Farm to Fork

User manual: the traceability back office, the buyer portal and the public QR page

Version for the demo at demo.farmtofork.lightswitch.co.ke · November 2026 · Lightswitch

The screenshots come from the demo tenant **Mlima Fresh Growers Cooperative** and its sample data. Names, phone numbers and companies in the demo are invented.

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1. What Farm to Fork does

Farm to Fork records the journey of fresh produce from the farm to the buyer. Every step is written down when it happens, so that any pack of produce can later be traced back to the farmers and plots it came from, and forward to every shipment and buyer it reached.

Farmer and plot → Spray and harvest records → Delivery at a collection centre → Batch → Dispatch → Pack house: receive, pack, palletise → Shipment to a buyer → Consumer scans the QR code

The system has three parts:

- **The back office** (`demo.farmtofork.lightswitch.co.ke`) for the cooperative or exporter's staff: field officers, collection clerks, pack house supervisors, logistics officers, compliance managers, finance and administrators.
- **The buyer portal** (`/portal` on the same site) where a buyer sees its own shipments and where the produce came from.
- **The public QR page** (`qr.demo.farmtofork.lightswitch.co.ke`) that opens when anyone scans the QR code printed on a pack.

> **Records are never edited**
> Every traceability event is stored permanently and protected against tampering. A mistake is corrected by a new record (for example a reversing receipt), and the trace then ignores the corrected step. This is what makes the trace trustworthy for buyers and regulators.

2. Getting started

Signing in

Open the back office in a web browser (Chrome, Edge, Firefox or Safari, on a computer, tablet or phone). Enter your e-mail address and password and choose **Sign in**.

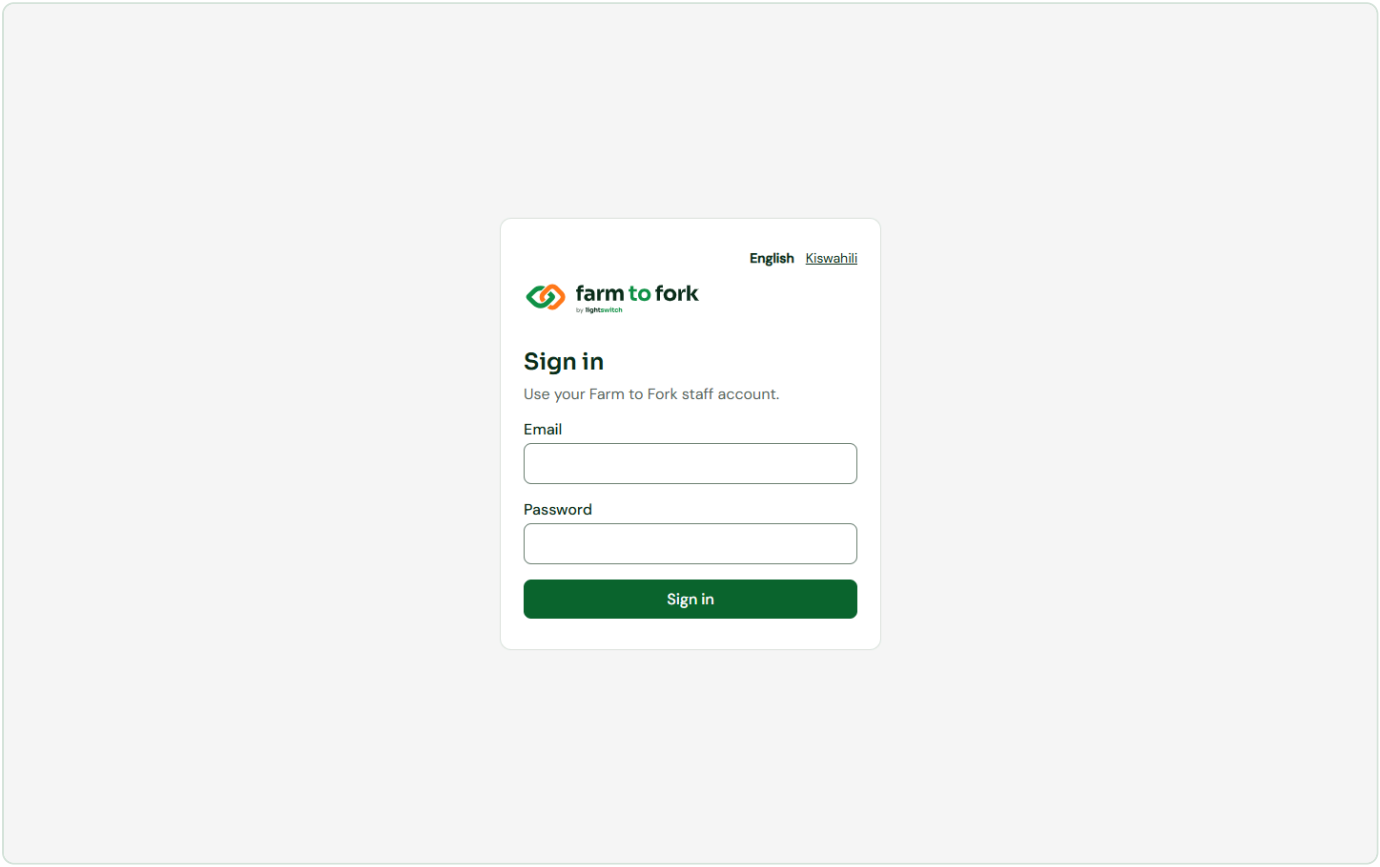


Figure 1. The sign-in page.

After five wrong passwords the account is locked for 15 minutes. Ask your administrator if you have forgotten your password; they can set a temporary one, which you change at your next sign-in.

Choosing English or Kiswahili

Every page has **English** and **Kiswahili** links at the top right. The choice is remembered on that device.



Figure 2. The sign-in page in Kiswahili.

Two-step verification

Administrators, compliance managers and finance officers must protect their account with an authenticator app (Microsoft Authenticator, Google Authenticator or similar). The first time you sign in, the system shows a QR code: scan it with the app, type the six-digit code the app shows, and save. You cannot use the back office until this is done.

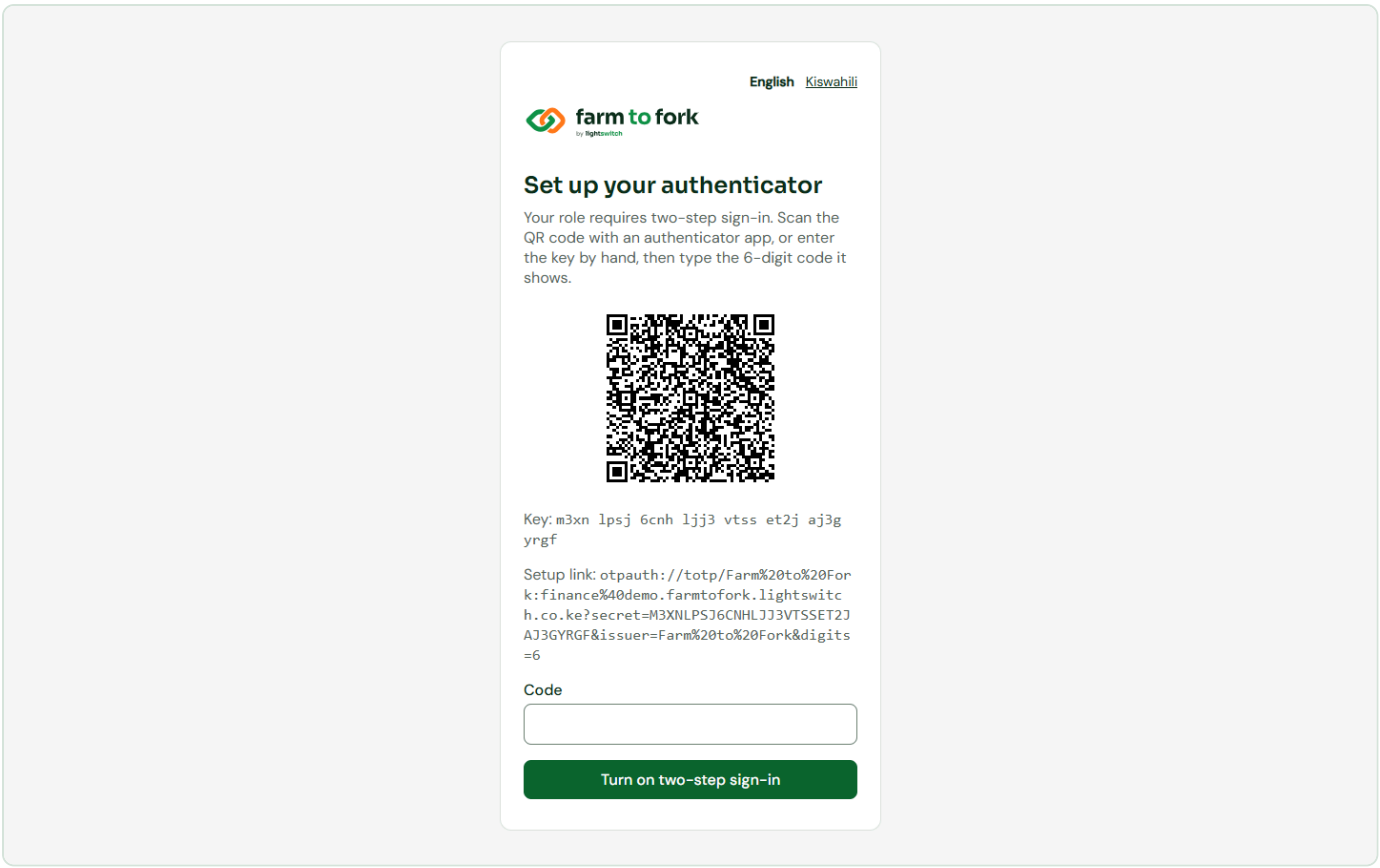


Figure 3. Setting up two-step verification on first sign-in.

From then on, after your password the system asks for the current code from the app.

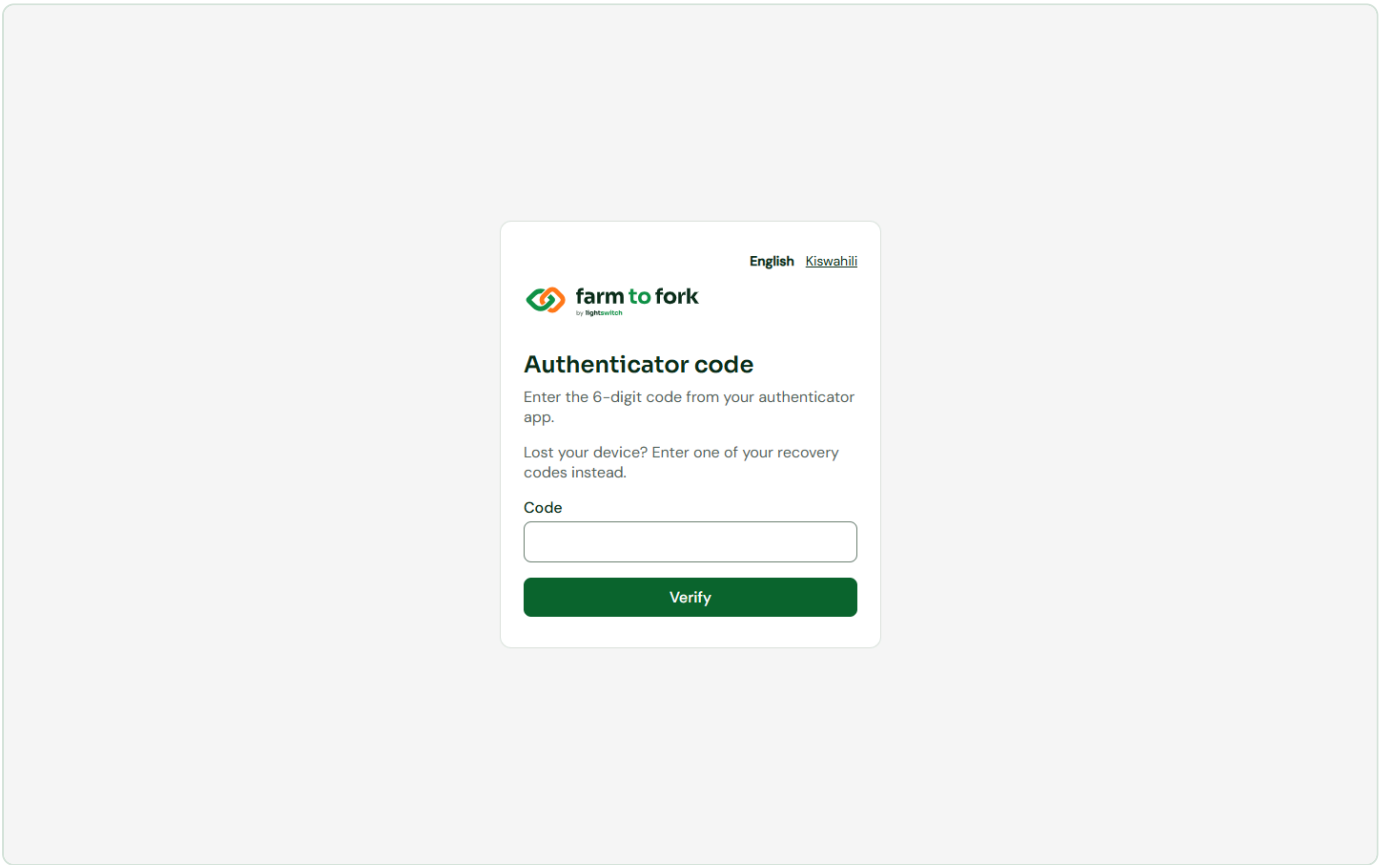


Figure 4. Entering the code from the authenticator app.

