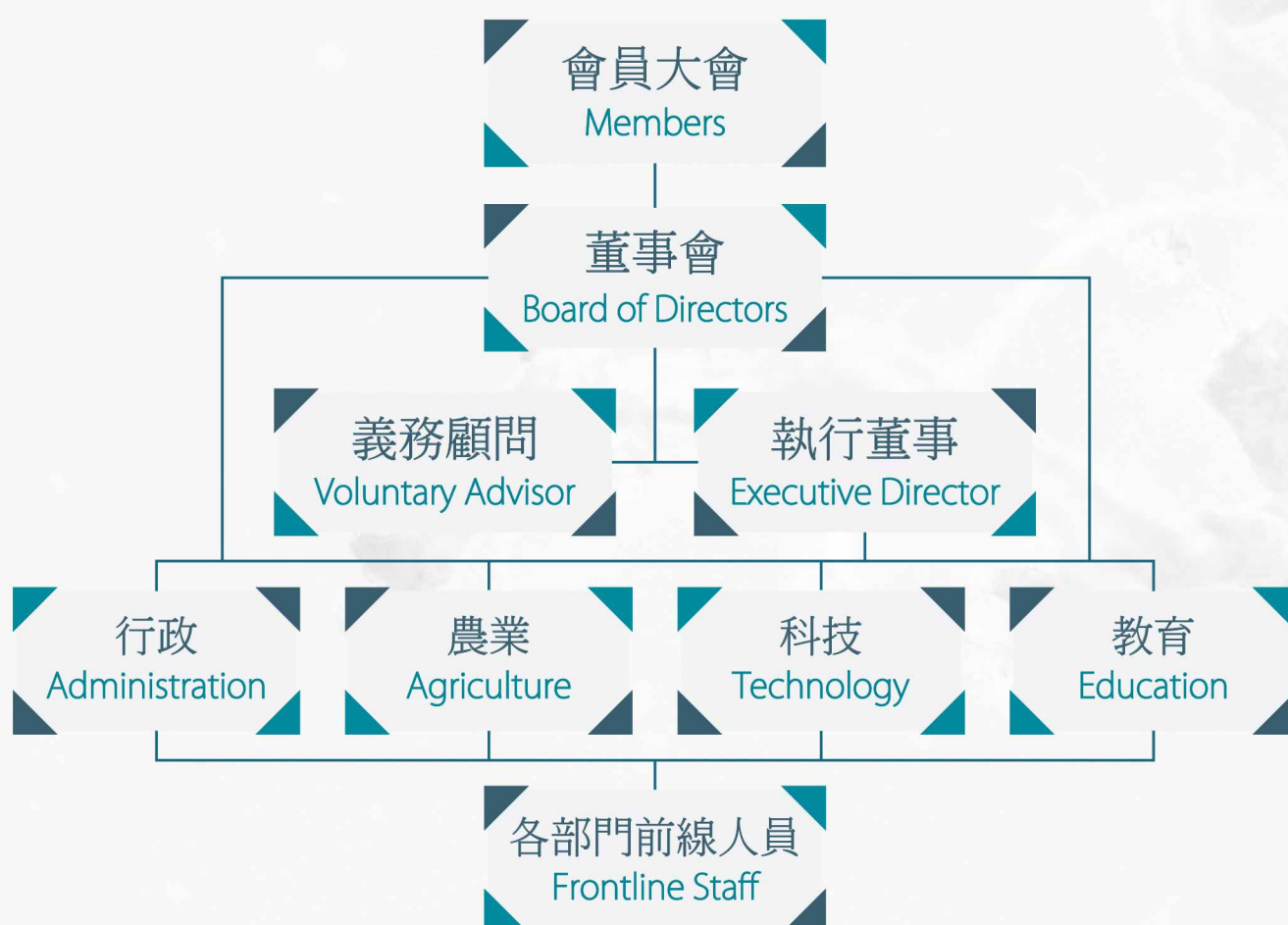
1. The Mushroom Initiative Limited (TMI) was registered as a non-profit organization in 2009 and was approved by the Inland Revenue Department as a charitable institution, which is exempt from tax under section 88 of the Inland Revenue Ordinance.
2. In 2010, the first experimental mushroom centre was set up in Lam Tsuen, Tai Po, in Hong Kong's New Territories, to work towards TMI's mission through organic mushroom cultivation.
3. Since 2009, all eligible produce, including vegetables, herbs, and mushrooms, have received organic certifications from the Hong Kong Organic Resource Centre.
4. In 2013, TMI was awarded for outstanding management practices by the Hong Kong Organic Resource Centre.
5. TMI started a four-year research collaboration with Huazhong Agricultural University on using kitchen waste to cultivate organic mushrooms which was completed in November 2016. It was funded by a private foundation and donations from individuals.
6. In 2016, TMI initiated a collaboration with the Food Research Centre of the Chinese University of Hong Kong to conduct research on mushroom cultivation skills and applications.
7. Since July 2017, TMI has been working on a collaborative project using ectomycorrhizal fungi for reforestation in Thailand. In 2018, the project was greatly expanded, a similar project has begun in Indonesia, and the preparatory work for a project in Vietnam was progressing well.
8. In the summer of 2018, TMI launched a regenerative agriculture project aimed at restoring soil ecosystems, improving soil quality, and increasing carbon sequestration on a farm in response to climate problems.

