

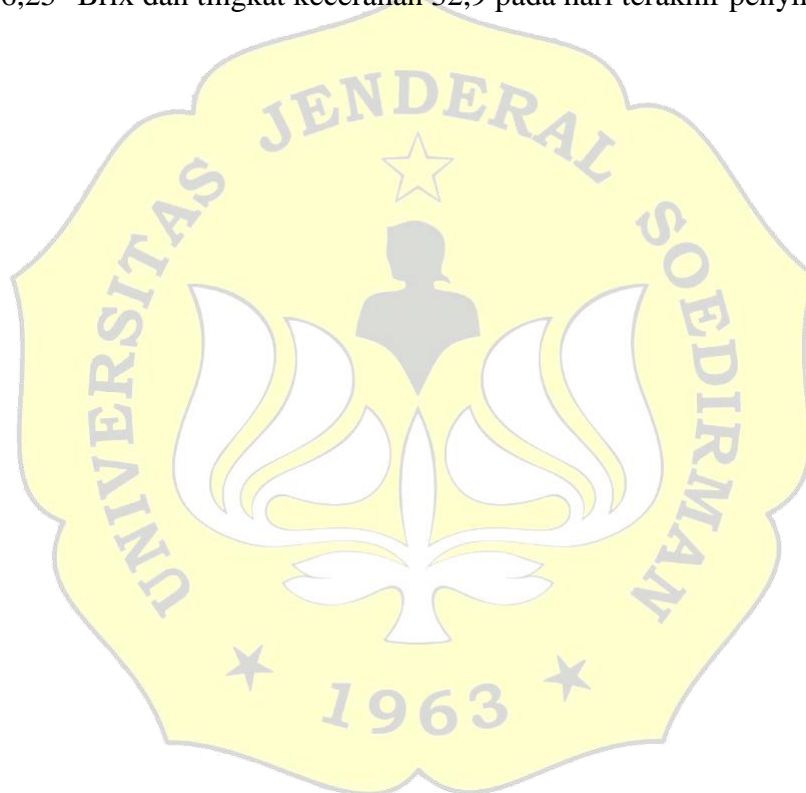
RINGKASAN

Nanas merupakan salah satu komoditas unggul di Indonesia. Jumlah produksi nanas yang mencapai 8 ribu ton pada tahun 2017 dan cita rasa yang khas menjadikan nanas sebagai komoditas ekspor utama di Indonesia. Dari total produksi tersebut, sebanyak 95% di ekspor dalam bentuk nanas olahan sedangkan, sisanya dalam bentuk segar. Hal ini disebabkan oleh kadar air nanas yang tinggi sehingga nanas bersifat *perishable* (mudah rusak). Salah satu cara penanganan pascapanen buah adalah dengan aplikasi *coating*. Pati merupakan bahan baku yang potensial untuk digunakan sebagai bahan *coating*. Pati dengan kadar amilosa yang tinggi mampu membentuk lapisan yang lebih tebal sehingga dapat memberi sifat pembatas yang optimal seperti pati ganyong, pati kentang, dan pati ubi jalar. Tujuan dari penelitian ini adalah: 1) mengetahui pengaruh aplikasi *coating* berbasis pati ganyong, kentang, dan ubi jalar terhadap karakteristik fisik dan kimia buah nanas selama penyimpanan; 2) mengetahui pengaruh aplikasi *coating* metode *spraying* dengan ukuran *nozzle* yang berbeda terhadap karakteristik fisik dan kimia buah nanas selama penyimpanan; 3) mengetahui kombinasi perlakuan ukuran *nozzle sprayer* dan jenis pati terpilih terhadap kualitas buah nanas selama penyimpanan.

Penelitian ini merupakan jenis penelitian eksperimentasl Rancangan Acak Lengkap (RAL) faktorial. Faktor yang diteliti adalah jenis bahan *coating* (P) dengan 3 jenis yaitu *coating* berbahan pati ganyong (P1), *coating* berbahan pati kentang (P2), dan *coating* berbahan pati ubi jalar (P3); ukuran *nozzle sprayer* (N) dengan 3 jenis yaitu ukuran *nozzle sprayer* 0,6 mm (N1), ukuran *nozzle sprayer* 1 mm (N2), ukuran *nozzle sprayer* 1,5 mm (N3). Berdasarkan faktor tersebut diperoleh 9 kombinasi perlakuan. Variabel yang diuji diantaranya variabel kimia dan variabel fisik. Variabel kimia terdiri dari kadar air, vitamin C, dan total padatan terlarut (TPT) dan variabel fisik terdiri dari tingkat kekerasan dan tingkat kecerahan.