Finding your way around

The menu on the left shows only the parts of the system your role may use (see section 3). On a phone, open the menu with the ☰ button at the top left. **Sign out** is at the bottom of the menu.

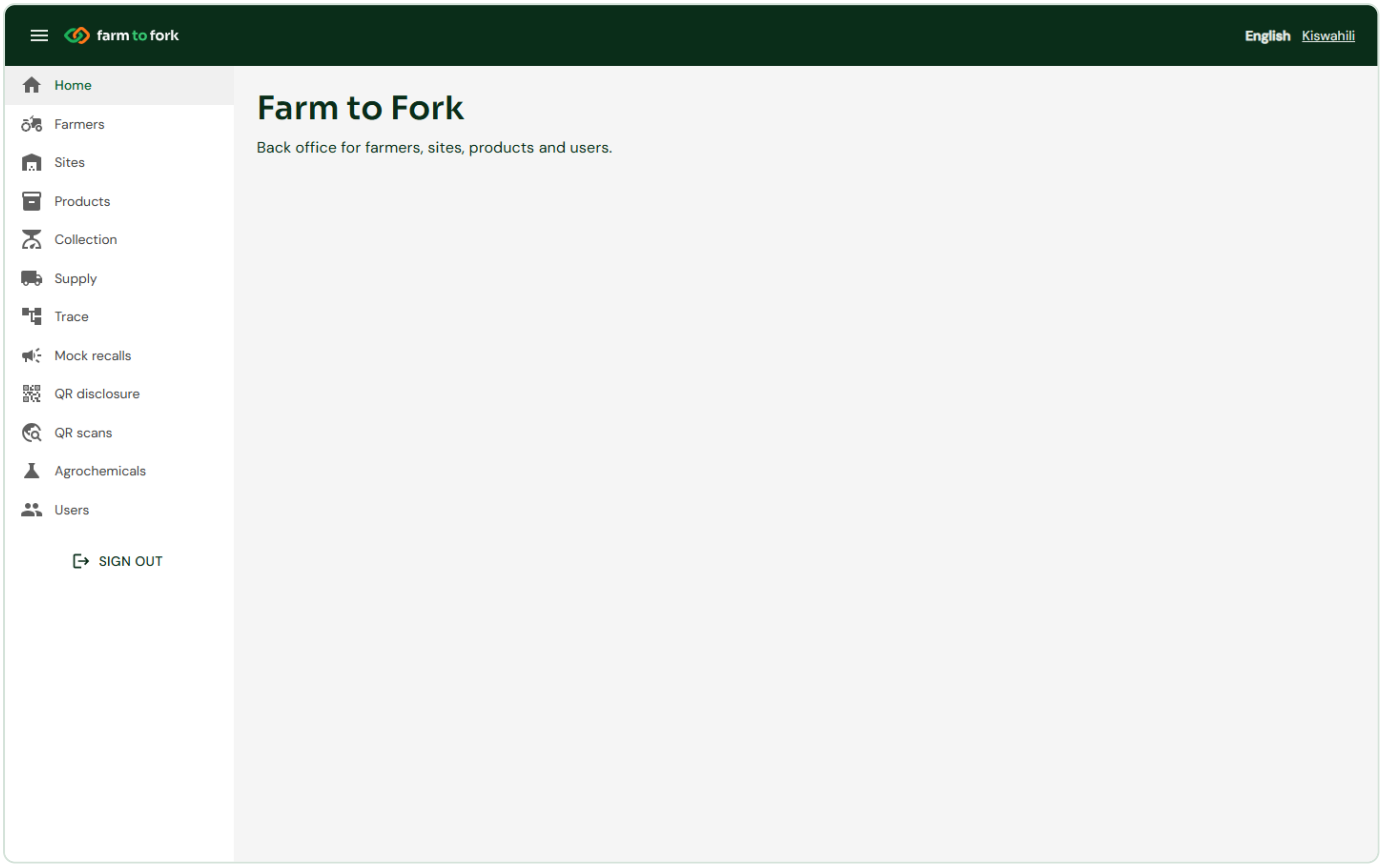


Figure 5. The home page as an administrator, with the full menu.

3. Roles and what each can do

Every user has one or more roles. Some roles are also limited to particular **sites** (a collection centre or pack house): a collection clerk at Kibugu cannot record deliveries at Kagio. Buyers are linked to the buyer company they work for.

Role	Main tasks	Menu
Tenant administrator	Everything, including users, sites and products. Needs two-step verification.	All
Field officer	Registers farmers, farms and plots; records plantings, sprays, scouting and harvests.	Farmers
Collection clerk	Receives and weighs deliveries at their centre, issues receipts, builds batches, closes the day, dispatches.	Collection, Supply
Pack house supervisor	Receives dispatches with quality checks, processes, packs, prints labels, builds pallets.	Supply, Trace
Logistics officer	Dispatches between sites, records custody handovers, manages buyers, creates shipments.	Supply, Trace
Compliance manager	Approved agrochemicals, traces, mock recalls, QR disclosure and scan alerts. Needs two-step verification.	Trace, Mock recalls, QR, Agrochemicals
Finance officer	Views collection and supply records. Needs two-step verification.	Collection, Supply
Buyer	Sees its own shipments and their origin in the buyer portal.	My shipments

> **Can't see a page?**
> Pages your role may not use are not in your menu. If you open one by its address you see an "access denied" message. Ask an administrator to add the role or site you need.

4. Farmers, farms and plots

The farmer list

Choose **Farmers** in the menu. Search by name, or by phone number or national ID (an exact match). Phone numbers and ID numbers are always shown partly hidden, for privacy.

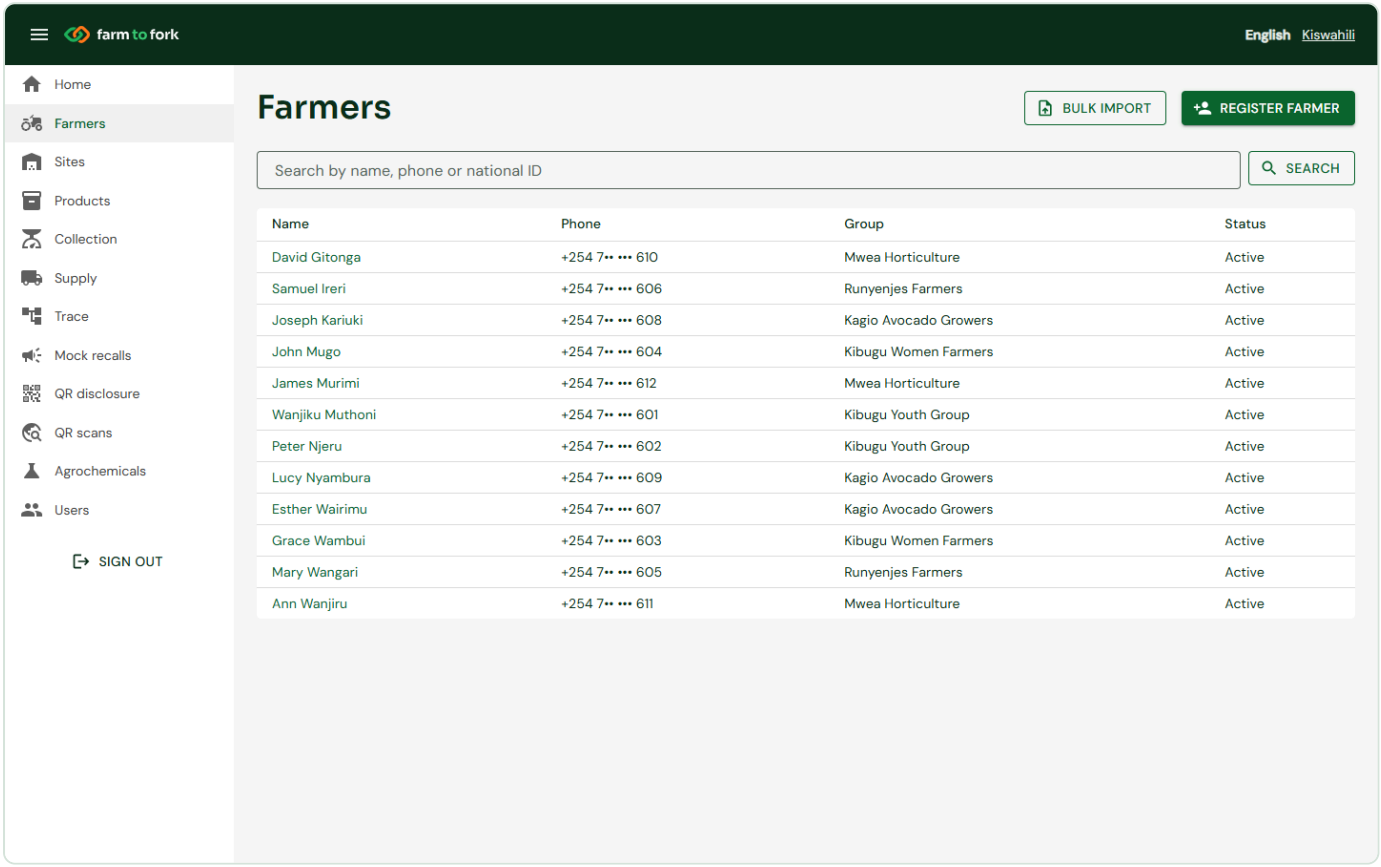


Figure 6. The farmer list.

Registering a farmer

1. On the farmer list choose **Register farmer**.
2. Fill in the name, gender, national ID and a Kenyan mobile number (for example 0712 345 678). Group and next of kin are optional.
3. Read the data-processing consent to the farmer in their language and tick that they agree. Registration is not possible without it.
4. Choose **Register**. The farmer's page opens.

