

RINGKASAN

Penelitian ini bertujuan untuk menentukan konsentrasi lilin dan jenis pengemas yang paling tepat terhadap kualitas buah pepaya maupun daya simpan buah pepaya. Buah pepaya berasal dari kebun petani di daerah produksi buah pepaya di Rawalo, Kabupaten Banyumas, Jawa Tengah. Penelitian dilakukan di Laboratorium Teknologi Pertanian Fakultas Pertanian Universitas Jenderal Soedirman.

Rancangan percobaan yang digunakan dalam penelitian ini adalah Rancangan Acak Kelompok Lengkap (RAKL) faktorial dengan 2 faktor. Faktor pertama adalah konsentrasi pelapis lilin yang terdiri 3 taraf yaitu konsentrasi pelapis lilin 0% (L0), konsentrasi pelapis lilin 5% (L1), dan konsentrasi pelapis lilin 10% (L2). Faktor kedua adalah faktor jenis pengemas yang terdiri 4 taraf yaitu tanpa pengemas (P0), kemas plastik HDPE (P1), kemas plastik PP (P2), dan kemas koran (P3). Total perlakuan adalah 12 perlakuan, yaitu 3 perlakuan konsentrasi pelapis lilin dan 4 perlakuan jenis pengemas. Percobaan dilakukan sebanyak 3 kali ulangan sehingga semuanya ada 36 unit percobaan. Setiap unit percobaan diisi dengan 4 buah pepaya, jadi seluruhnya ada 144 buah pepaya. Lama penelitian berlangsung selama 10 hari. Suhu ruangan yang digunakan dalam penelitian ini berkisar antara 25-30°C. Data diperoleh dari pengukuran susut bobot, total padatan terlarut (kandungan gula), tekstur, kadar vitamin C dan uji organoleptik. Setiap taraf perlakuan yang berbeda, dilakukan uji lanjut *Duncan's Multiple Range Test* pada taraf kepercayaan 95%.

Pepaya yang digunakan dalam penelitian ini banyak yang terkena penyakit. Gejala penyakit mulai terlihat pada hari ke 6 setelah perlakuan. Penyakit pada pepaya ini disebabkan oleh cendawan seperti *Rhizopus* sp. dan *Colletotrichum gloeosporioides*. Penyebab berkembangnya cendawan ini disebabkan oleh suhu yang berkisar antara 27-30°C dan kelembaban antara 90-95%, dimana merupakan kondisi yang cocok bagi perkembangan cendawan. Hasil penelitian menunjukkan bahwa masing-masing perlakuan mempengaruhi kualitas dan daya simpan buah pepaya. Kombinasi perlakuan konsentrasi pelapis lilin 5% dan jenis pengemas plastik PP mampu memberikan pengaruh paling baik dibandingkan perlakuan lainnya pada variabel susut bobot, tekstur, kadar vitamin C, dan uji organoleptik (kesegaran, warna, aroma, kekerasan, dan rasa).

SUMMARY

This research aimed to know the most appropriate type of packaging and the concentrate of wax to the quality and shelf life of papaya fruit. The papaya fruit derived from the farmers papaya fruit orchard in the production of papaya in Rawalo, Banyumas Regency, Central Java. Research conducted at The Agricultural Technology Laboratory, Faculty of Agriculture, Jenderal Soedirman University.

The experimental design used in this research was Randomized Complete Block Design (RCBD) with two factors. The first factor was the concentration of the waxing which consisted of three levels in explanation 0% waxing concentration (L0), 5% waxing concentration (L1), and the 10% waxing concentration (L2). The second factor was a factor in the type of packaging which consisted of four levels in explanation without packaging (P0), HDPE plastic packaging (P1), PP plastic packaging (P2), and packing paper (P3). The total treatment was contain 12 treatments, the 3 treatment of waxing concentration and 4 types of packaging treatment. The experiments were performed 3 times restarting which all there were 36 experimental units. Each experimental unit filled with 4 pieces of papaya, so the total was 144 papaya. Long research lasted for 10 days. The room temperature was used in the study ranged between 25-30°C. Data acquired from measurements of weight loss, total soluble solids (sugars), texture, vitamin C and organoleptic tests. Each stage of a different treatment, a further test carried Duncan's Multiple Range Test at the level of 95%.

*Papaya was used in this research were exposed to many diseases. Symptoms of the disease began to be seen on day 6 after treatment. The diseases of papaya were caused by fungi such as *Rhizopus* sp. and *Colletotrichum gloeosporioides*. The cause of the development of this fungus were caused by temperatures between 27-30°C and humidity between 90-95%, which was a condition suitable for the development of fungi. The results showed that each treatment affect the quality and shelf life of papaya fruit. Treatment combination of 5% waxing concentration and PP plastic packaging were able to provide most excellent effect than other treatments in variable weight loss, texture, vitamin C, and organoleptic (freshness, color, odor, hardness, and flavor).*