Hasil penelitian menunjukkan bahwa 1) aplikasi *coating* berbasis pati ganyong, kentang, dan ubi jalar mampu mempertahankan kualitas buah nanas selama penyimpanan. Penggunaan pati ganyong memiliki sifat pembatas paling optimal dibanding jenis pati lainnya, yaitu mampu menekan laju oksidasi dilihat

dari nilai rata-rata kadar vitamin C buah, menahan penguapan air, dan menghambat laju respirasi dilihat dari nilai TPT buah nanas; 2) ukuran *nozzle sprayer* yang digunakan turut mempengaruhi kualitas buah nanas, dimana penggunaan ukuran *nozzle sprayer* 1,5 mm mampu mempertahankan kualitas buah nanas dilihat dari nilai rata-rata kadar air, vitamin C, TPT, tingkat kekerasan, dan tingkat kecerahannya; 3) Kombinasi perlakuan terpilih untuk buah nanas adalah pengaplikasian *coating* berbahan pati kentang dan ukuran *nozzle sprayer* 1mm (P2N2), dengan kadar air 81,79%, vitamin C 11,88 mg/100 g, dan total padatan terlarut 16,25 °Brix dan tingkat kecerahan 32,9 pada hari terakhir penyimpanan.



SUMMARY

Pineapple has becoming one of major commodity in Indonesia. The total of its production have reached 8 thousand tons during 2017, the peculiar taste of pineapple is one of the main reason why pineapple has become the main export commodity in Indonesia. Among all of its production, 95% of pineapple exported in a processed type of form and the rest are most likely exported in a fresh form of fruit. This is caused mainly by how high does water of one pineapple can content, therefore pineapple tend to be characterized as perishable. One of the way to better managed the post-harvesting is by the applicational concept of coating. In this case, the starch of one fruits has good potential in order to apply this coating concept. The starch with high amylose can build a thick layer so it can provide an optimal barrier such as Canna's starch, Potato's starch, and Sweet-potato's starch.

The purpose of this research is: 1) to determine the application of canna, potato, and sweet-potato's starch-based coatings to the physical as well as chemical characteristics of pineapple during storagemet; 2) to understand the application of spraying method with different nozzle sizes may affect the physical and also chemical characteristics of pineapple during storagemet; 3) to study the combination of the nozzle sprayer size setting and which type of the selected-starch on the quality of pineapple during storagemet.

This research is an experimental type of factorial research based on Completely Randomized Design. The determining factor is the type of coating material (P) with 3 types, namely canary starch (P1), potato starch (P2), sweet-potato starch (P3); the size of the sprayer nozzle 0,6 mm (N1), the size of the sprayer nozzle 1 mm (N2), the size of the sprayer nozzle 1,5 mm (N3). Based on those factors, 9 combinations of treatment were obtained. The variable which will be examined involves chemical variables as well as physical variables. Chemical variable consist of water content, vitamin C, and total dissolved solids (TDS), as for the physical variable it involves hardness level and the brightness level.

The results research showed that 1) the application of Coating based of Canna, Potato and Sweet-potato's starch can maintain the quality of pineapples during the storagemet. The usage of Canna's starch has the most potential to create an optimal barriers compared to any other type of starch fruits, in which it could pressed the oxidizing process seen by the average value of the vit c levels that one fruit has, withstand the water evaporation and inhibit the rate of respiration process which could be seen by the value of Pineapple's TDS (TPT); 2) the size of the sprayer nozzle which used can also affects the quality of pineapple, where the usage of a 1.5 mm sprayer nozzle size are able to maintain the quality of pineapple proven by the average value of water content, vitamin C, TPT, hardness level, and brightness level; 3) the selected treatment combination for pineapple fruit is the application of a coating made of potato starch and a sprayer nozzle size of 1mm (P2N2), with a water content of 81.79%, vitamin C 11.88 mg / 100 g, and a total dissolved solid of 16.25 ° Brix and a brightness level of 32.9 on the last day of storagemet.

