

# PRODUCTION OF MICROSCOPIC ALGAE, THEIR USE IN LIVESTOCK AND POULTRY.

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**Annotation:** Microscopic algae are abundant in water bodies and moist soils. Because they are phototrophic organisms, they develop actively in sunlight and temperature and produce large amounts of biomass. Knowing this property of microscopic algae, they can be used in livestock and poultry.

**Keywords:** Microscopic algae, reservoirs, phototroph, biomass, livestock, poultry.

Microscopic algae are abundant in water bodies and moist soils. Their species are blue-greens, greens, diatoms, euglena, etc., which are phototrophic organisms that actively develop in sunlight and temperature and produce large amounts of biomass.

In microscopic algae, species rich in physiologically active substances — proteins, carbohydrates, vitamins, fats, enzymes, hormones — are isolated from nature and propagated in a special nutrient medium. The biochemical composition of chlorella and scenedesmus algae-pure cells is studied by separating and multiplying the green algae species that are rich in nutrient medium. Chlorella and scenedesmus contain 50-55% of proteins, 25-30% of carbohydrates, 7-15% of fats, vitamins A, B, B1, B2, B6, B12, C, D and other physiologically active substances.

Because green algae cells are rich in proteins, vitamins, and other physiologically active substances, they can be used as feed to increase their productivity in animal husbandry, horticulture and fisheries, silkworm breeding, and poultry and other industries.

For active growth, development and reproduction of green algae, the water temperature should be 25-35°C and 20-70 thousand lux of light, as well as nitrogen, phosphorus, potassium, magnesium, iron salts.

It was found that when the cells of *Chlorella* and *Senedesmus* were multiplied in the nutrient medium at 0.4, and the number of cells was 35-40 million per 1ml, their productivity would increase by 25-30% if given to cattle as water, suspension instead of water. *Senedesmus*-fed cattle may be poisoned by gossypol substances. In this case, green algae breaks down gossypol substances in the body and has a positive effect on their health.

Green algae is being used extensively to increase fishery productivity. The grass carp and white-tailed deer, which are raised on fish farms, are herbivorous fish. The grass carp feeds on aquatic plants and white-tailed deer microscopic algae. Across the country, many fisheries are using green algae as food for whitefish, increasing their productivity by up to 50%.

Innovative technological and practical work in this area is carried out by the staff of Bukhara State University on the basis of economic contracts.

The use of green algae in silkworm breeding has been shown to be highly effective. When mulberry leaves are soaked in a suspension of 60-80 million cells in 1 ml of *Chlorella* and *Senedesmus* and fed to silkworms, their growth and development is accelerated, the feeding period is shortened by 2-3 days, vitality is increased, as a result of complete weeding 15-20% burr savings, cocoon weight was found to increase by 15-20%, and silk yield was increased by 20-41%.

*Chlorella* and *Senedesmus* cells are propagated and used in poultry. It has been theoretically and practically determined that when poultry feed is mixed with their algae, their productivity increases by 25-30% and they are healthy.

Research is underway on the use of green algae in botany, horticulture and fruit and vegetable growing. When the seeds of plants are sown with suspensions of *Chlorella* and *Senedesmus*, the strength and vigor of root development, rapid

penetration into the crop leads to its quality, especially when root rot diseases are almost non-existent.

When green algae, which is rich in biologically active substances, is added to the feed of livestock, it was found that their milk and meat production increased by 25-30%.

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