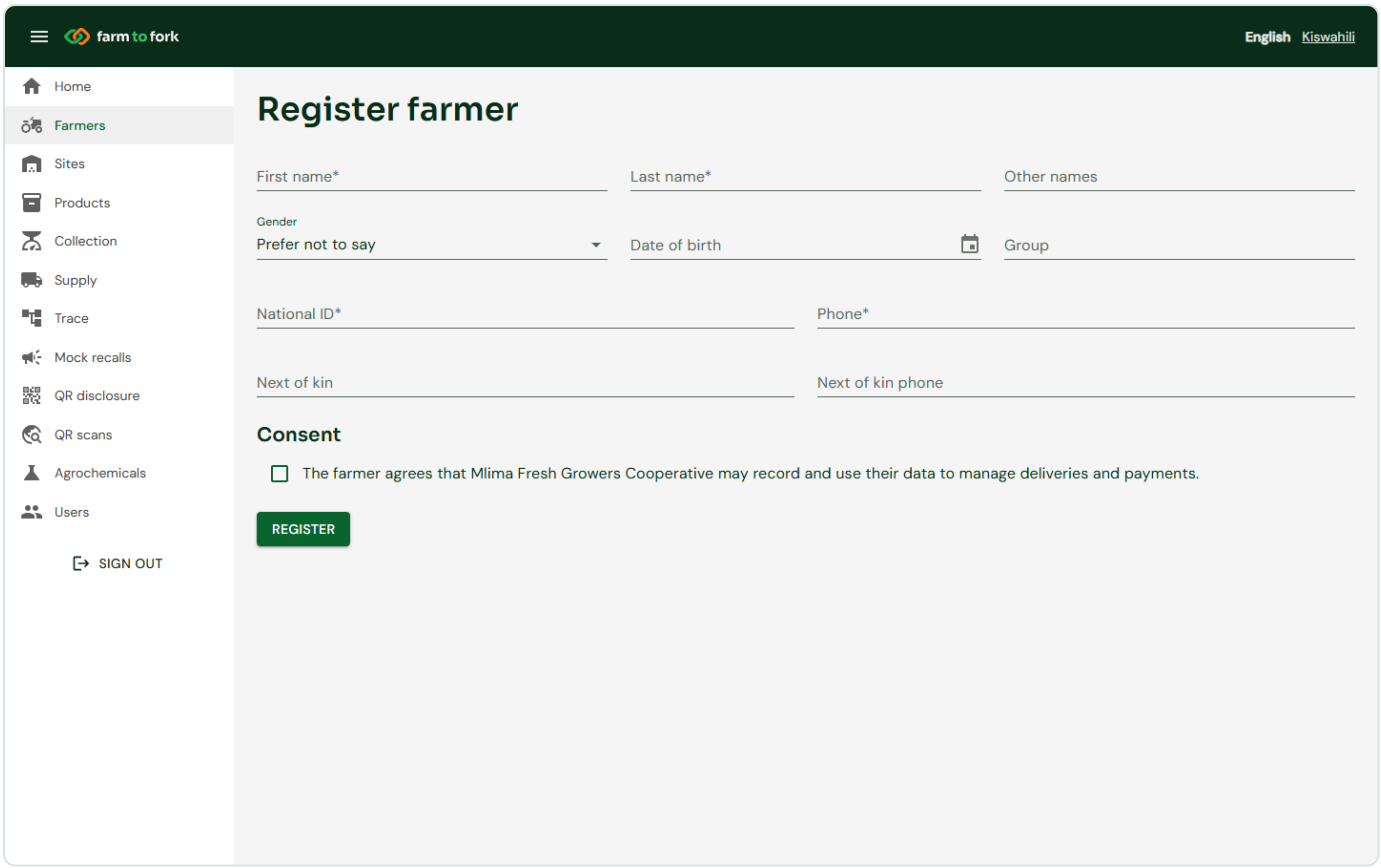


Figure 7. Registering a farmer, with the consent at the bottom.

A farmer can only be registered once: the system refuses a phone number or national ID that is already in use.

The farmer's page: consents, farms and plots

The farmer's page shows their details, their **consents** and their **farms and plots**.

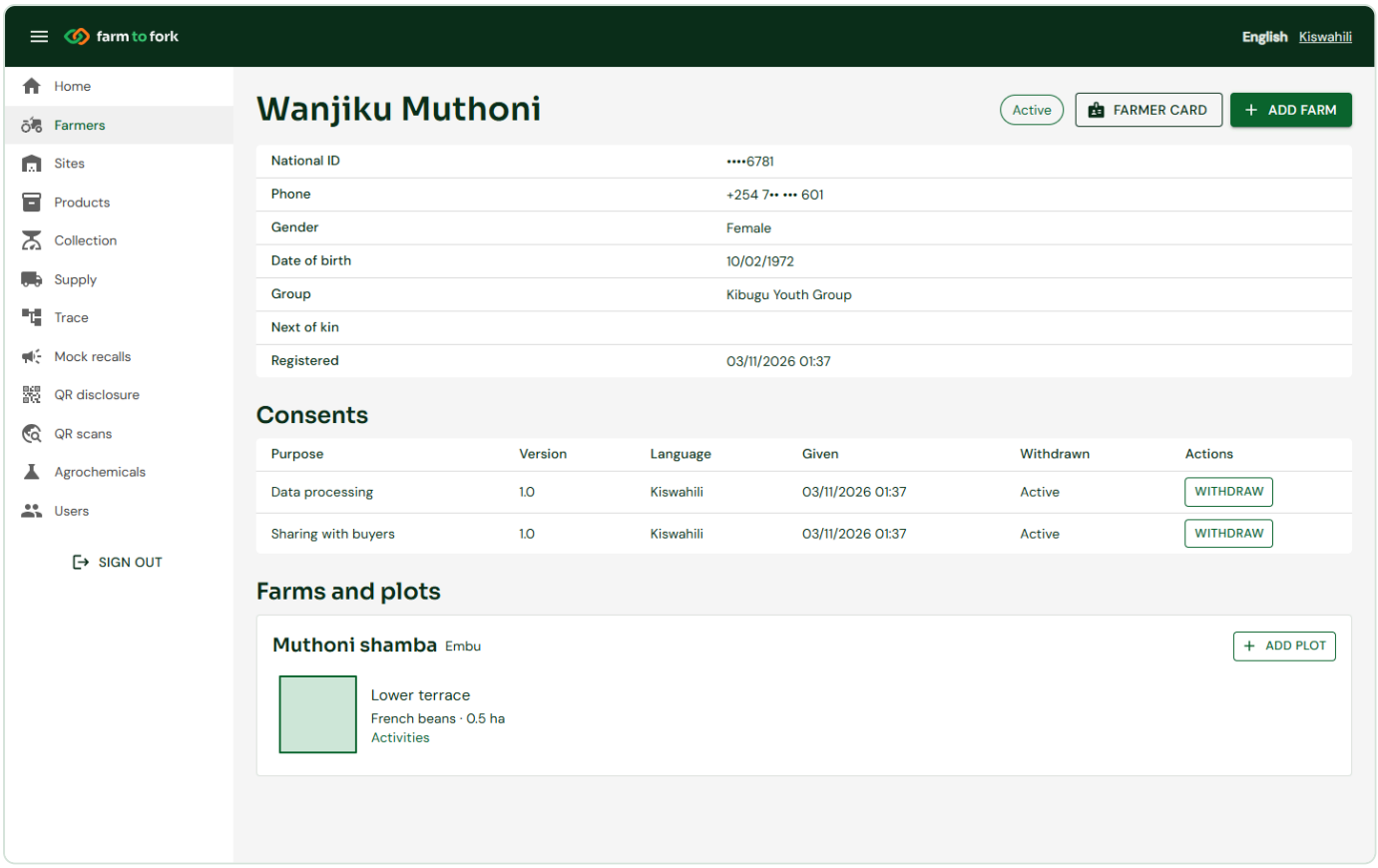


Figure 8. A farmer's page.

- **Consents:** *Data processing* is required. *Sharing with buyers* is optional and lists who may see the farmer's name: named buyers (for example "EU Fresh BV"), or `Public` for the QR page on the pack. A consent can be withdrawn at any time with **Withdraw**; the name is then hidden from that moment.
- **Add farm** creates a farm (name and county). **Add plot** adds a plot to a farm: crop, variety, area and its boundary, pasted as GeoJSON or uploaded as a `.geojson` file (for example exported from a GPS app). The system warns when a plot overlaps another farmer's plot and when the mapped area differs from the declared area by more than 20%.
- **Activities** under a plot opens its field record (see section 6).

Farmer cards

Farmer card prints an ID card (85.6 × 54 mm) with a QR code. At the collection centre the clerk scans the card instead of typing the phone number.

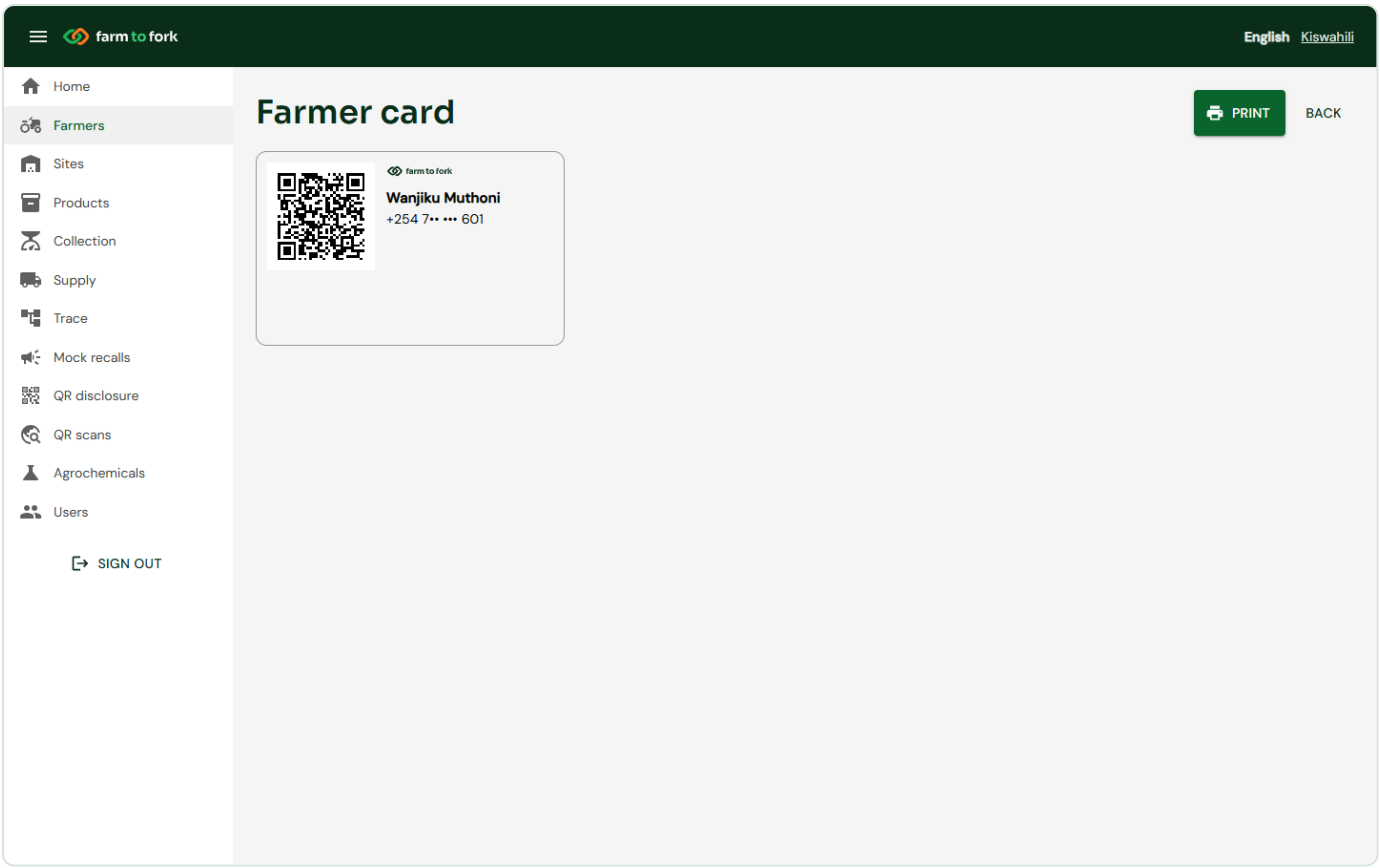


Figure 9. A farmer card ready to print.

Importing many farmers

Administrators and field officers can register farmers in bulk from a spreadsheet (**Farmers › Import**). The page explains the columns; each row is checked and rows with problems are reported without stopping the others.

