Arkanudin Rizki Permono
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Ihsan Ashari
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POTENSI EKONOMI DARI KOPI INDONESIA

"Mulai Biji Hingga Ampas"

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Penerbit Widina

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KATA PENGANTAR

Puji syukur ke hadirat Tuhan Yang Maha Esa atas rahmat dan karunia-Nya sehingga buku ini yang berjudul "Potensi Ekonomi Kopi Indonesia mulai Biji hingga Ampas: Inovasi Pengolahan Kopi dan Pemanfaatan Limbahnya" dapat disusun.

Buku ini disusun di tengah meningkatnya minat masyarakat terhadap kopi, masih banyak potensi yang belum tergali dari hasil samping dan limbah kopi. Padahal, jika dikelola dengan tepat, setiap bagian dari kopi mulai dari biji hingga ampas dapat memberikan nilai ekonomi, sosial, dan lingkungan yang luar biasa.

Melalui buku ini, tim penulis berupaya menyajikan informasi yang tidak hanya bersifat teoritis, tetapi juga aplikatif dan inspiratif. Pembaca akan diajak memahami proses pengolahan kopi secara menyeluruh mulai dari panen sampai kopi siap seduh, serta memanfaatkan hasil sampingnya menjadi produk yang bernilai guna dan ramah lingkungan.

Harapan tim penulis, buku ini dapat menjadi panduan praktis bagi petani, pelaku UMKM, serta generasi muda yang ingin mengetahui serta berusaha di bidang pengolahan kopi serta memanfaatkan limbah kopi.

Akhirnya, tim penulis mengucapkan terima kasih kepada semua pihak yang telah memberikan dukungan, saran, dan inspirasi dalam proses penyusunan buku ini. Semoga buku ini bermanfaat dan menjadi salah satu langkah kecil dalam pengembangan pengelolaan kopi yang lebih hijau, inovatif, dan berdaya saing.

Tim Penulis

KATA PENGANTAR

Puji syukur kami panjatkan ke hadirat Tuhan Yang Maha Esa atas segala rahmat dan karunia-Nya sehingga buku Potensi Ekonomi dari Kopi Indonesia "Mulai Biji Hingga Ampas" ini dapat disusun dengan baik. Buku ini disusun sebagai media edukasi, diseminasi inovasi, serta referensi ilmiah praktis mengenai komoditas kopi, mencakup aspek ekonomi, penanganan pascapanen, pengolahan produk, hingga pemanfaatan limbah kopi secara berkelanjutan.

Buku ini disusun di tengah meningkatnya minat masyarakat terhadap kopi, masih banyak potensi yang belum tergali dari hasil samping dan limbah kopi. Jika dikelola dengan tepat, setiap bagian dari kopi mulai dari biji hingga ampas dapat memberikan nilai ekonomi, sosial, dan lingkungan yang luar biasa.

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pembangunan pertanian modern di Indonesia. Kami menyadari bahwa buku ini masih memiliki keterbatasan baik dari sisi kedalaman materi maupun cakupan pembahasan. Oleh karena itu, kritik, saran, serta masukan konstruktif sangat diharapkan guna penyempurnaan pada masa mendatang. Semoga buku ini dapat menjadi referensi akademis sekaligus praktis bagi

masyarakat luas yang memiliki perhatian terhadap pengembangan kopi secara berkelanjutan.

Akhir kata, kami mengucapkan terima kasih kepada seluruh pihak yang telah berkontribusi dalam proses penyusunan buku ini. Semoga karya ini memberikan manfaat nyata bagi peningkatan kapasitas SDM pertanian, serta kemajuan agribisnis kopi nasional.

Aris Hanafiah, S.Tp., M.P.

Widyaiswara Ahli Madya Balai, Besar Pelatihan Pertanian (BBPP)

Lembang, BPPSDMP Kementerian Pertanian

DAFTAR ISI

PENDAHULUAN

A. LATAR BELAKANG

Kopi merupakan bagian integral dari kehidupan sosial dan ekonomi masyarakat Indonesia. Keberadaannya tidak hanya berfungsi sebagai minuman konsumsi harian, tetapi juga sebagai medium interaksi sosial dan simbol produktivitas. Selain nilai kulturalnya, kopi berperan sebagai komoditas strategis yang mendukung perekonomian nasional, khususnya pada sektor pertanian rakyat.