組織結構 / Organizational structure

菇菌圓的架構由董事會、義務顧問和受僱人員組成，董事會的負責監察菇菌圓的日常運作及制定機構的發展方向。而義務顧問則為機構提供專業的諮詢服務。受僱人員負責日常機構運作、教育及發展項目。

TMI is comprised of a Board of Directors, voluntary advisors, and staff. The main duty of the Board is to monitor operation and formulate TMI's strategic directions. The voluntary advisors are responsible for providing professional advice. Staff members focus on the implementation of education, project developments and daily operations.

組織架構表 / Organizational chart



主編的話

2018年是世界時局動盪的一年，美國近年奉行單邊主義政策，為了其國內少數人的利益，啟動對世界各國的貿易戰，單方面退出八個國際協定，並通過各種制裁手段和挑釁行為，導致軍備競賽及地區戰爭危機，妄圖從動盪和戰爭中獲益。退出的協定還包括《巴黎氣候變化協定》，此協定是2015年12月12日在巴黎氣候變化大會上通過、2016年4月22日在紐約簽署的氣候變化協定。《巴黎氣候變化協定》的主要目標是將本世紀全球平均氣溫上升幅度控制在2攝氏度以內，並將全球氣溫上升控制在前工業化時期水平之上1.5攝氏度以內。截至2016年6月29日，共有178個締約方簽署了《巴黎氣候變化協定》，共有19個締約方完成了這一程式。美國退出《巴黎氣候變化協定》的消息一出來，就引發各國關切。美國是全球第二大二氧化碳排放國，如果決定退出巴黎協定，就等於不再遵守減少排碳的承諾。這對於大旱、暴雨等極端氣候將有深遠影響，可能讓已經危及地球的氣候變化難題更加難以解決。

對於時局的動盪，我們無能為力。對於美國退出《巴黎氣候變化協定》，我們表示無奈。雖然如此，天地無私的奉獻，養育了地球上的生靈，而人類卻以各類廢物為回報。我們作為地的一員，實在愧對天地。儘管菇菌圓微不足道，但我們對環境保護的初心，永遠不變。常言聚沙成塔，從我做起，愚公移山，感天動地，我們深信僅終有一天，地球上每一份子都會為維護萬物的生存環境而不遺餘力。

為應對個別大國不顧人類福祉的不負責任行為，菇菌圓努力展開各種增加土地碳封存的項目，以降低大氣中的溫室氣體不斷上升的趨勢。在2018年，繼承上年度開展的在東南亞以原生菌根真菌共生技術的植林計劃，我們在泰國的項目點已擴展至十個，並得到當地社區、學術機構及政府機關的大力支持。目標是在泰國砍伐森林區或種植區進行立足於社區的重新造林。工作重點包括確定當地原生外生菌根真菌品種及其感染的原生樹種，並建立以確認的原生菌根真菌品種作為種植原生樹木技術的社區示範點，以及開展社區培訓講習班，培訓村民辨識食用菌子實體和管理菌根樹林。

