

## **BAB 5**

### **KESIMPULAN DAN SARAN**

#### **5.1 Kesimpulan**

Berdasarkan hasil penelitian yang telah dilakukan, didapatkan beberapa kesimpulan sebagai berikut:

1. Jenis *tray* yang digunakan memiliki pengaruh terhadap distribusi suhu dan aliran udara panas yang kemudian mempengaruhi laju pengeringan, waktu pengeringan, dan efisiensi *solar dryer*.
2. Jarak antar *tray* memiliki pengaruh terhadap distribusi suhu dan aliran udara panas tiap *tray*, namun memiliki pengaruh yang lebih kecil terhadap waktu pengeringan dan efisiensi *solar dryer*.
3. Performa *solar collector* berhubungan dengan intensitas radiasi matahari dan *solar collector* mampu menaikkan suhu udara panas hingga suhu 44 °C dengan efisiensi pada rentang 46-59 %.
4. Variasi terbaik untuk pengeringan kopi hingga mencapai kadar air 12,5% sesuai SNI adalah menggunakan *perforated tray* dengan jarak antar *tray* sebesar 10 cm. Variasi tersebut dapat menghasilkan efisiensi sistem *solar dryer* sebesar 55,55 %.

#### **5.2 Saran**

Berdasarkan hasil penelitian yang telah dilakukan, terdapat beberapa saran untuk penelitian selanjutnya:

1. Melakukan pengeringan dengan variasi kemiringan dan jenis *solar collector* untuk mempelajari lebih lanjut mengenai performa *solar collector*.
2. Melakukan penyamaan kadar air awal sampel setiap variasi percobaan.
3. Melakukan perbandingan antara pengeringan dengan pengeringan terbuka.
4. Menambahkan insulasi pada ruangan pengering untuk mengurangi hilangnya panas.
5. Melakukan analisis lebih lanjut terhadap kandungan senyawa kafein dan asam klorogenat.

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