

PIENAAR ENERGY (PTY) LTD

Growing vegetables in photovoltaic greenhouses in Northeast China



Overview

Instead of traditional cultivation, vegetables — such as cucumbers, peppers and tomatoes — are grown through soilless culture technology. A 32,000-square-meter greenhouse was put into use in 2018 with an investment of 50 million yuan (\$7.2 million). Here, solar photovoltaic (PV) panels were installed several meters above the water, helping to generate an annual 260 gigawatts-hours of energy — enough to power 113,000 households in China. Beyond. Agro-photovoltaic (APV), which perfectly combines PV power generation with agricultural production, offers both economic and environmental benefits, injecting new vitality into the modernization of agriculture globally. cn]

Because temperatures in Northeast China are low in the spring, farmers in Yongji county of Jilin city, Jilin province, have introduced techniques for growing. China's solar greenhouses allow farmers to effectively control the environment and play a crucial role in the counter-seasonal cultivation of vegetables. Tomatoes (*Solanum lycopersicum* L. On the southern side arched struts extend from the peak of the roof to the soil surface, covered with transparent plastic material to capture the heat of the sun. An insulating blanket is also rolled over the plastic.

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Standard 20ft containers



Standard 40ft containers



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