與此同時，印尼的相關計劃亦已啟動，並划定了兩個項目試點。我們計劃使用菌根真菌，在退化的熱帶泥炭沼澤森林中進行復林活動，定期測量碳封存量以確定復林計劃的成效。而越南項目的前期準備工作亦進展良好，預計於2019年正式啟動。我們亦於本年度夏季亦展開了再生農業項目，目的在恢復土壤的生態系統，改善泥土品質，增加碳封存，以回應氣候暖化問題。

2018年對於菇菌圓是極具挑戰的一年，世界及本地時局的不穩，氣候不斷惡化的挑戰，年輕一代的迷惘，如此種種消沉而又刺激的氣氛，就像刀子一樣刺痛着每個關懷地球和人類的個體，看着人類走上自取滅亡的道路，既無奈又無助。所幸的是，世界各國多不

認同個別大國的不負責任行為。而我國近年來積極發展綠色生態項目，在深度參與全球環境治理顯示出大國的擔當。美國航天局衛星在2000年至2017年間收集的數據顯示，全球綠化面積增加了5%，相當於多出一個亞馬遜熱帶雨林。更令人驚喜的是，僅中國的植被增加量，就占到過去17年裏全球植被總增量的25%以上，位居全球首位。這些數據讓我們感到菇菌圓在保護環境的道路上並不孤單，但願我們與地球環保同仁，以數燈之火，在世界點起無盡之燈，照亮大眾未萌的心，共同走向一個可持續和更美好的未來。



Letter from the Editor

2018 is a year of turbulence for the world. The United States has been pursuing a unilateralist policy. For the benefits of its small group of people, the U.S. has launched a trade war against various countries, unilaterally withdrawn from eight international agreements, and adopted various sanctions. The provocative behavior of the United States has led to regional war crises while attempting to benefit from turmoil and war. The agreement the U.S. withdrew from includes the Paris Climate Change Agreement, a climate change agreement adopted at the Paris Climate Change Conference on December 12, 2015 and signed in

in New York on April 22, 2016. The main objective of the Agreement is to limit the global average temperature increase of this century to within 2 degrees Celsius and to limit the global temperature rise to within 1.5 degrees Celsius above the pre-industrial level. By June 29, 2019, a total of 178 Parties had signed the Paris Climate Change Agreement, and 19 Parties had completed the program. When the United States withdrew from the Agreement, it concerned various nations. The United States is the second largest carbon dioxide emitter in the world. The country's decision to withdraw from the Paris Climate Change Agreement means that it would no longer comply with the commitment to reduce carbon emissions. This will have far-reaching effects on extreme weather such as drought and heavy rain, which may worsen the climate change problem that has already endangered our planet.



We could not help but to accept the current chaotic situation and the withdrawal of the United States from the Paris Climate Change Agreement. Even so, nature has selflessly provided us all materials to support life, while human beings have paid with all kinds of waste to the nature. TMI may be small but our

dedication to environmental protection will never change. We strongly believe that in the near future, every individual on earth will spare no effort to maintain the living environment for all.

In response to the irresponsible behavior with no regards to human well-being, TMI is working on various projects to increase carbon sequestration in the land, in order to reduce the rising trend of greenhouse gases in the atmosphere. In 2018, in line with the tree planting plan with the symbiotic technology of primary mycorrhizal fungi in Southeast Asia, our projects in Thailand have expanded to 10 sites last year and have received strong support from local communities, academic institutions, and government agencies. The goal is to achieve community-based reforestation on sites where severe deforestation occurred or planting areas in Thailand. The work focuses on the identification of native ectomycorrhizal fungi species and the native host species of trees, and the establishment of a community demonstration site that adopt the identified native mycorrhizal fungi as a native tree planting techniques, and community training workshops on edible mushroom identification.