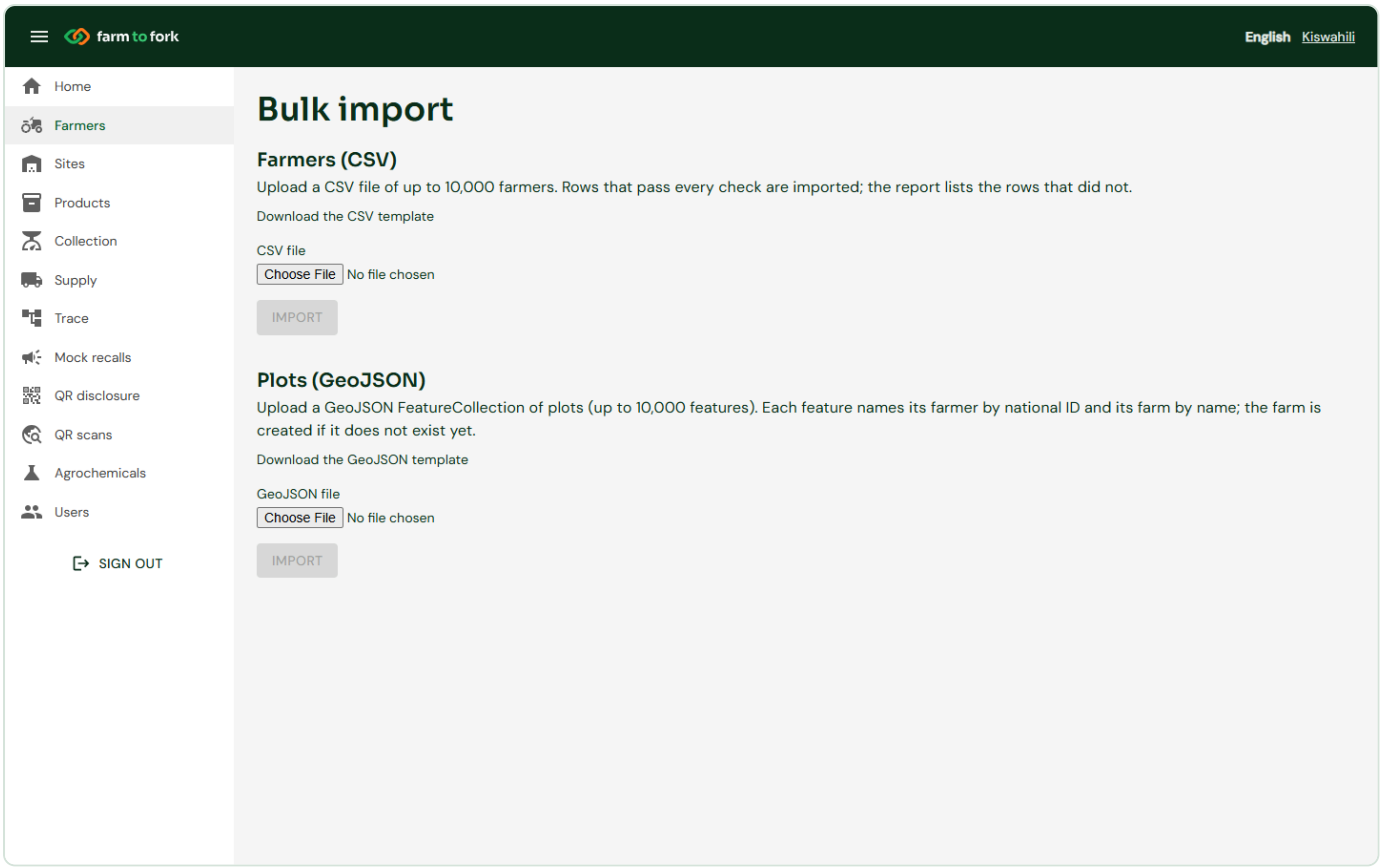


Figure 10. Importing farmers from a file.

5. Sites and products

Sites

A site is a place where produce is handled: a collection centre, a pack house or a warehouse. Each has a short code (for example `KBU`) that appears in receipt and lot numbers, an optional GS1 location number (GLN), its county and GPS position.

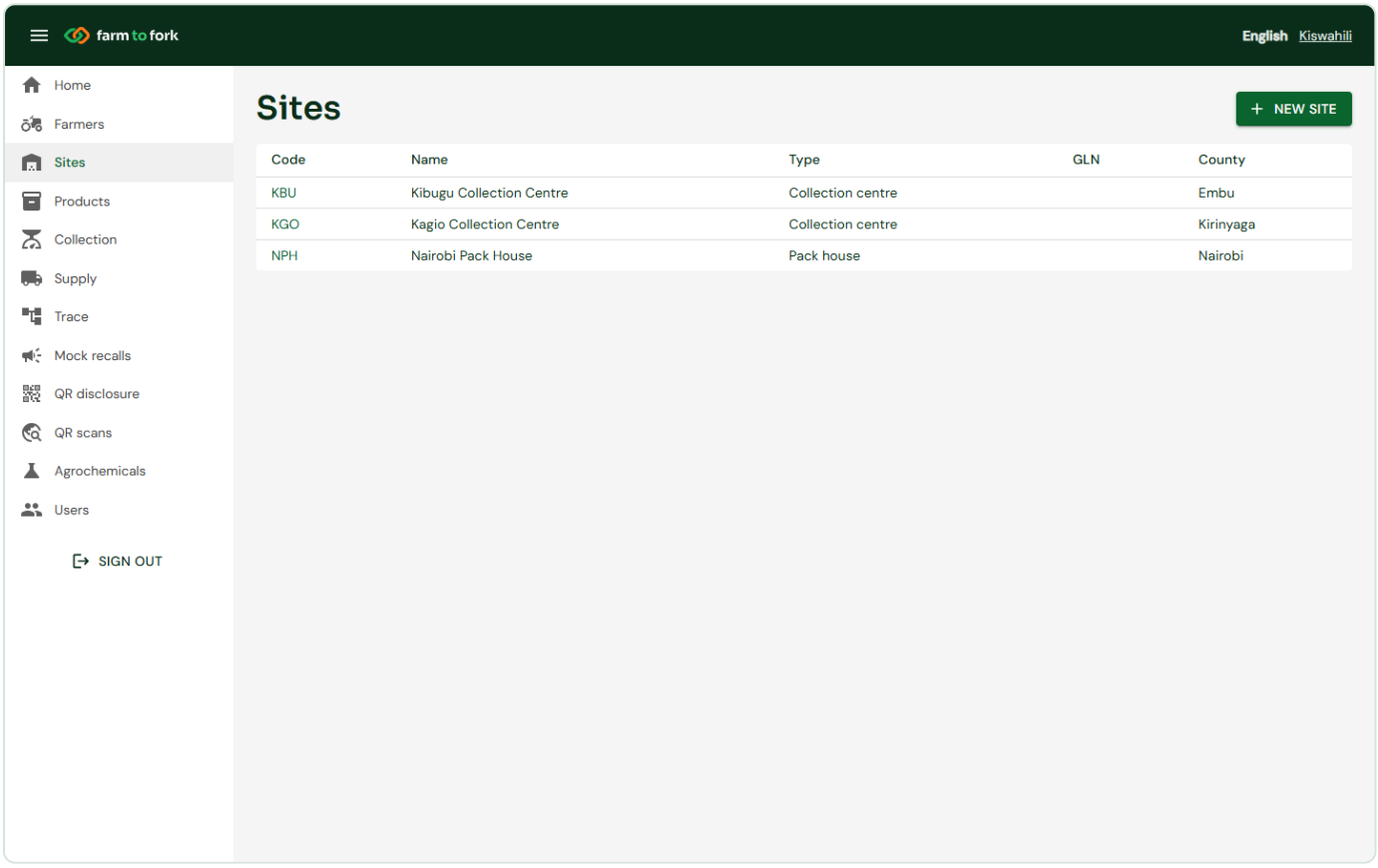


Figure 11. Sites.

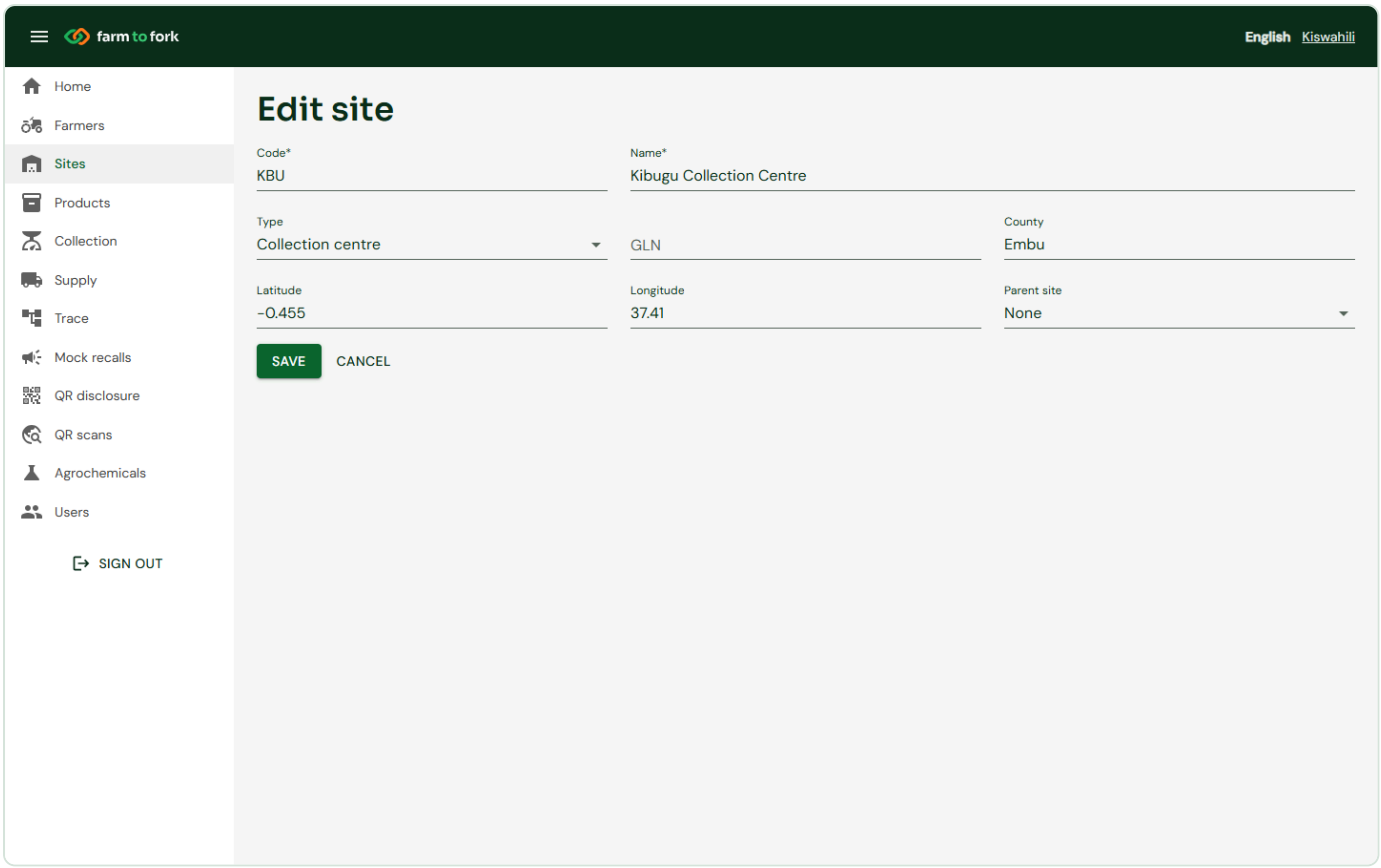


Figure 12. Editing a site.

Products

A product is what is bought from farmers and sold to buyers, for example *French beans (fine)*. Each product has:

- **Grades** used when weighing deliveries (for example Class 1 and Reject).
- A **GTIN** (the barcode number) and **shelf life**, needed to print pack labels and best-before dates.
- A **maximum yield**: the most output a process may give per kg of input. The system refuses records that would create produce out of nothing.

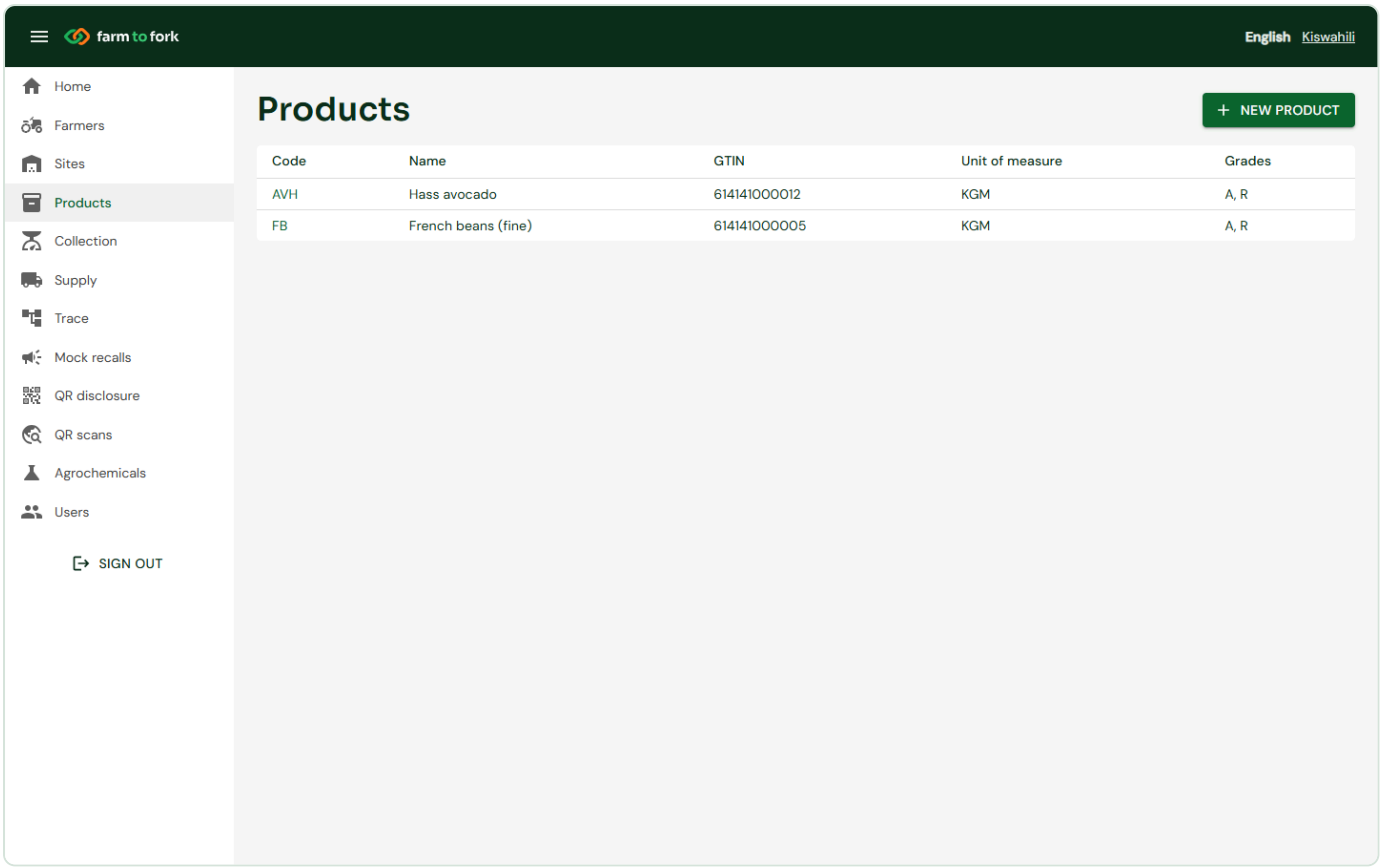


Figure 13. Products.