Indonesia memiliki potensi besar dalam industri kopi dunia dengan volume produksi tahunan yang melebihi setengah juta ton (Hidayanti *et al*., 2021). Komoditas ini memainkan peran krusial dalam mendukung pertumbuhan ekonomi nasional melalui pemenuhan permintaan pasar domestik maupun internasional (Wahyudi *et al*., 2020). Selain memperkuat devisa negara, sektor kopi juga menjadi tulang punggung bagi pendapatan masyarakat perdesaan, seperti di Desa Tulungrejo yang kontribusinya mencapai 58,47% dari total pendapatan petani (Triwanto *et al*., 2022).

INDUSTRI KOPI INDONESIA

A. SEJARAH INDUSTRI KOPI INDONESIA

Sejarah industri kopi di Indonesia tidak dapat dipisahkan dari perjalanan panjang perkembangan ekonomi dan sosial masyarakat Nusantara. Sejak diperkenalkan dan dibudidayakan secara luas, kopi berkembang menjadi komoditas penting yang menopang struktur ekonomi perdesaan. Hingga saat ini, produksi kopi nasional didominasi oleh varietas Arabika dan Robusta yang sebagian besar diusahakan oleh sekitar dua juta petani kecil. Kondisi tersebut menunjukkan bahwa sejak awal hingga masa kini, industri kopi Indonesia tumbuh melalui keterlibatan langsung masyarakat lokal sebagai pelaku utama (Ashardiono & Trihartono, 2024; Faradillah *et al*., 2019)

Dalam lintasan sejarah regional, Provinsi Aceh menempati posisi penting melalui pengembangan kopi Arabika Gayo. Kopi Gayo tumbuh sebagai komoditas unggulan yang memiliki reputasi kuat di tingkat nasional dan internasional. Keunggulan tersebut tidak hanya ditentukan oleh kualitas rasa, tetapi juga oleh sistem produksi yang relatif berkelanjutan dan berbasis

BAB
3

RESPON FISIOLOGIS, NUTRISI, & SIMULASI BIAYA PRODUKSI LAHAN KECIL DARI KOPI DI INDONESIA

A. RESPON FISIOLOGIS TANAMAN KOPI

1. Kopi Arabika (*Coffea arabica L*)

Tanaman kopi arabika (*Coffea arabica*) memiliki karakter fisiologis yang sangat dipengaruhi oleh kondisi lingkungan tumbuh, terutama ketersediaan air, intensitas cahaya, dan unsur hara. Respons fisiologis tanaman ini menentukan kemampuan adaptasi, pertumbuhan, serta produktivitasnya. Oleh karena itu, pemahaman terhadap aspek fisiologis kopi arabika menjadi dasar penting dalam pengelolaan budidaya yang berkelanjutan dan adaptif terhadap perubahan lingkungan (DaMatta & Ramalho, 2006).

Salah satu faktor pembatas utama dalam fisiologi kopi arabika adalah defisit air. Berbagai penelitian menunjukkan adanya variasi genotipe dalam toleransi terhadap kekeringan. Beberapa genotipe mampu mempertahankan

PROSES PENGOLAHAN KOPI

A. KARAKTERISTIK PANEN KOPI IDEAL DALAM PERSPEKTIF *CLIMATE SMART AGRICULTURE*

Penerapan *Climate-Smart Agriculture* (CSA) atau Pertanian Cerdas Iklim menjadi strategi vital dalam menjaga stabilitas produksi kopi nasional di tengah ketidakpastian iklim global. Pendekatan ini menekankan pada penyesuaian praktik budi daya yang adaptif terhadap anomali cuaca untuk memastikan keberlanjutan panen. Tujuan utama dari metode ini adalah meminimalkan dampak negatif perubahan lingkungan sekaligus mempertahankan kualitas dan kuantitas hasil panen (Sarvina *et al*., 2021).