Meanwhile, relevant plans in Indonesia have also been launched and two projects have been piloted. We plan to use mycorrhizal fungi to carry out reforestation activities in degraded tropical peat swamp forests and periodically measure carbon sequestration to determine the effectiveness of the reforestation program. The preliminary preparations for the Vietnam project are also progressing well and the project is expected to be officially launched in 2019. We also launched a regenerative agriculture project this summer on our farm to restore soil ecosystems, improve soil quality, and increase carbon sequestration in response to global warming.

2018 was a very challenging year for TMI. Watching human beings embark on the path of self-destruction could make people who cares about the earth and human beings feel desperate and helpless. Fortunately, there are countries who do not agree with the irresponsible behavior of the United States. In recent years, China has actively developed green ecological projects, and its deep participation in global environmental governance has demonstrated the role of a great country. Data collected by NASA satellites between 2000 and 2017 showed that the global green area has increased by 5%, equivalent to an additional Amazon rainforest. What is even more surprising is that China's vegetation increase alone accounts for more than 25% of the total global vegetation increase over the past 17 years, ranking first in the world. TMI is not alone on the road to protect the environment. Together, we could build a better and sustainable future.





ECTOMYCORRHIZAE



EDIBLE MUSHROOMS



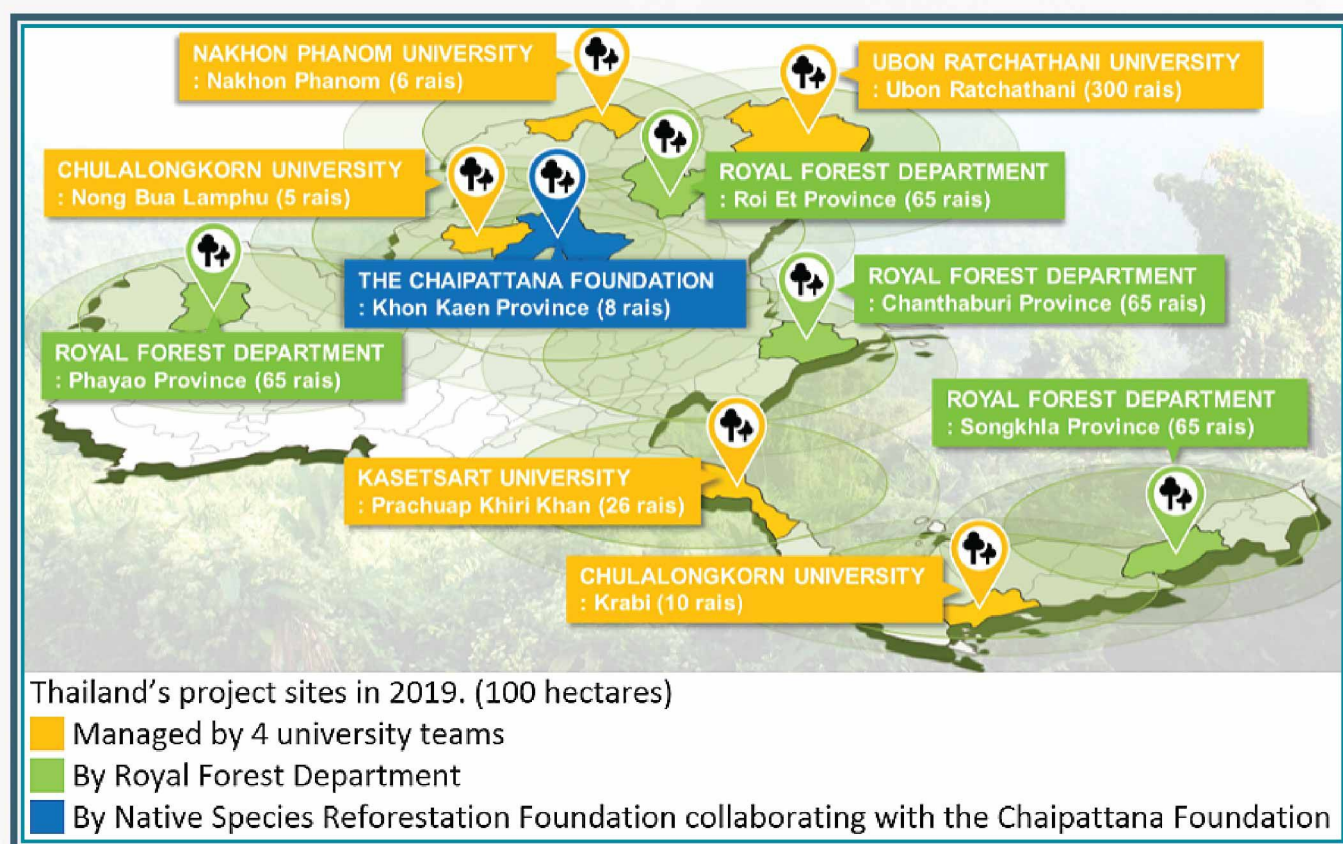