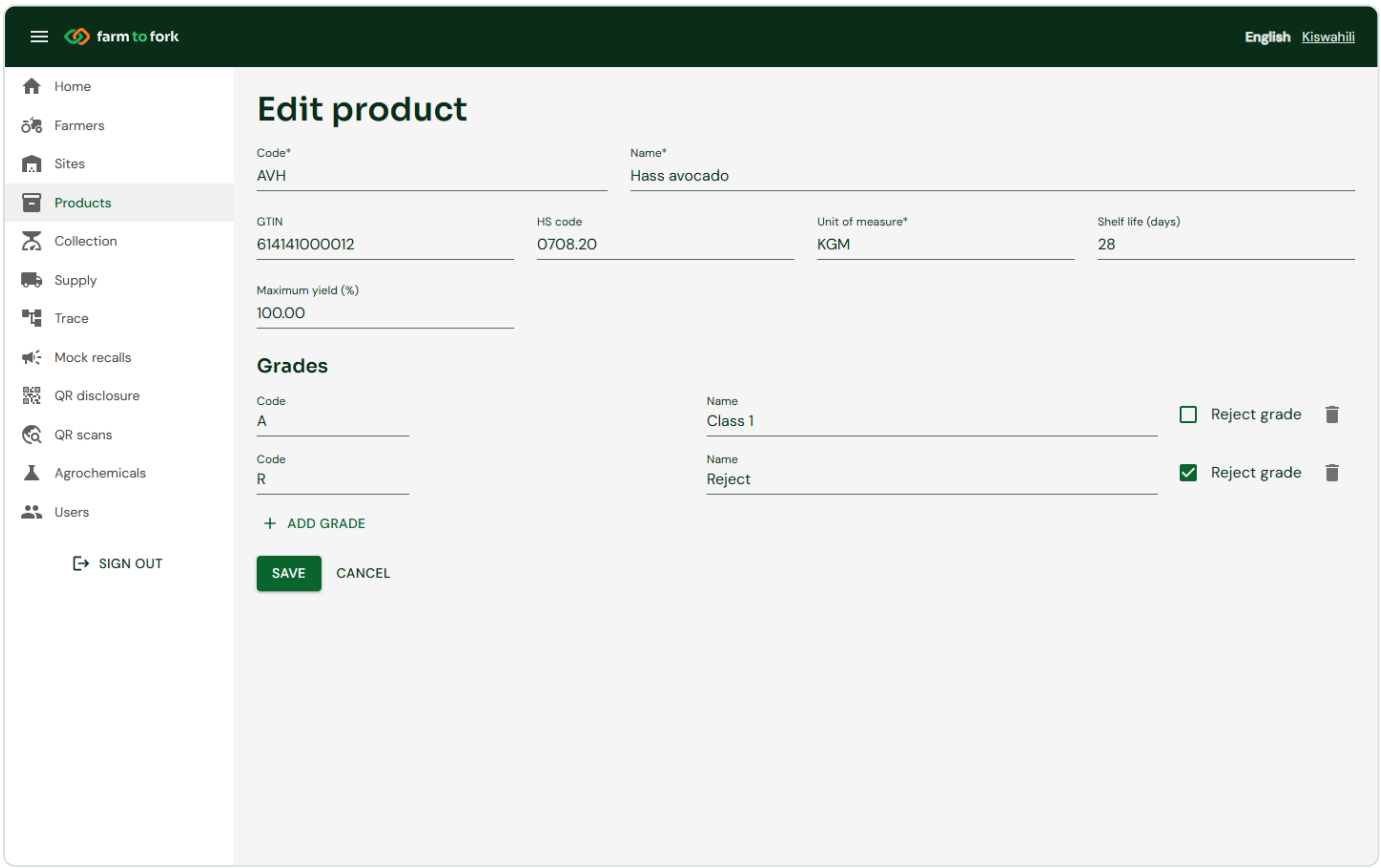


Figure 14. A product with its grades, GTIN and shelf life.

6. Field operations

Approved agrochemicals

Compliance managers keep the list of spray products farmers may use (**Agrochemicals**): the PCPB registration number, the **pre-harvest interval (PHI)** in days, and the active ingredients with their maximum residue limits (MRLs) for the EU, UK and US. Only active products on this list can be recorded in a spray.

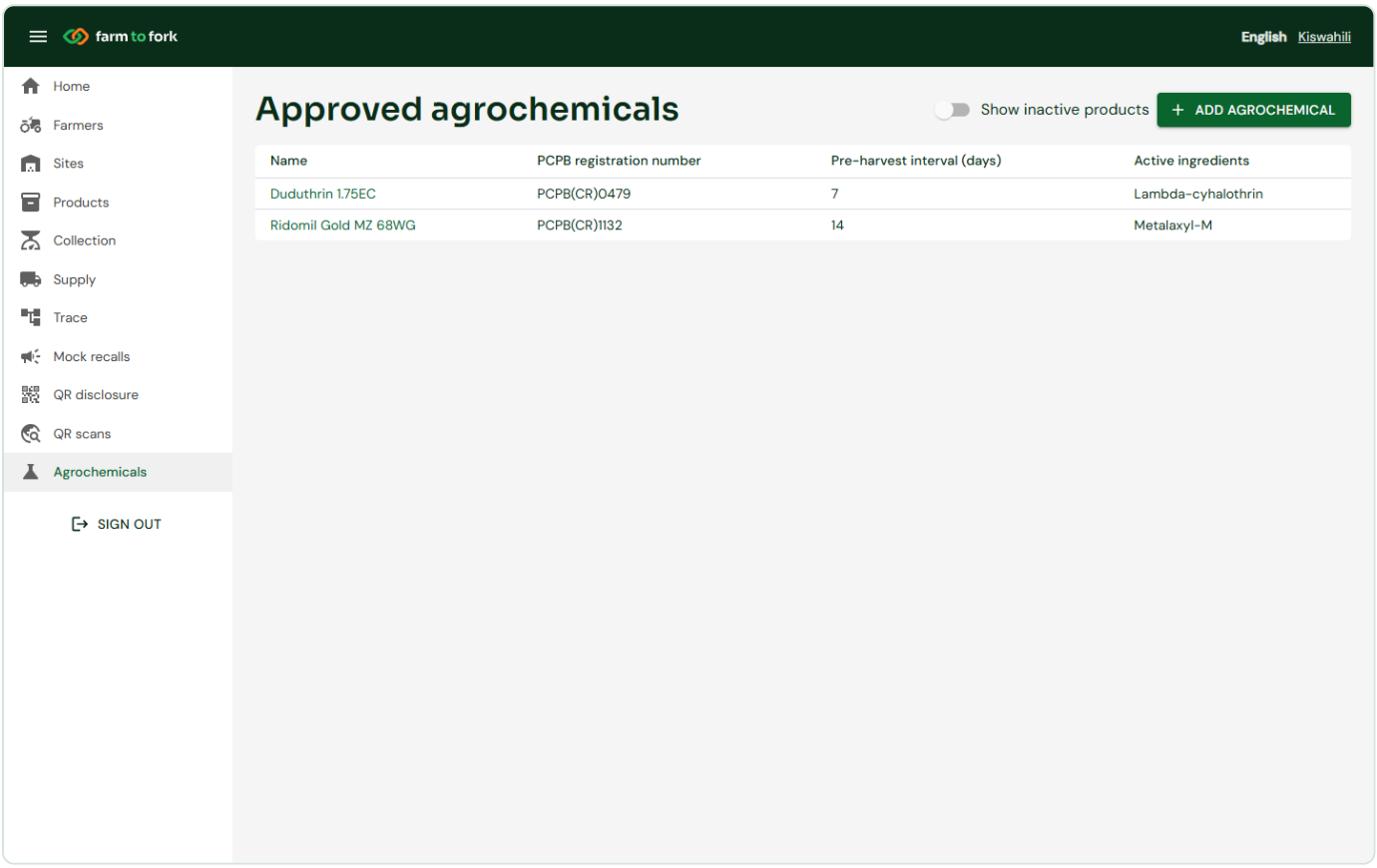


Figure 15. Approved agrochemicals.

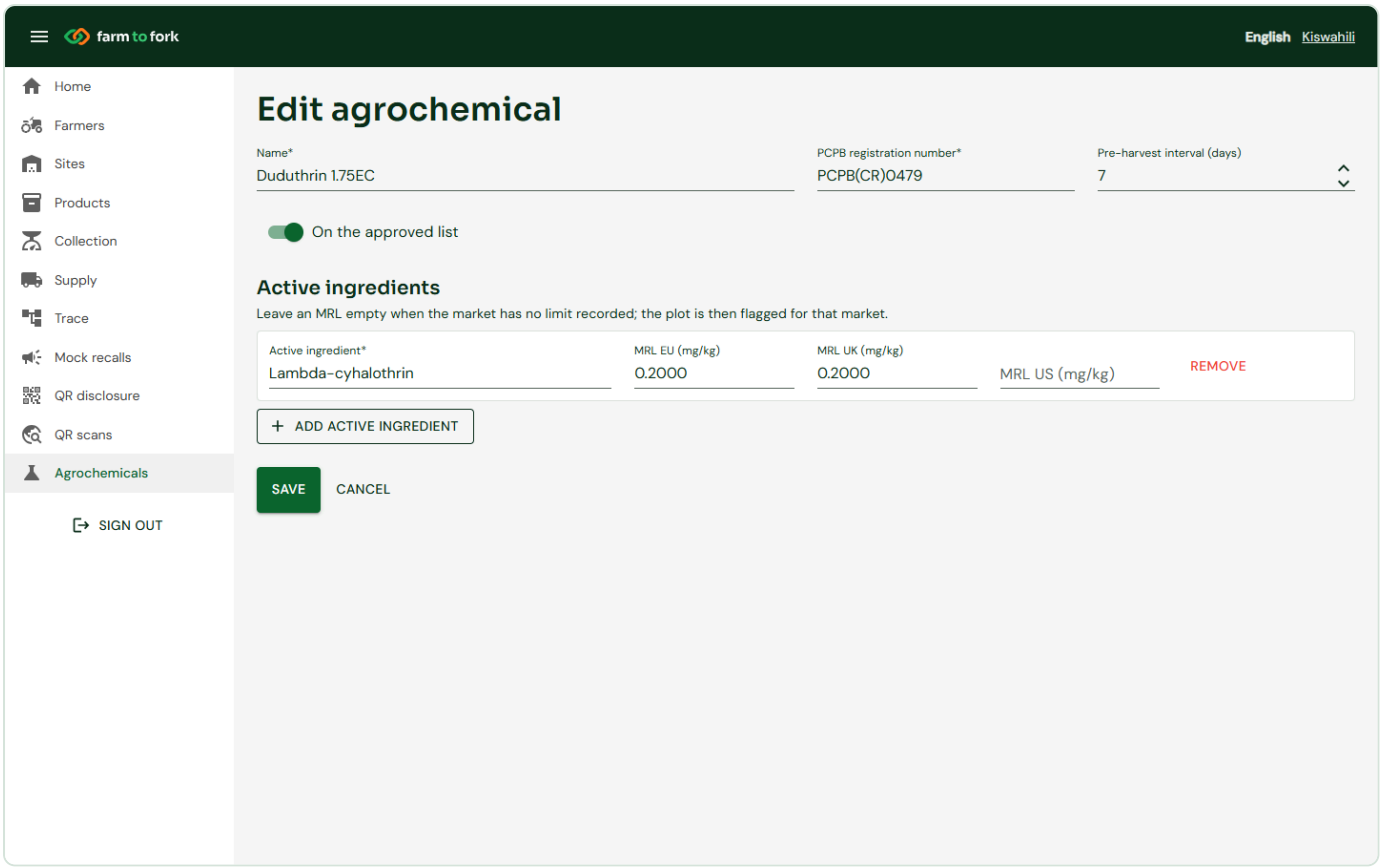


Figure 16. An agrochemical with its PHI and MRLs per market.

