

Title (en)

PROCESS AND ARRANGEMENT FOR THE CARBON DIOXIDE SUPPLY OF PLANTS CULTIVATED IN A GREENHOUSE

Title (de)

VERFAHREN UND ANORDNUNG ZUR KOHLENDIOXID-VERSORGUNG VON IN EINEM GEWÄCHSHAUS ANGEBAUTEN PFLANZEN

Title (fr)

PROCÉDÉ ET SYSTÈME D'ALIMENTATION EN DIOXYDE DE CARBONE DE PLANTES CULTIVÉES EN SERRE

Publication

EP 2094075 A1 20090902 (DE)

Application

EP 07822735 A 20071120

Priority

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- DE 102006054504 A 20061120

Abstract (en)

[origin: WO2008061976A1] The invention relates to a process and an arrangement for the carbon dioxide (CO₂) supply of plants cultivated in a greenhouse by means of industrial CO₂ or CO₂ provided by combustion of gas. It is proposed that the time-specific net CO₂ uptake (Pnet) of the plants is calculated using a generally valid model of net CO₂ gas exchange of C3 plants, which model is known per se, is valid for a defined temperature range which contains the greenhouse internal temperature, and a CO₂ concentration, which corresponds to the CO₂ concentration of the outer atmosphere, as a function of the leaf area of the plants and the photosynthetically active radiation (PAR) which is directly measured outside the greenhouse or is derived from a radiation parameter measured there, and is compensated for by feed of the corresponding amount of CO₂, as long as the time-specific expected increased profit of the products cultivated in the greenhouse compared with a greenhouse which is not supplied with CO₂, which profit is derived from the expected CO₂-specific increase in yield on the basis of the photosynthetically active radiation (PAR) and the air temperature (T) outside the greenhouse and also the current price for the product produced, is greater than the costs of the CO₂ supply.

IPC 8 full level

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See references of WO 2008061976A1

Cited by

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