THE FEASIBILITY OF UV IRRADIATION DURING PLANTS GROWTH IN THE CLOSED GROUND CONSTRUCTION

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This article established the influence of artificial UV radiation on the process of growing plants in a greenhouses.

Recently, more and more researchers pay attention to natural ultraviolet radiation (290-400 nm), as the fotorehulyatornyy factor that is near the visible spectrum of significant importance in the field of photo-biological plant. Meanwhile, work on the role of ultraviolet radiation is mainly conducted with artificial wave ultraviolet radiation (λ <290 nm) that is missing in the flow of solar radiation that reaches Earth's surface. The results of these studies do not give a complete picture of the mechanism of action of ultraviolet radiation on plants livelihoods. In fact, plants in natural growing constantly exposed to medium (280-320 nm) and long wavelength (320-400 nm) UV radiation from the sun.

Therefore clarify the role of UV and visible light (400-700 nm) in the formation morphophysiological features and adaptation mechanisms of plants to adverse environmental conditions is one of the important issues. Special issue acquires relevance for the life of plants under greenhouses where the use of artificial optical radiation is a major part of the process plant.

Experimentally that radiation 400-760 nm has the greatest impact fotosynteznyy. This range of radiation are all artificial sources of optical radiation used in crop production (DNAT lamp, DRL, DRLF, LF, etc.).

Exploratory studies found positive biological effects of ultraviolet radiation (300-400 nm) to accelerate flowering and the formation of ovaries vegetables, which leads to increased quality and quantity of production

The current state of science and technology allows us to develop artificial sources of optical radiation with desired spectral and intensity. So in the greenhouse and greenhouses for growing vegetables seedlings more powerful it was possible to use UV filters which cut off harmful depressing spectrum of wavelengths of light in powerful xenon lamps. But today not studied the question of the most effective range of the area (within the wavelength) in the UV and radiation dose. It was established

that under greenhouses additional ultraviolet radiation (E <2, 5 W / m^2) caused a stimulating effect on photosynthesis of leaves, chlorophyll content and biomass accumulation of useful radish and lettuce. It was also established that UV radiation accelerates their tomato plants flowering and fruiting, and promotes the content of soluble sugars and vitamin C.

When the manufacturing plant growing in greenhouses of yield and quality depend primarily on matching the spectral composition of artificial light sources radiation composition of natural sunlight. This is the most effective value for the following areas of spectrum - ultraviolet (290-380) / visible (380-760) / infrared (760-1000), 3/43/54.