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MODIFIED ATMOSPHERE STORAGE OF MILLED RICE IN MOBILE CONTAINERS

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ABSTRACT

Sealed storage of milled rice with CO₂ gas in small 45-gallon metal drums serves not only as an alternative to fumigation, but also to complete and complement existing storage methods. Storage studies in five states showed that the physical and eating qualities of rice were maintained for at least 24 months. Purging the food grade CO₂ gas to 80% took 5 minutes, and the sealing technique used managed to retain the gas at the minimum required to completely disinfest all insects (35% gas level for 2 weeks). This decentralized food storage technique is ideal to meet food security-related needs, and to provide flexible storage during emergencies (military conflict and natural disasters). The technology is simple but effective, low cost, and environment-friendly. Only local materials are used. It is easily transported in any weather conditions and to all geographical locations.