

RINGKASAN

Nanda Putri Eriyani, Program Studi Teknologi Industri Pertanian, Fakultas Pertanian, Universitas Muhammadiyah Jember, Juni 2026, Kajian Proses dan Analisis Kelayakan Finansial Usaha Kopi Bubuk di PT Nor Coffee Indonesia, Dosen Pembimbing Danu Indra Wardhana dan Andika Putra Setiawan.

Penelitian ini dilatarbelakangi oleh meningkatnya kebutuhan industri kopi terhadap proses *roasting* yang stabil dan konsisten, sementara PT Nor Coffee Indonesia belum diketahui evaluasi teknis mengenai kinerja mesin *roasting* serta kelayakan finansial usaha kopi bubuknya. Penelitian ini bertujuan menganalisis kinerja mesin *roasting N1000i* dan kelayakan finansial usaha kopi bubuk. Analisis kinerja meliputi rendemen, kebutuhan energi, efisiensi proses, kapasitas efektif, konsumsi energi spesifik, dan konsumsi bahan bakar. Hasil penelitian menunjukkan bahwa mesin *roasting N1000i* mampu menyangrai kopi sebanyak 1 kg per proses pada suhu rata-rata 200°C dengan tingkat kematangan *medium to dark roast* sesuai standar perusahaan. Rendemen yang dihasilkan sebesar 80% dengan susut bobot 20%. Mesin memiliki efisiensi yang baik dalam memanfaatkan energi pembakaran LPG sehingga mampu menjaga kestabilan suhu dan menghasilkan mutu *roasting* yang merata.

Analisis finansial menunjukkan bahwa usaha kopi bubuk di PT Nor Coffee Indonesia layak dijalankan dengan nilai NPV sebesar Rp3.986.908.297, IRR 71,80%, Net B/C Ratio 1,51, BEP 12.894 unit per tahun, dan *Payback Period* (PBP) 2,82 tahun. Hasil analisis sensitivitas menunjukkan bahwa usaha masih layak pada kenaikan harga bahan baku hingga 15 dan 30% namun, menjadi tidak layak apabila harga bahan baku meningkat 45%. Pada kondisi tersebut nilai NPV menjadi negatif, nilai IRR berada di bawah tingkat *discount rate*, dan nilai Net B/C Ratio kurang dari satu sehingga usaha berpotensi mengalami kerugian.

Kata Kunci: Kopi Bubuk, Mesin *Roasting N1000i*, Efisiensi *Roasting*, Analisis Finansial, Analisis Sensitivitas.

SUMMARY

Nanda Putri Eriyani, Agricultural Industrial Technology Study Program, Faculty of Agriculture, Muhammadiyah University of Jember, June 2026, Process Study and Financial Feasibility Analysis of Ground Coffee Business at PT. Nor Coffee Indonesia. Supervisors: Danu Indra Wardhana and Andika Putra Setiawan

This research was motivated by the coffee industry's increasing need for a stable and consistent roasting process. Meanwhile, PT Nor Coffee Indonesia lacked a technical evaluation of its roasting machine performance and the financial feasibility of its ground coffee business. This study aimed to analyze the performance of the N1000i roasting machine and the financial feasibility of its ground coffee business. Performance analysis included yield, energy requirements, process efficiency, effective capacity, specific energy consumption, and fuel consumption. The results showed that the N1000i roasting machine was capable of roasting 1 kg of coffee per process at an average temperature of 200°C with a medium to dark roast level, meeting company standards. The resulting yield was 80% with a weight loss of 20%. The machine's efficiency in utilizing LPG combustion energy allows it to maintain temperature stability and produce an even roast quality.

Financial analysis indicates that the ground coffee business at PT Nor Coffee Indonesia is feasible, with an NPV of Rp3,986,908,297, an IRR of 71.80%, a Net B/C Ratio of 1.51, a BEP of 12,894 units per year, and a Payback Period (PBP) of 2.82 years. Sensitivity analysis results indicate that the business remains viable with raw material price increases of 15 and 30%, but becomes unviable if raw material prices increase by 45%. Under these conditions, the NPV becomes negative, the IRR falls below the discount rate, and the Net B/C Ratio is less than one, potentially incurring losses.

Keywords: Ground Coffee, N1000i Roasting Machine, Roasting Efficiency, Financial Analysis, Sensitivity Analysis.