Sowing Amomum villosum under photovoltaic panels

Could agrivoltaic farming be a solution?
Agrivoltaic farming could be a solutionto not just one but both of these problems. It uses the shaded space underneath solar panels to grow crops. This increases land-use efficiency,as it lets solar farms and agriculture share ground,rather than making them compete against one another.

Can Broccoli grow under photovoltaic panels?
Researchers in South Korea have been growing broccoliunderneath photovoltaic panels. The panels are positioned 2-3 metres off the ground and sit at an angle of 30 degrees,providing shade and offering crops protection from the weather.

What is Amomum villosum?
Amomum villosum is commonly grown in plantationsof such trees as Hevea brasiliensis,Cinnamomum porrectum,Mangifera indica,Albizia chinensis,A. falcataria and Cassia siamea,forming a two-layered agroforestry system (Fig. 2). Rubber tree-Amomum,a common underplanting combina- tion,has shown noticeable economic profit.

Where is Amomum villosum grown?
Amomum cultivation in natural forests Since 1963,A. villosum has been successfully cultivated in tropical forests in Southern Yunnan. According to the Statistics Bureau of Yunnan Province (unpublished data,1989),the total planted area is now over 13 000 ha.

How do sheep Agrivoltaics work in Canada?
While the shepherds get paid to cut the grass on solar farms,the sheep use the grass and pastures under the solar panels for shade and grazing. Sheep-based agrivoltaics is found throughout Canada. A map showing the agrivoltaic potential in Canada

How agrivoltaic systems can help farmers in East Africa?
Elsewhere,agrivoltaic systems in East Africa are allowing farmers to make better use of land that was previously seen as unviable. An Agrivoltaic farming project in Kenya is using solar panels held several metres off the ground,with gaps in between them. The shade from the panels protects vegetables from heat stress and water loss.

In recent years, A. villosum has become one of the main cash crops in Guangxi Province of China, but as planting areas have expanded, a serious leaf disease of A. villosum in the main production area, Longan County, has killed numer - ous leaves on plants. At present, the main pathogens known to cause leaf diseases in A. villosum are Fusarium ...

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It is suggested that natural fostering can be applied for long-term sustainable development of A. Villosum from these four aspects. Background: Amomum Villosum (A. Villosum), called Chunsharen in Chinese, is widely used in treating gastrointestinal disease. Its clinical benefits have been confirmed by both in vitro and in vivo studies. Facing the shortage ...

Anatomy of the flower-shaped structure of Amomum villosum. (A) The flowers on the inflorescence gradually open from bottom to top, (B) Whole flower, (C) Stamen, (D) Stigma and pollen sac (the ...

Amomum villosum Lour. var. xanthioides T. L. Wu et Senjen and Amomum longiligulare T. L. Wu gradually fade out of the market because of their weak taste and insufficient medicinal properties. At present, Sharen (Amomi Fructus) circulating in the market is mainly Amomum villosum Lour. with its production area located in Yangchun, Guangdong ...

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Amomum villosum, the main active component of Amomum villosum has a variety of biological activities and pharmacological effects. Therefore, under the background of younger gastrointestinal

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Taking as reference the existing GPv farms, this study aims to rethink a new vegetated land cover below and around the photovoltaic (Pv) panels with high capacity to ...

AV is defined as the co-location of solar photovoltaic (PV) panels and crops on the same land to optimize food and energy production simultaneously and sustainably.

The dried fruit of Amomum villosum is an important spice and medicinal plant that has received great attention in recent years due to its high content of bioactive components and its potential for food additives and drug development. However, the stems and leaves of A. villosum are usually disposed of as waste. Based on the study of the fruits of A. villosum, we ...

The row spacing of over 6 m that is common in plantations leaves considerable space vacant underneath, which is a waste of solar energy and soil nutrients, and also causes competition for light and soil nutrients between rubber trees and ground vegetation. Such a ...

Objective Amomum villosum (AV) is an herb whose dried fruit has been extensively used in modern medicine to treat digestive system diseases such as dysentery, vomiting and abdominal pain.

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Amomum villosum. Lour is a perennial evergreen herb belonging to Amomum in Zingiberaceae family, ... (20:1) at 230°C. The carrier gas helium was at a flow rate of 1.0 mL/min, and the injected sample volume was 1 ...

Considering the above research gaps, this study aimed to (1) explore the soil contamination status caused by heavy metals and assess the human health risks posed by heavy metals in A. villosum planting soils and fruits; (2) reveal the relationships between heavy metal concentrations and soil fungal communities in A. villosum-producing areas; and (3) reveal the ...

Precise modelling of soil moisture content as a function of solar irradiance level is crucial since soil moisture level varies significantly for full sun and shading conditions (under ...

A. villosum in RP and NSF on yield and quality parameters, rhizospheric soil physical- chemical characters, and rhizosphere soil microbiota is critical for optimizing the cultivation of high ...

Abstract: Amomum villosum, which is an important perennial medicinal plant, easily suffers from continuous cropping obstacles in the plantation. The aim of this study is to find an effective ...

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Amomum villosum Lour. (A. villosum) is the original plant of the medicinal and culinary spice Amomi Fructus (Sharen) and is an important economic crop in the Lingnan region of China. During the cultivation and production of A. villosum, prolonged reliance on single asexual reproduction has exacerbated the degradation of its varieties, leading to inconsistent ...

Amomum villosum, which is an important perennial medicinal plant, easily suffers from continuous cropping obstacles in the plantation. The aim of this study is to find an effective method to solve ...

The results showed that plant diversity, litter, soil humidity, and soil fertility of rainforest decreased at different levels after Amomum villosum cultivated under rainforest, and the ...

The extensive planting of Amomum villosum in Xishuangbanna brought about harms to biodiversity of the reserve to some extent.The survey by setting up sample plots under both ...

The forest-medicinal plant management system has benefited the commercial production of Amomum villosum. However, little is known about the influence of different forestlands on the cultivation ...

2. Distribution, Botanical description and taxonomy. Amomum villosum commonly known as "hill cardamom.Amomum villosum is native to Southeast Asia, including regions in China, India, Bhutan, Nepal,

Bangladesh, and Myanmar. It is often found in the hilly regions and forests, growing at higher elevations [20,21].Amomum tsao-ko is commonly referred to as "tsao ...

1 Introduction. Amomum villosum Lour. (A. villosum), usually called sharen in China, is a member of Zingiberaceae family and is mainly cultivated in Southern China and Southeast Asian countries.The fruit of A. villosum was used for medicine purposes could be traced back to the seventh century, and together with Areca catechu L., Morinda officinalis ...