The plants that exist in the world are found in almost every part of the globe: deserts, mountains, hills, pastures, and so on. Also, different strains of microorganisms belonging to different generations have been found in these areas. To a certain extent, these microorganisms play an important role in enriching the soil and obtaining high yields from plants. In recent years, a number of experiments have been conducted around the world on the symbiotic relationship between plant and microorganism species. The group of microorganisms known to science to this day lives in the soil around the roots of nodular plants, cultivating free nitrogen in nature to make it viable for plants. In addition to these types of microorganisms, there are groups of microorganisms that live in plant tissues and help plants grow and develop. This group of microorganisms is correspondingly endophytic bacteria of plants. According to some scientists, bacterial endophytes colonize all the internal tissues of plants, and these groups of microorganisms are found in the internal tissues of almost all plants around the world. Some endophytes help plants grow. The mechanisms that accelerate plant growth used by bacterial endophytes for these strains are similar to those used by rhizosphere bacteria [1].

Endophytic microorganisms have been found to live in plant tissues and synthesize substances necessary for plant growth. Alternatively, substances necessary for plant life are actively involved in the synthesis of phytohormones, auxin, cytokinin, gibberellin and similar bioactive substances. Adapted to grow in saline soils in desert and semi-desert areas, these endophytic bacteria play an important role in the vital activity of halophyte and xerophyte plants. The ability of different bacterial endophytes to develop plant growth occurs as a direct or indirect mechanism. Direct stimulation of plant growth occurs when bacteria facilitate the uptake of essential nutrients or by modulation of hormone levels in the plant. Endophytic microorganisms can modulate the synthesis of several different phytohormones such as auxin, cytokinin, and gibberellin. Also, some endophytic microorganisms can also
synthesize some enzymes, such as 1-aminocyclopropane-1-carboxylate (ASK) diamine, which can reduce phytohormone ethylene levels by releasing a directly higher concentration of ethylene in all higher plants.

In recent years, many scientists have been conducting experiments with endophytic microorganisms found in the tissues of agricultural plants. According to G. Santoyo and others, endophytic microorganisms found in food crops have been identified and their properties, their role in plant development and the production of substances important for their growth have been determined. Much information has been found about this. For example, the endophytic bacterium *Azospirillum lipoferum* 4B is found in rice, corn, and wheat plants that are eaten and synthesizes nitrogen cation exchanger for plant growth [2]. *Azospirillum sp. B510* in the synthesis of nitrogen cation in rice plant [2], *Burkholderia phytofirmans PsJN* synthesis of IAA by endophytic bacteria in potato, tomato, corn, barley, onion, canola, grape plants, 1-aminocyclopropane-1-carboxylate diamine, acetone, and 2,3-butanediol in soy plants [3-6].

Based on these data, it is important to determine and analyze the content of endophytic bacteria in the rhizosphere, endosphere and phyllosphere of such plants as Isen, teresken, Karabarok, sarsazan, keyreuk, okbosh, balykkuz, common in desert and semi-desert areas.

**References:**