Plot activities

Open a plot's **Activities** from the farmer's page. Record plantings, inputs, sprays, irrigation, scouting and harvests with the date and the person who did the work. For a spray, choose the product from the approved list and enter the product lot and quantity.

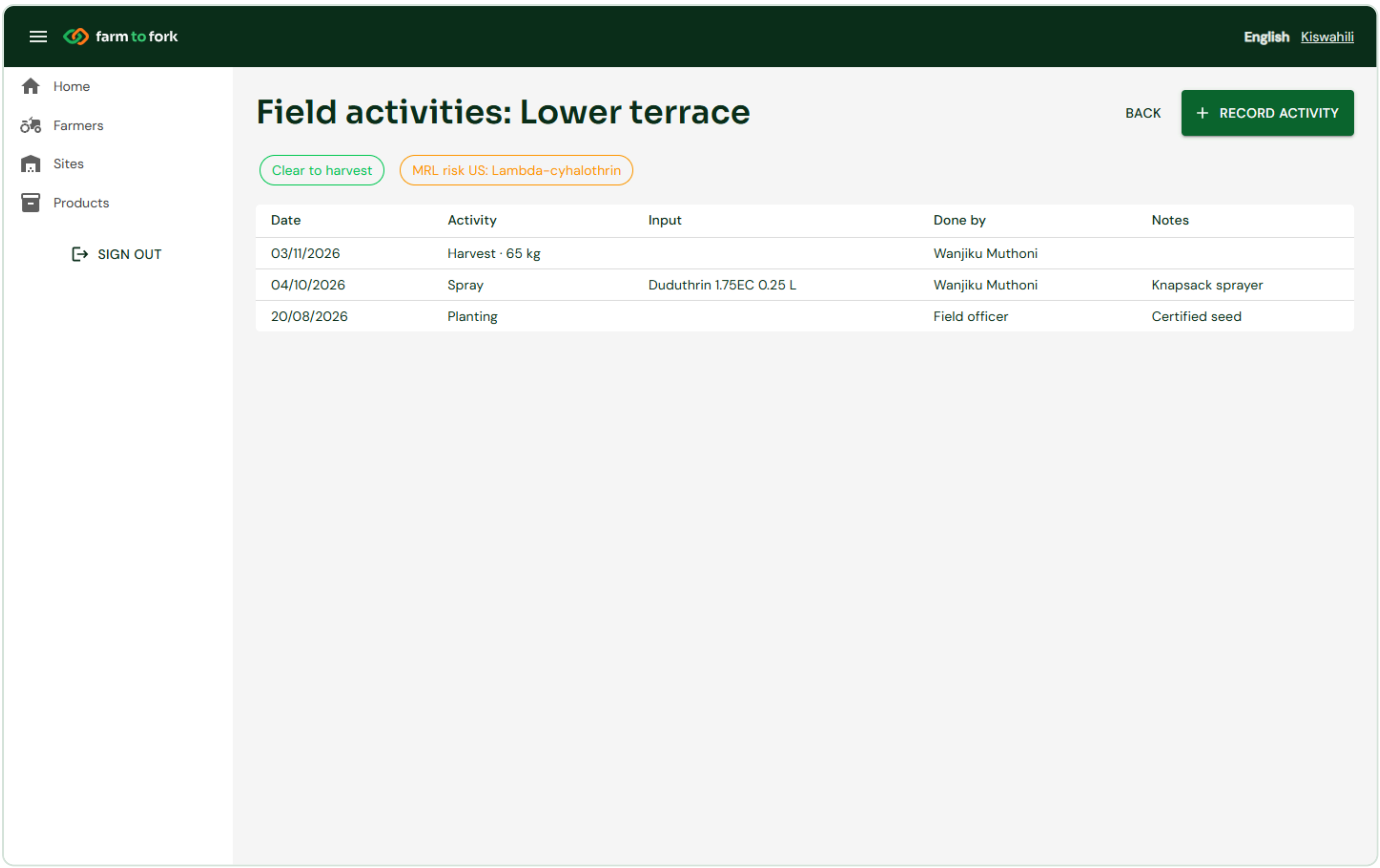


Figure 17. A plot's activities, with its pre-harvest interval status.

- A status at the top says **Clear to harvest**, or until which date the plot is still inside the PHI of its last spray.
- A harvest inside the PHI is refused (or, if your organisation chose so, flagged in red).
- Orange tags show **MRL risks**: an ingredient sprayed in the last 90 days that has no limit for a market (here the US).
- Each harvest creates a **harvest lot** that the later delivery is linked to.

7. Collection centres

Collection clerks work at the centres they are assigned to. Choose **Collection** and pick the centre.

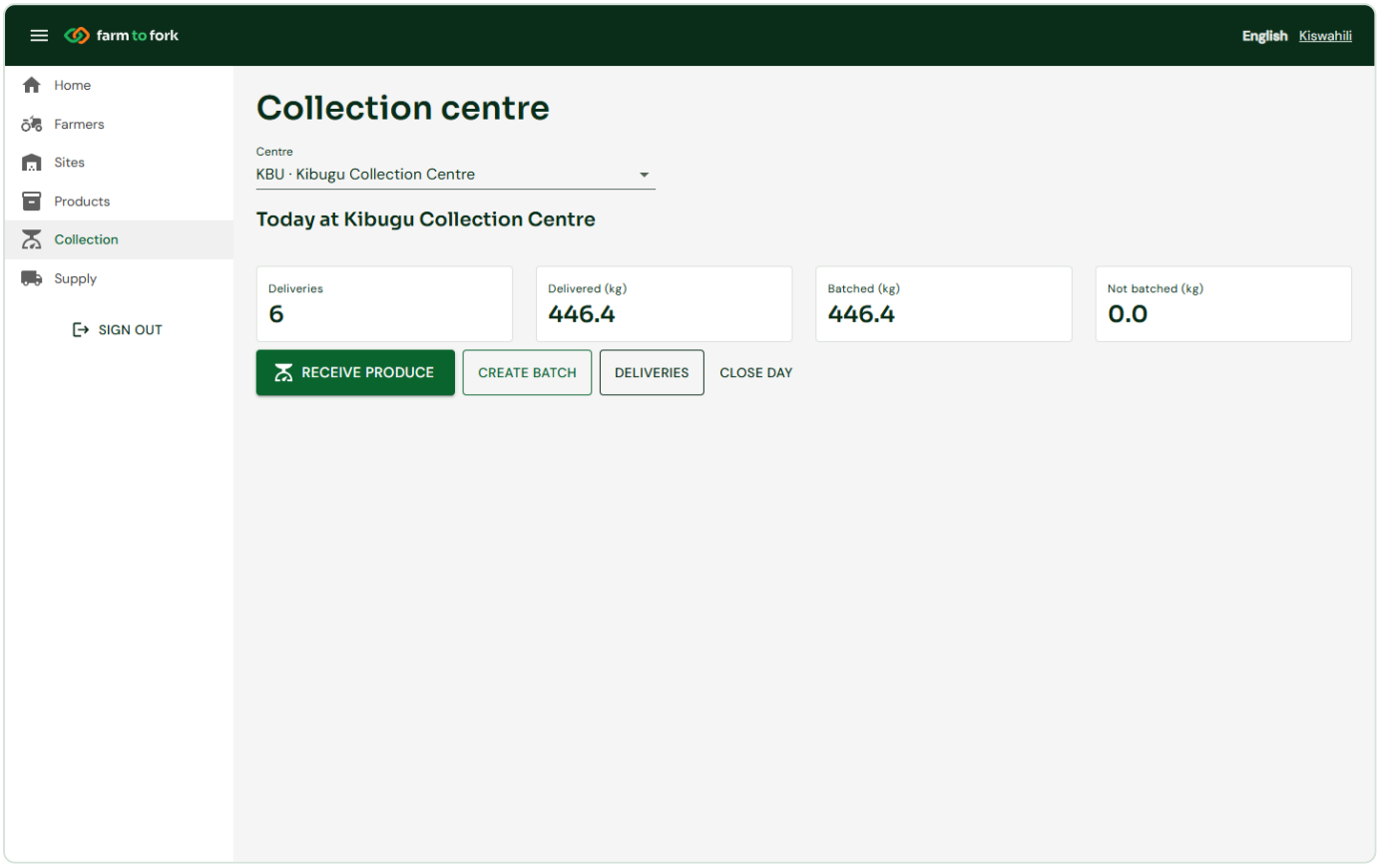


Figure 18. Collection: choose a centre and a task.

Receiving produce

1. Choose **Receive produce**.
2. Find the farmer: type their phone number or national ID, or scan their farmer card, and choose **Find farmer**.
3. Choose the plot (recommended: it links the delivery to the plot's harvest) and the product.
4. Enter the gross weight and the tare (crate or bag). The net weight is calculated.
5. Split the net weight across the grades, and give a reason for every reject.
6. When the weight is typed rather than read from a scale, choose the reason.
7. Choose **Save and show receipt**.

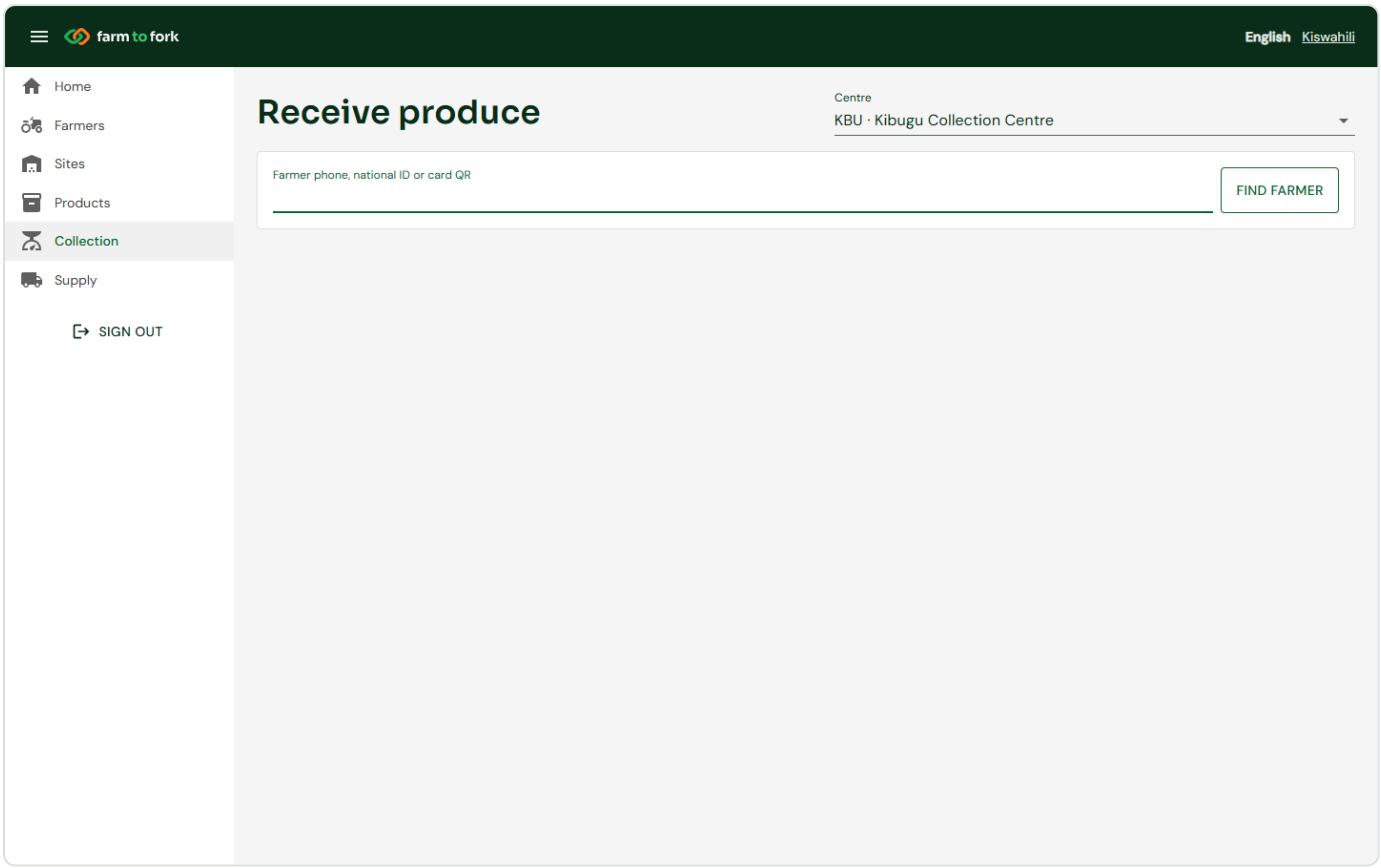


Figure 19. Step 1: find the farmer.

