

Precision Vision for Smart Agriculture

Implemented Case Study: **Berry-level intelligence for coffee yield prediction**

We turn ordinary photos of crops into an accurate count of what's on the plant and how ripe it is, so you can plan harvests, labour and sales on facts instead of guesswork. Coffee is our first proven crop. **See the case study at visimatics.com**

1 Who it's for

Growers
Know how much coffee is on your trees and when it will be ready, plot by plot.

Harvesters
Pick at the right time and send crews and machines where the ripe cherries are.

Coffee supply chain
Traders, exporters, processors and roasters get earlier, more reliable supply forecasts.

2 The challenge we solve

Hidden fruit. Leaves and branches cover dense clusters of cherries.

Green on green. Unripe cherries blend into the leaves around them.

Tricky light. Harsh sun and deep shade fool ordinary cameras and software.

Double counting. Overlapping cherries are easily counted twice.

The result today: yield estimates are made by eye, vary from person to person, and arrive too late to act on. Visimatics replaces them with a consistent, measurable count.

3 Results from real coffee farms

87%
Overall accuracy
Labels each cherry correctly about 87% of the time, tested on dense, real-world canopy.

93%
Unripe (green)
Finds 93 of every 100 green cherries, even when they blend into the leaves.

87%
Ripe (red)
Finds 87 of every 100 ripe cherries, the ones ready to pick and sell now.

75%
Semi-ripe
Finds 3 in 4 cherries in transition, signalling what's coming in the weeks ahead.

For technical teams: precision / recall by class. Raw 91.5% / 93.1% · Ripe 87.1% / 86.6% · Semi-ripe 84.6% / 75.0% · Weighted average precision 0.873 across dense field evaluations. Full details at www.visimatics.com

From one photo to a farm-wide yield picture

Every cherry is counted and graded by ripeness, then mapped across the farm, giving decision-makers a clear view of what will be harvested, where, and when.



One photo, 39 cherries counted and graded: 19 unripe, 7 semi-ripe, 11 ripe and 2 overripe, including fruit partly hidden behind leaves.



Ripeness mapped across the farm, so you can see which plots are ready first and plan picking routes accordingly.

What this means for your business

Forecast earlier
Mid-season yield estimates based on counts, not guesswork.

Harvest smarter
Pick at peak ripeness and put labour where it's needed.

Trade with confidence
Better supply visibility for contracts, pricing and logistics.

Let's work together on

FOR EQUIPMENT MAKERS

Autonomous Harvesting

The "eyes" for robotic coffee harvesters: telling the machine which cherries are ripe and where they are, to help tackle the growing shortage of farm labour.

Robotics & ag-machinery companies

FOR BUYERS & SELLERS

Commodities Trading

Replace subjective crop estimates with hard numbers and mid-season forecasts, giving you an earlier, clearer read on supply.

Traders, exporters & roasters

BEYOND COFFEE

Agricultural Data Collection & Curation

Coffee is our first crop; the same approach can extend to other agricultural commodities. We work with your team to collect and prepare exactly the data you need.

Agribusiness, research & AgTech teams

See how Visimatics can work for your crop.
Explore the coffee case study and book a conversation.

visimatics.com →

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