

Change of Physicochemical Properties of Grain in the Germination of Chickpea Grain

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Abstract : Indicators of quality of grain chickpeas, the absorption of water different temperatures by grain chickpeas studied. Organoleptic and physicochemical changes in the germination of chickpeas studied. The total time of the duration of germination of chickpea grain is determined. As a result of the analysis of experimental data, it was found that the germination time at which the chickpea sprout length was 0.5- 3 mm varies from 21 to 25 hours. The change in the volume of chickpea grain during germination was investigated. It was found that in the first 2 hours the volume of chickpeas changes slightly - by 38%. This is due to the process of adsorption of water to a critical state. From 2 to 9 hours, the process of swelling of chickpea grain is observed - the vital activity of cells increases, enzymatic systems become active, the respiratory coefficient increases; gibberellin, stimulating the formation of a number of enzymes, is released. During this period, there is a sharp increase in the volume of chickpea grains - up to 138%. From 9 to 19 hours, "sprouting" of chickpea grains is observed, no morphological changes occur in the corcule - the grain volume remains at 138%. From 19 hours, the grain growth process begins, while the grain volume increases by 143%.

Keywords : chickpea, seeds, legumes, germination, physic-chemical properties

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