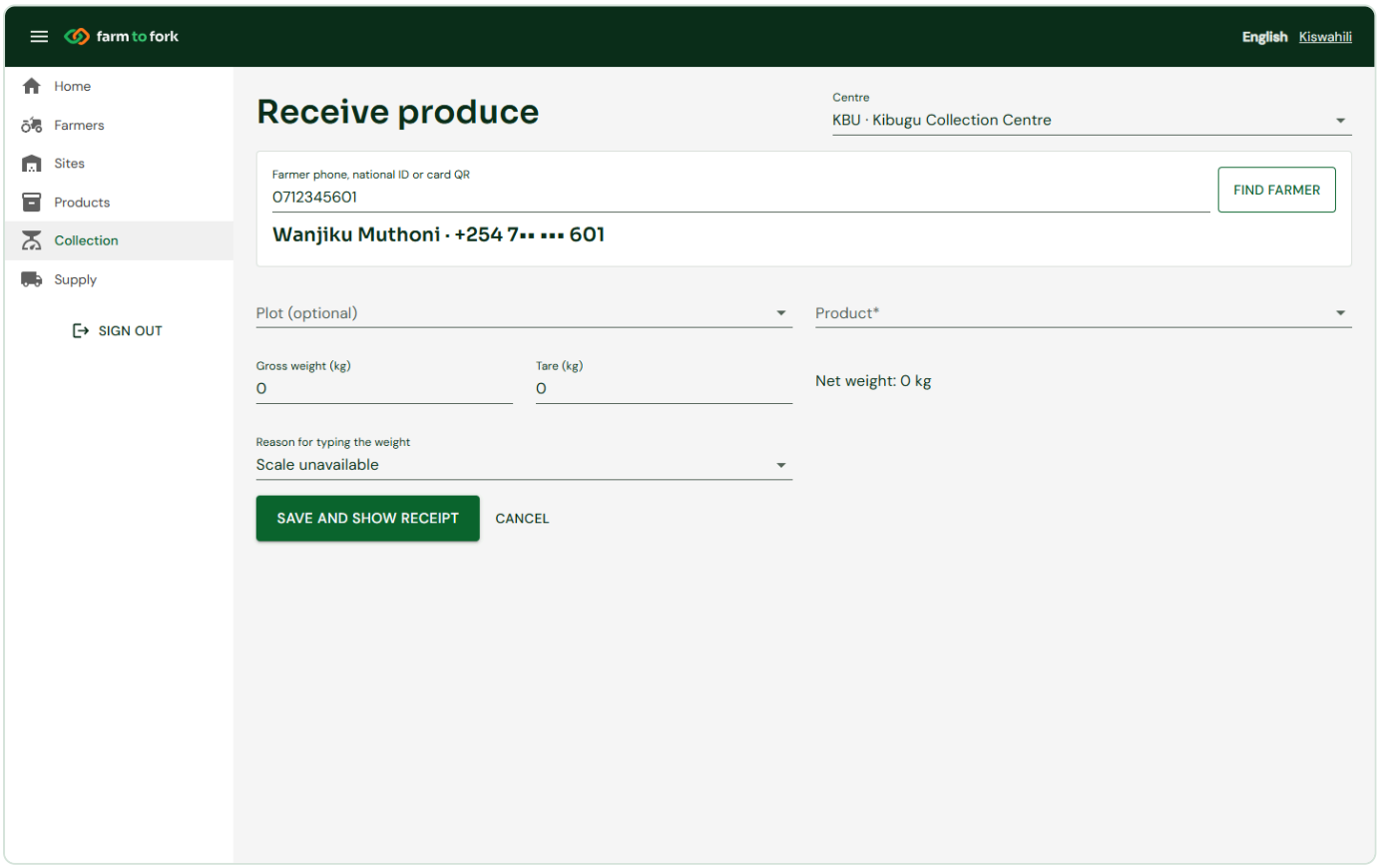


Figure 20. Step 2: plot, product, weights and grades.

> **Pre-harvest interval check**

> If the farmer's plot was sprayed too recently, the system stops the delivery and says when the plot may be harvested. If no plot is chosen and any of the farmer's plots is inside its PHI, the clerk must choose the plot.

Receipts and the day's deliveries

Every delivery gets a receipt number `{centre}-{yyMMdd}-{0001}` that can never change. The receipt prints on an 80 mm thermal printer; give it to the farmer. The deliveries list shows the day's receipts.

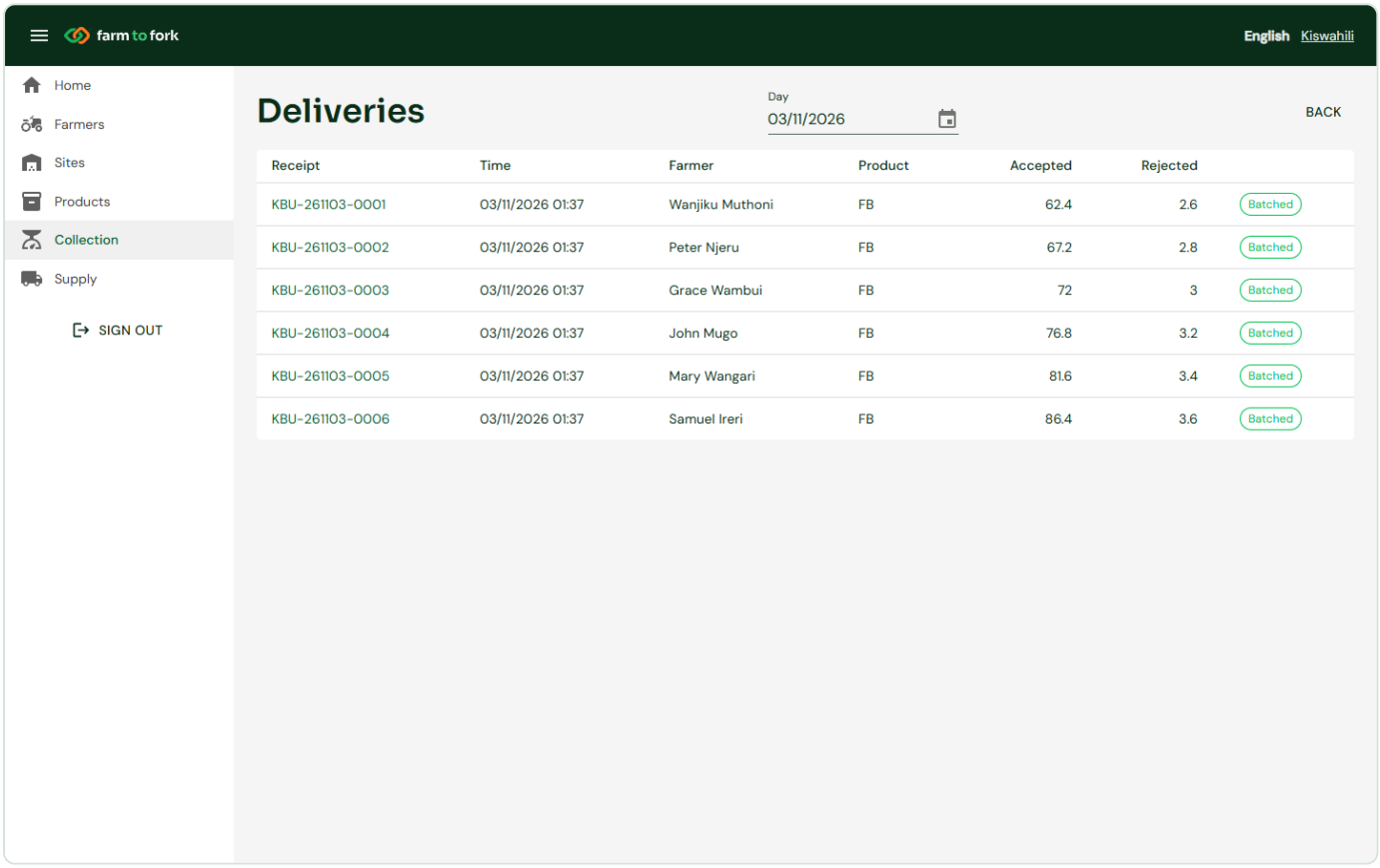


Figure 21. The day's deliveries.

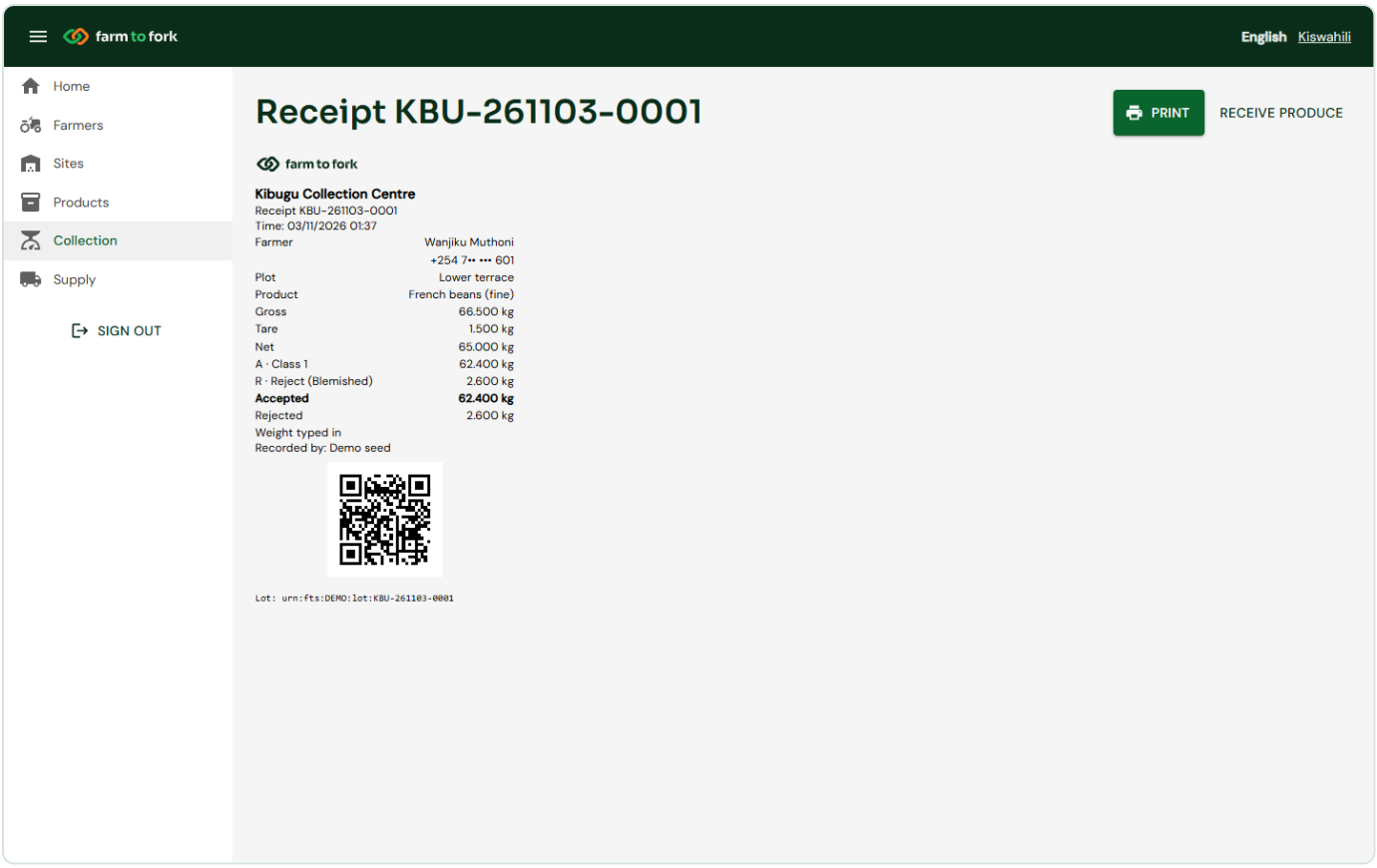


Figure 22. A delivery receipt.