DIPTEROCARP TREES



年度合作項目

Collaborations

1. 泰國項目：各大學的研究隊伍合作進行社區外生菌根菌應用的植樹研究，可以幫助當地社區收集高價的食用菌而增加收入。繼承上年度開展、以原生菌根真菌共生技術的植林計劃，我們在泰國的項目點已擴展至十個。
2. 印尼項目：與印度尼西亞泥炭地的菌根研究經驗豐富的資深科學家和著名真菌學家 Dr. Ir. Maman Turjaman 合作，在位於南蘇門答臘島巨港和加里曼丹中部分別建立了兩個項目用地，進行泥炭地的樹林恢復，作為增加土壤碳封存的研究項目。



1. Thailand Project: We are working with research teams in Thai universities to enhance community projects by using edible fungi (ectomycorrhizae) for reforestation. Communities benefit by cultivating and collecting edible mushrooms through native tree planting, as they continue to implement the plantation plans initiated in 2017 using the symbiotic technology of primary mycorrhizal fungi. There are now 10 active project sites in Thailand.
2. Indonesia Project: We are cooperating with Dr. Ir. Maman Turjaman (shown in photo), a senior scientist and well-known mycologist with experience in mycorrhizal research in the peatlands of Indonesia. Two research sites have been established, in Palembang and South Kalimantan, to carry out forest restoration in peatlands, thereby increasing soil carbon sequestration.

員工心聲 (Winny)

我是2013年10月來到菇菌圓的，初來乍到的我，對於菇菌培植一竅不通，幸有菇菌圓最有江湖地位的好姨循循善導，在歡笑和“打罵”聲中慢慢掌握了這項技術。主管同事亦安排我負責菇菌培養數據的整理，作為一個家庭主婦，離開工作崗位多年，面對電腦實在望而生畏，但憑我一股打不死的幹勁，毅然報讀了各類社區進修課程，故能不辱使命，中規中矩地執行這項任務。隨着人事變動，我得以從一個雜務人員提升為行政人員，實在跟機構給予的機會和自身的努力的結果分不開。

在菇菌圓的五個年頭裏，機構的梁主席對我有深刻的影響，梁小姐作為機構的創辦人之一，她身體力行，不辭勞苦地推動世界各地的環保工作，使我從一個“無知婦孺”，蛻變成環境保護的忠實支持者。每每看到梁小姐沒日沒夜的工作，面對大量焦頭爛額的事情，心疼之情油然而生，自感能力有限，未能助其萬一。惟有以“曲線救國”之道，努力於本分工作，不再增加梁小姐的工作負擔。

在菇菌圓工作是我這五年內最快樂的日子，同事相處融洽。記得有一次同事跟我玩笑，說要大大增加我的工作量時，我以被欺負的口吻說：“我只是一個每星期上三天班的兼職員工啊”，就因為這句話，每當我接到新任務時，同事都搶先說：“我只是一個每星期上三天班的兼職員工啊”，真是讓我哭笑不得。在這種歡樂的環境中，跟年輕的同事相處，使我感到越活越年輕，所有煩惱的煙消雲散。謝謝您，我的菇菌圓！





