

**Techno-economical Aspect
on Irradiation Technology Application
to Handle Post Harvest of Temulawak
(*Curcuma xanthoriza* Roxb.)**

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ABSTRACT

TECHNO-ECONOMICAL ASPECT ON IRRADIATION TECHNOLOGY APPLICATION TO HANDLE POST HARVEST OF TEMULAWAK (*Curcuma xanthorrhiza* Roxb.). Sprouting inhibition of fresh harvested temulawak (*C. xanthorrhiza* Roxb.) rhizome is an important factor to provide fresh harvested rhizome as a source of raw material both *simplicia* or herbal medicines. Fresh rhizome is easy to sprout of herbal medicine storage which impact to the decreasing of quality or deterioration of it. Therefore, the producers of herbal medicine prefer to buy dried rhizomes. So far at the level of farming producers, they need the post harvest technology, which able to maintain the quality of freshness harvested of rhizome, this will increase the bargaining position of farming producers in marketing of fresh harvested rhizome. Based on previously results of research showed that gamma irradiation at the dose of 0.15 kGy could inhibit the sprouting of fresh harvested rhizome and prolonged its storage life for 6 to 8 weeks. The objective of this paper is to describe the preliminary assessment of techno-economics feasibility of gamma irradiation application in post harvest handling of fresh harvested *C. xanthoriza* Roxb rhizome. The techno-economical assessment results show that gamma irradiation application is feasible to be applied to maintain the quality of fresh harvested *C. xanthorrhiza* Roxb. rhizome regardless the significantly sprouting condition as long as the storage.

Keywords: *Curcuma xanthorrhiza* Roxb., gamma irradiation, feasible and quality, sprouting inhibition, techno-economics, temulawak rhizome.