Salah satu karakteristik utama budi daya kopi yang adaptif terhadap iklim adalah pemilihan lokasi tanam dengan elevasi yang tepat. Seiring dengan kenaikan suhu bumi, area dataran tinggi di atas 1.500 meter di atas permukaan laut (mdpl) diproyeksikan menjadi zona paling ideal untuk pertumbuhan kopi, terutama jenis arabika. Pergeseran area tanam ke elevasi yang lebih tinggi ini merupakan bentuk adaptasi fisik untuk mendapatkan

PRODUK LAIN DARI TANAMAN KOPI

A. PRODUK *WINE* KOPI

Salah satu inovasi produk yang paling menonjol dalam beberapa tahun terakhir adalah "*Wine* Kopi" atau *Coffee Wine*. Istilah "*wine* kopi" (atau kopi *wine*) mengacu pada jenis cita rasa kopi yang memiliki aroma dan rasa mirip anggur fermentasi (*wine*) — manis, asam buah, dan kompleks. Namun, bukan berarti kopi ini mengandung alkohol. Produk ini bukanlah minuman beralkohol yang dicampur dengan kopi, melainkan hasil dari metode pemrosesan pascapanen tertentu yang menghasilkan profil rasa menyerupai anggur (*wine*). Dataran Tinggi Gayo di Aceh menjadi pusat pengembangan utama produk ini, di mana petani memanfaatkan kondisi alam untuk menciptakan varian rasa yang eksotis.

Proses pembuatan *wine* kopi, khususnya Gayo *Wine* Coffee, melibatkan fermentasi buah kopi utuh (ceri merah) dalam jangka waktu yang lebih lama dibandingkan dengan metode konvensional. Metode ini dikenal sebagai *wine process*, yang berbeda dengan *honey process* atau *natural process* biasa.

PEMANFAATAN LIMBAH KOPI

A. PEMANFAATAN LIMBAH UNTUK PUPUK ORGANIK

Pertumbuhan signifikan industri kopi global membawa konsekuensi berupa peningkatan volume limbah pascapanen, seperti kulit buah, kulit tanduk, ampas kopi, dan abu sisa pembakaran, yang berisiko mencemari lingkungan apabila tidak dikelola dengan tepat. Padahal, melalui pendekatan ekonomi sirkular, ragam limbah yang kaya unsur hara tersebut memiliki potensi besar untuk dimanfaatkan sebagai bahan baku pupuk organik padat maupun cair yang tidak hanya bernilai ekonomi tinggi, tetapi juga efektif meningkatkan kesuburan tanah serta mendukung efisiensi budidaya kopi secara berkelanjutan (Wijaya *et al*., 2024).

Pemanfaatan limbah kopi sebagai pupuk organik didasarkan pada kandungan nutrisi makro dan mikro yang tersimpan di dalamnya. Ampas kopi diketahui memiliki kandungan nitrogen (N) sebesar 2,10%, fosfor (P) 0,45%, dan kalium (K) 0,68%. Selain unsur hara makro, ampas kopi juga kaya akan bahan organik yang mencapai 35,8%, sehingga sangat potensial untuk

PRASARANA DAN SARANA PENANGANAN PASCA PANEN KOPI

Penanganan pascapanen kopi merupakan fase krusial yang menentukan keberhasilan produksi komoditas ini. Tahapan ini memiliki pengaruh yang sangat signifikan terhadap kualitas fisik biji, profil cita rasa yang dihasilkan, serta nilai ekonomi produk akhir di pasar global.

Salah satu metode yang paling mendasar dalam penanganan pascapanen adalah pengolahan kering atau *natural process*. Dalam metode ini, buah kopi ceri dikeringkan secara langsung di bawah sinar matahari selama beberapa minggu tanpa melalui proses pencucian terlebih dahulu.

