

# Mung beans have solar container ozone

Which mung bean cultivars have higher stomatal conductance?

In addition to the patterns of stomatal conductance in each mung bean cultivar, we also found that under the ambient air condition, Chainat 3 and Chainat 4, O<sub>3</sub>-sensitive cultivars, had higher stomatal conductance than Chainat 84-1-1 and Kampangsan 2, enabling them to take up more O<sub>3</sub>. This ability likely led to uncontrollable H<sub>2</sub>O<sub>2</sub> accumulation.

Which mung bean genotype has the highest TPC?

Mung bean variety NM 20-21 showed the maximum value for TPC, while NM-51 showed the minimum value of TPC, but the effect of foliar application of ascorbic acid and silicic acid on TPC contents under elevated O<sub>3</sub> levels was not found significant (Table 3). A higher value of ascorbic acid was recorded in variety NM-2006 than all other genotypes.

Why do mung bean leaves have a high proline level?

Proline levels in O<sub>3</sub> contaminated mung bean leaves increased considerably in the current study because proline helps to stabilize subcellular structures (e.g., membranes and proteins), scavenge free radicals, and buffer cellular redox potential under stress circumstances (Ashraf and Foolad 2007).

The present work provides an insight into the development of biochemical adaptations in mung beans against ozone (O<sub>3</sub>) toxicity. The study aims to explore the O<sub>3</sub> stress tolerance ...

Ascorbic and silicic acid application mitigated toxic effects of ozone in mung bean (*Vigna radiata* L. Wilczek) by modulating growth, secondary metabolites, water relations, and grain ...

Mung beans are in the legume family which means they are related to chickpeas, lentils and peas. Mung beans are a great source of plant-based protein, fiber and various vitamins and minerals.

Our findings suggest that B-AgNPs can enhance growth, biomass, yield, and seed quality, and can improve mung bean ozone tolerance. Therefore, B-AgNPs may be a promising protectant for mung ...

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Assessment of six Indian cultivars of mung bean against ozone by using foliar injury index and changes in carbon assimilation, gas exchange, chlorophyll fluorescence and ...

The germination of the mung beans is quite uncomplicated and is therefore usually not a problem even for beginners of the sprout diet. By the way, ...

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Treated Mung bean was also analyzed for in-vitro protein digestibility (IVPD), grain hardness, and germination rate. A comparison between untreated (control) and treated mung bean samples at ...

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It is known to be a tremendous protectant agent against soil borne diseases. However, there are still some gaps in the performance of biochar in terms of mung bean yield and NUE mung ...

Most of the world's crop production and plant growth are anticipated to be seriously threatened by the increasing tropospheric ozone (O<sub>3</sub>) levels. The current study demonstrates how different mung bean ...

ELSEVIER Agriculture, Ecosystems and Environment 61 (1997) 29-34 Agriculture Ecosystems & Environment Exclusion of UV-B radiation from normal solar spectrum on the growth of ...

It is the first report to outline the potential protective effects of ascorbic and silicic acid applications against O<sub>3</sub> toxicity in 12 mung bean {*Vigna radiata* (L.) Wilken} varieties. Under controlled ...

Dielectric properties for black-eyed peas, mung beans, and cowpea weevils measured. Potential differential heating between cowpea weevils and legumes during RF heating. Industrial RF ...

The present study showed the negative impact of ambient ozone on the yield of mung bean and that foliar application of B-AgNPs and EDU improved various yield parameters.

Ground-level ozone (O<sub>3</sub>) is the most phytotoxic secondary air pollutant in the atmosphere, severely affecting crop yields worldwide. The role of nanoparticles (NP) in the alleviation ...

Mung beans have been extensively studied for their health benefits, yet challenges persist in optimizing their use in functional foods and ...

Tropospheric ozone (O<sub>3</sub>) can be deleterious to plants by decreasing crop yield and quality. Present study was conducted on six cultivars of mung bean (...)

Optimization of Process Parameters for Ozone Disinfestation of *C. Maculatus*: Effects on Germination, in Vitro Protein Digestibility, Nutritional, Thermal and Pasting Properties of Mung Bean Grains .pdf, raw ...

Abstract The present work provides an insight into the development of biochemical adaptations in mung beans against ozone (O<sub>3</sub>) toxicity. The study aims to explore the O<sub>3</sub> stress tolerance potential ...

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Developing ozone-tolerant varieties is crucial for mitigating these environmental stresses. This study investigates the effects of ascorbic acid (AA) ...

Research led us to the mung bean, which is normally used to produce bean sprouts. These plants have previously been used in both delayed luminescence and UPE studies [25, 30, 31]. ...

Online ahead of print.**ABSTRACT**The present work provides an insight into the development of biochemical adaptations in mung beans against ozone (O<sub>3</sub>) toxicity. The study aims to explore the ...

*Callosobruchus maculatus* adult progeny declined as the exposure time increased, at all inlet ozone concentrations. Cowpea bean quality did not change after ozone exposure, except for the ...

Learn how to grow mung beans indoors with our easy guide. Get tips on planting, caring for, and harvesting fresh, nutritious ...

Navigating Biomass Trade-Offs: Earmarking Sustainable Food Security Through Biochar Interventions in Mung Bean Cultivars Under High Ozone Atmosphere Published: 07 April ...

A field study using selective filters to remove the UV-B portion of the solar spectrum was conducted with mung bean (a dicotyledonous C<sub>3</sub> plant) and maize (a monocotyledonous ...

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Mung bean polysaccharides have been less studied, but differences have been found in the functional properties of mung bean polysaccharides obtained by different treatments.

The response of *Vigna radiata* L. (mung bean) to tropospheric ozone (O<sub>3</sub>) phytotoxicity using Ethylenediurea (EDU) and magnesium nitrate (Mg (NO<sub>3</sub>)<sub>2</sub>, 20 mg/L and 50 mg/L) was assessed ...

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