Colleague's sharing

I began working at TMI in October 2013. As a newcomer, I didn't understand mushroom cultivation. Fortunately, my best friend, Auntie Ho, taught me all the techniques. My supervisor also assigned me the compilation of the mushroom culture data. As a housewife, I had been out of work for years, so I had a hard time with computer. However, after enrolling in various community refresher courses, I managed to carry out tasks with ease. At the time of a personnel rearrangements, I was promoted from supporting staff to executive officer. I am really grateful for the opportunities given by the organization.

Over the past five years, the chair of the organization, Ms Leung, has had a profound influence on me. As one of the founders of the organization, Ms Leung has worked tirelessly for environmental protection around the world, encouraging me to become a supporter of environmental protection. Ms Leung is always handling a lot of troubles and I feel unhappy that I often cannot help her. The only thing I can do is to do my job well and try to stop her endless task lists from growing.

My days working at TMI are the happiest of the past five years, and I get along very well with my colleagues. I remember one time, my colleague joked with me that she would greatly increase my workload. I said in a tone as if I was bullied: "I am just a part-time staff who work three days a week." Since then, whenever I receive new tasks, my colleagues will be the first to copy me and say: "I am just a part-time staff who work three days a week." and every time it makes me laugh. In this happy environment, getting along with young colleagues makes me feel younger and all my troubles are gone. Thank you, my TMI!

2018年菇菌圓活動詳情

本機構在香港及外地舉辦及參與了多項活動，包括工作坊、農場參觀、公開活動（全城有機日及各類展覽活動等），外訪如泥土健康及再生農業國際會議和研討會、訪問國內及東南亞真菌專家等，更開展了東南亞的植林與菌根真菌項目，接觸人數約3000人。以下為項目及活動的簡介：

TMI's activities in 2018

TMI organized and participated in a broad array of local and foreign activities, including workshops, farm visits, public events such as Organic Day 2018, international conferences and seminars on soil health and regenerative agriculture, and visits to academic institutions in China and Southeast Asia, and we also started mycorrhizal fungi cultivation projects in Southeast Asia, reaching out to approximately 3,000 individuals. The following is an overview of our projects and activities in 2018:

舉辦及參與活動表列

In 2018, TMI organized or participated in the following events:

月份	地點	合作／協辦／主辦單位	活動
1月	旺角花墟	漁護處	漁農美食嘉年華
3月	中環	香港有機資源中心	全城有機日
4月	菇菌圓	大埔運頭塘婦女共購小組	社區支援購買小組探訪
6月	菇菌圓	香海正覺蓮社佛教正覺中學	菇菌工作坊
10月	菇菌圓	香港女童軍總會天水圍何超瓊活動中心	菇菌工作坊
10月	菇菌圓	香港女童軍總會	菇菌工作坊
10月	菇菌圓	Kids4Kids	菇菌培植及知識分享
10-11月	綠蔭家園場地	綠蔭家園	再生農耕知識分享
12月	美國Southbridge	The Bionutrient Food Association	The 8th Soil and Nutrition Conference
12月	美國Kentucky	The Acres USA	2018 Acres U.S.A. Eco-Ag Conference

The background of the entire page is a close-up photograph of a mushroom mycelium. It shows a network of fine, white, thread-like structures (mycelia) growing along and around a dark, woody branch. The lighting is soft, highlighting the delicate texture of the mycelium against the darker wood and a blurred background.

聯絡方法 / CONTACT US

菇菌圓有限公司

農場地址：香港新界大埔林村白牛石下村

通訊地址：大埔郵政信箱747號

網站 / Website: www.ecomushrooms.org

電話 / Phone: +852 3142-0102

The Mushroom Initiative Limited

TMI Farm: Lower Pak Ngau Shek Tsuen, Tai Po, NT, Hong Kong

Mailing address: Tai Po P.O. box 747, Hong Kong

電郵 / Email: home@ecomushrooms.org