Karakteristik rasa yang dihasilkan dari metode pengolahan kering cenderung lebih manis dengan nuansa buah yang kuat. Profil rasa ini terbentuk akibat adanya kontak yang berkepanjangan antara kulit buah ceri dan biji kopi selama proses pengeringan berlangsung (Mangku *et al*., 2022; Widodo *et al*., 2023).

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PROFIL PENULIS

Arkanudin Rizki Permono, M.E.

Penulis pertama lahir di Surakarta pada tanggal 12 Juli 1992 dan mulai berkarier sebagai dosen pada tahun 2025. Ia menempuh pendidikan Sarjana (S1) pada Program Studi Agribisnis, Fakultas Pertanian, Universitas Sebelas Maret dan lulus pada tahun 2015. Selanjutnya, ia melanjutkan pendidikan Magister (S2) pada Program Studi Ekonomi dan Studi Pembangunan, Fakultas Ekonomi dan Bisnis, Universitas Sebelas Maret dan menyelesaikannya pada tahun 2020.

Dalam pengembangan keilmuannya, penulis memiliki beberapa bidang kepakaran, yaitu Ekonomi Pertanian, Ekonomi Islam, Ekonomi Industri, serta Ekonomi Lingkungan. Keempat bidang tersebut menjadi fokus dalam kegiatan akademik, baik dalam pengajaran, penelitian, maupun pengabdian kepada masyarakat.

Sebagai akademisi muda, penulis berkomitmen untuk terus mengembangkan kapasitas keilmuan dan kontribusi ilmiah dalam bidang ekonomi, khususnya yang berkaitan dengan pembangunan berkelanjutan dan sektor pertanian. Saat ini, penulis dapat dihubungi melalui alamat email institusi di arkanudinrizkipermono@unsil.ac.id dan terdaftar pada SINTA dengan ID 6969682.

Aris Hanafiah, S.Tp., M.P.

Penulis kedua lahir di Tasikmalaya pada tanggal 28 September 1966 dan telah memulai karier profesionalnya di dunia pendidikan dan pelatihan sejak tahun 1996. Ia menempuh pendidikan Sarjana (S1) pada Program Studi Teknologi Hasil Pertanian, Fakultas Teknologi Pertanian, Instiper Yogyakarta dan lulus pada tahun 1992. Selanjutnya, ia melanjutkan pendidikan Magister (S2) pada Program Studi Agribisnis, Fakultas Ilmu Ekonomi Pertanian, Universitas Padjadjaran Bandung dan menyelesaikannya pada tahun 2008.

Dalam perjalanan kariernya, penulis memiliki keahlian utama di bidang pascapanen dan pengolahan hasil pertanian, yang menjadi fokus dalam kegiatan pengajaran, pelatihan, serta pengembangan sumber daya manusia pertanian. Saat ini, ia menjabat sebagai Widyaiswara Ahli Madya pada Balai Besar Pelatihan Pertanian (BBPP) Lembang di bawah Badan Penyuluhan dan Pengembangan Sumber Daya Manusia Pertanian (BPPSDMP) Kementerian Pertanian.

Dengan pengalaman panjang di bidang pelatihan dan pengembangan kapasitas sumber daya manusia, penulis berkomitmen untuk terus berkontribusi dalam peningkatan kualitas sektor pertanian, khususnya dalam pengolahan hasil pertanian yang bernilai tambah dan berkelanjutan.

Ihsan Ashari, S.E., M.Si.

Penulis ketiga lahir di Sinjai pada tanggal 1 Februari 1998 dan memulai karier akademiknya sebagai dosen pada tahun 2025. Ia menyelesaikan pendidikan Sarjana (S1) pada Program Studi Ekonomi Pembangunan, Fakultas Ekonomi dan Bisnis, Universitas Muhammadiyah Makassar pada tahun 2020. Selanjutnya, ia melanjutkan pendidikan Magister (S2) pada Program Studi Ekonomi Pembangunan dan Perencanaan di Universitas Hasanuddin dan lulus pada tahun 2023.

