

Description

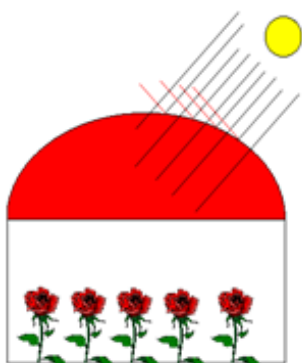
This invention relates to the manipulation of the transmittance spectra of light as it passes through a plant protective cover in the photosynthetic region of the light spectrum in order to optimise plant production - both in terms of yield and crop specific quality criteria. The use of Redgrow aims at providing the optimal light quality (i.e. wavelengths) to minimize plant stress but optimise the plant physiological characteristics that can be manipulated by altering the light environment. Redgrow considers plant physiological variables through design and development in order to aid production both in terms of quality and quantity. This is achieved by modifying the transmittance curve that typifies the cover material to track as closely as possible both the action spectrum of photosynthesis as well as that of the desired crop-specific characteristics.

Market Opportunity

Existing tunnel materials in the market is unable to manipulate the light spectrum, increasing cooling costs and lowering the quality and growth of crops. Redgrow further guarantees an increased lifetime as opposed to conventional films currently available as it is more robust.

Existing tunnels can be upgraded with this new technology by replacing old film. This technology further creates opportunities for small emerging farmers in Africa, to start cultivating crops. With increased quality and yields of crops it is a feasible solution on for small scale farmers.

Redgrow will be offered at the same price as existing films in the market, providing a price/benefit competitive advantage.



Benefits

- Increased crop quality
- Improved yields
- Faster growth
- Temperature control
- Illuminating unwanted UV's
- Durability
- Minimizes plant stress in warm dry areas



Project status

Patented in: USA, ARIPO, Australia, China, Spain, France, India, Italy, Turkey, Netherland, South-Africa

Currently we are seeking a partnership with investors OR manufacturers and distributors interested in a license.



Contact: North-West University: Technology Transfer & Innovation Support Office

FR Bezuidenhout +27 (0)82 961 4304

FR.Bezuidenhout@nwu.ac.za