Bidang kepakaran yang ditekuni meliputi Ekonomi Pembangunan serta Perencanaan Wilayah, yang menjadi fokus dalam kegiatan akademik, baik dalam pengajaran, penelitian, maupun pengabdian kepada masyarakat. Sebagai akademisi muda, penulis memiliki komitmen untuk mengembangkan kajian-kajian strategis terkait pembangunan ekonomi daerah, perencanaan wilayah, serta isu-isu pembangunan berkelanjutan.

Saat ini, penulis dapat dihubungi melalui alamat email institusi ihsanashari@unsil.ac.id dan terdaftar pada SINTA dengan ID 6968534. Dengan latar belakang keilmuan yang dimiliki, penulis terus berupaya memberikan kontribusi ilmiah yang relevan bagi pengembangan ilmu ekonomi dan pembangunan di Indonesia.

Luthfi Alif Dinar Choirunnisa, M.E.

Penulis keempat lahir di Pacitan pada tanggal 13 September 1998 dan memulai karier akademiknya sebagai dosen pada tahun 2025. Ia menempuh pendidikan Sarjana (S1) pada Program Studi Pendidikan Ekonomi, Fakultas Ekonomi dan Bisnis, Universitas Negeri Malang dan lulus pada tahun 2020. Selanjutnya, ia melanjutkan pendidikan Magister (S2) pada Program Studi Ekonomi dan Studi Pembangunan, Fakultas Ekonomi dan Bisnis, Universitas Sebelas Maret dan menyelesaikannya pada tahun 2022.

Bidang kepakaran yang ditekuni meliputi Ekonomi Pembangunan serta Ekonomi Sumber Daya Alam dan Lingkungan. Kedua bidang tersebut menjadi fokus dalam pengembangan keilmuan, baik dalam kegiatan pengajaran, penelitian, maupun pengabdian kepada masyarakat, khususnya yang berkaitan dengan isu pembangunan berkelanjutan dan pengelolaan sumber daya secara optimal.

Sebagai akademisi muda, penulis memiliki komitmen untuk terus mengembangkan kapasitas keilmuan dan memberikan kontribusi nyata dalam pengembangan ilmu ekonomi, khususnya dalam konteks pembangunan dan lingkungan. Saat ini, penulis dapat dihubungi melalui alamat email institusi luthfialifdinarchoirunnisa@unsil.ac.id dan terdaftar pada SINTA dengan ID 6902286.

POTENSI EKONOMI DARI KOPI INDONESIA

"Mulai Biji Hingga Ampas"

Indonesia merupakan salah satu produsen kopi terbesar di dunia yang memiliki keragaman cita rasa khas dari berbagai daerah. Buku ini mengupas tuntas perjalanan komoditas kopi, mulai dari aspek hulu di perkebunan hingga proses hilirisasi yang bernilai tambah tinggi. Penulis menjelaskan bagaimana keunggulan geografis dan kekayaan *single origin* Nusantara menjadi fondasi kuat bagi ketahanan ekonomi nasional serta posisi tawar Indonesia di pasar internasional.

Lebih dari sekadar minuman, kopi dipaparkan sebagai ekosistem industri yang dinamis dan inklusif. Pembahasan dalam buku ini mencakup analisis rantai pasok, peran teknologi dalam pengolahan biji, hingga tren gaya hidup yang memicu pertumbuhan kedai kopi lokal. Strategi pemasaran dan pemberdayaan petani menjadi sorotan utama guna memastikan bahwa keuntungan ekonomi tidak hanya berputar di tingkat eksportir, tetapi juga menyejahterakan para produsen di tingkat tapak.

Menariknya, buku ini juga mengeksplorasi konsep ekonomi sirkular melalui pemanfaatan limbah atau ampas kopi. Ampas kopi yang selama ini dianggap sisa produksi ternyata memiliki potensi ekonomi baru sebagai bahan baku kosmetik, pupuk organik, hingga sumber energi terbarukan. Dengan pendekatan yang komprehensif, karya ini memberikan pandangan baru bahwa optimalisasi industri kopi Indonesia dapat dicapai melalui inovasi berkelanjutan yang meminimalkan limbah sekaligus memaksimalkan pendapatan.

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