A mistake on a receipt is corrected by an administrator with a **reversing receipt**; the original stays on record and the trace ignores it.

Batches

Deliveries of one product are pooled into a **batch** before they leave the centre. Choose the deliveries and create the batch; print its label (100 × 60 mm) and stick it on the crates.

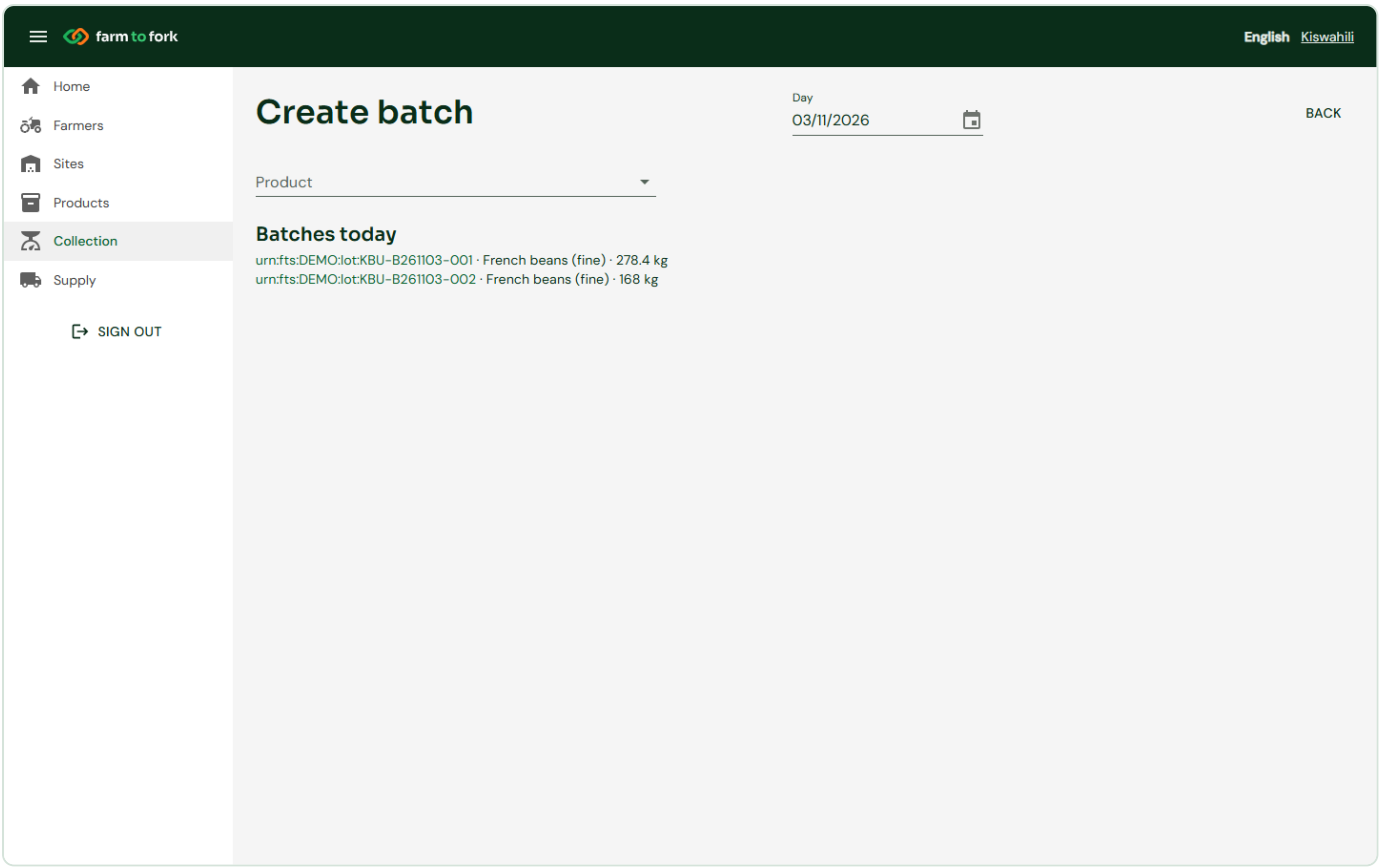


Figure 23. Building a batch.

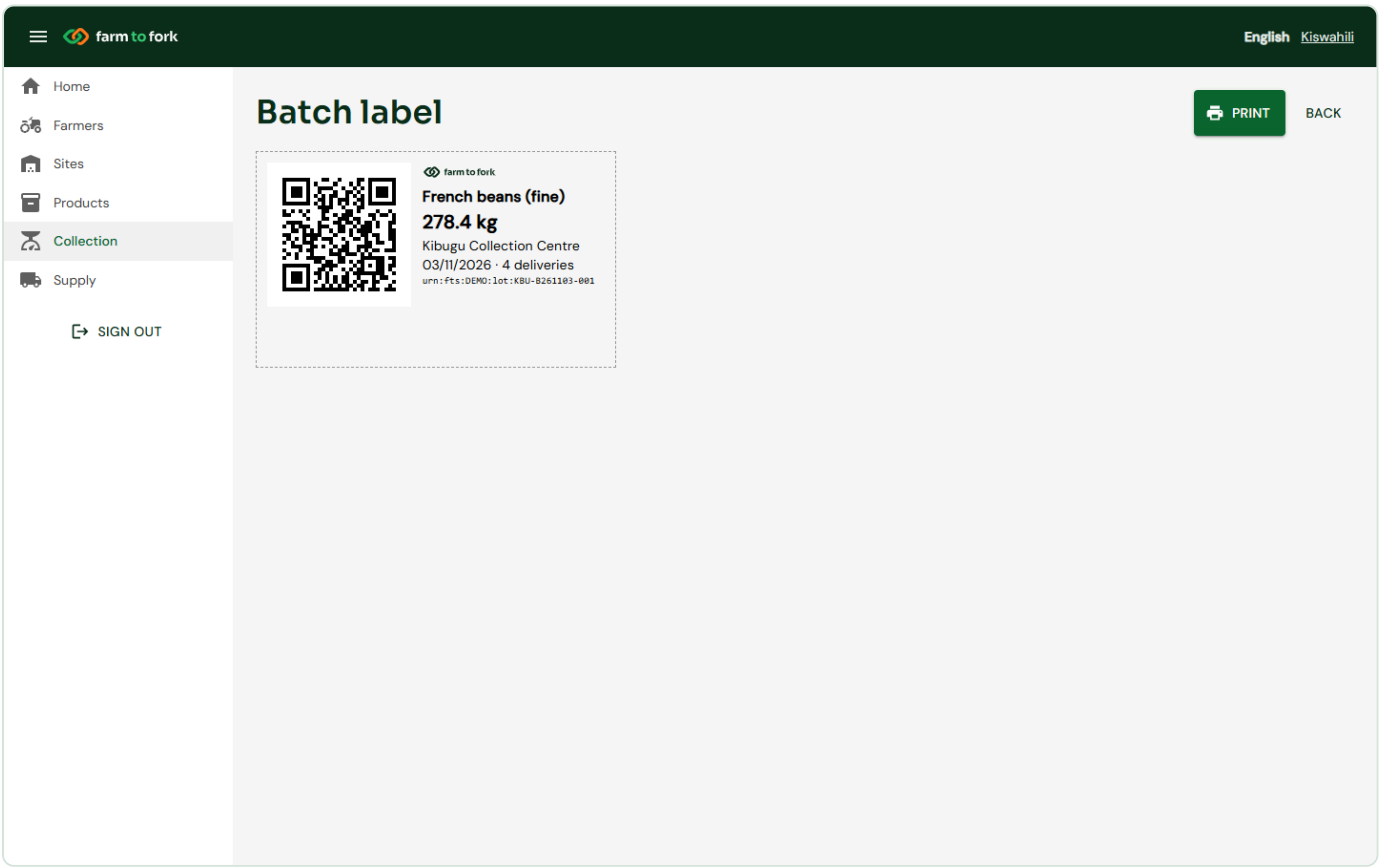


Figure 24. A batch label.

Closing the day

At the end of the day the clerk closes it. The system compares the kilograms delivered with the kilograms batched; a difference larger than the allowed tolerance (0.5% by default) needs a note. A closed day takes no more deliveries or batches.

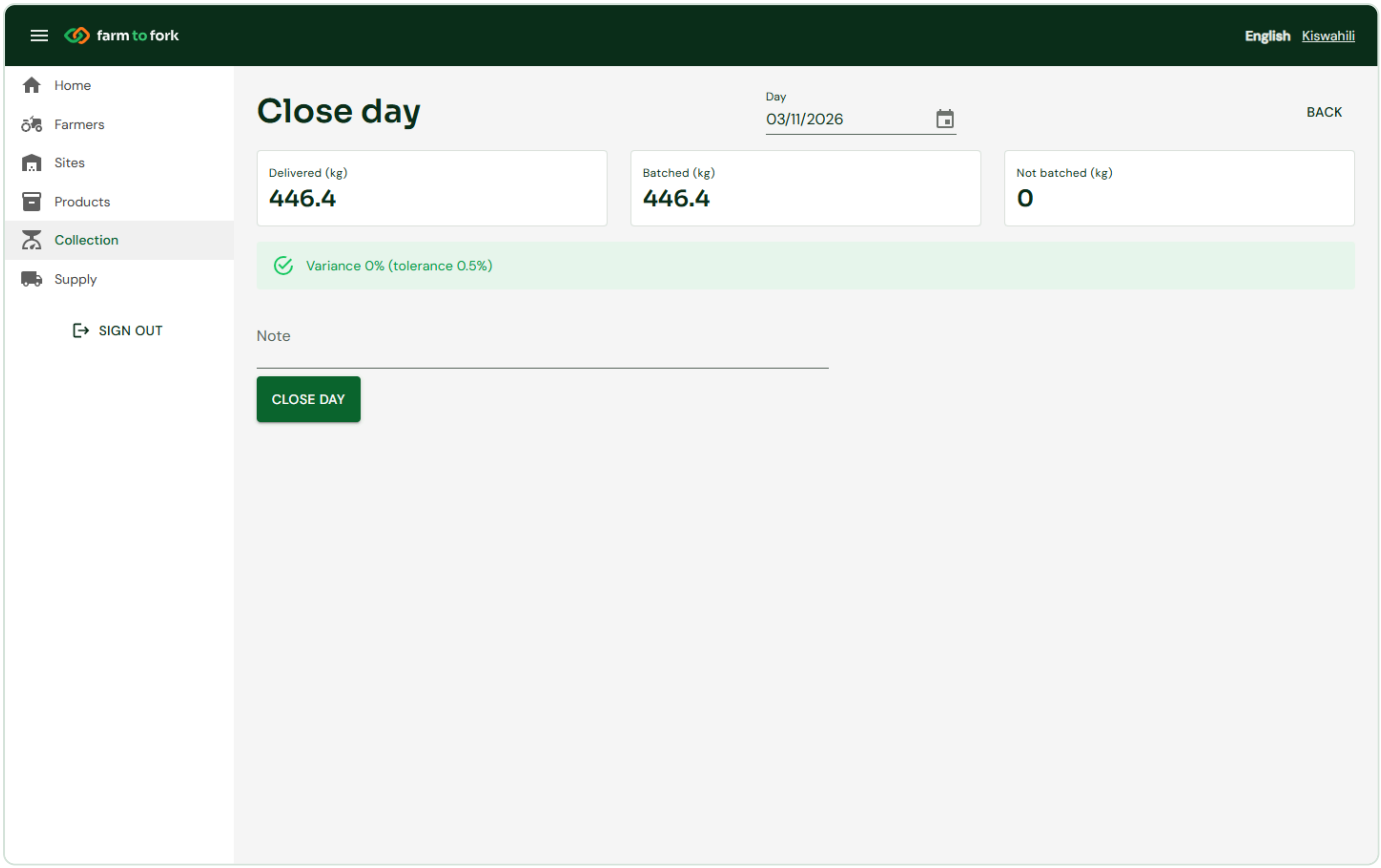


Figure 25. Closing the day.

8. Pack house and logistics

Choose **Supply** and pick a site to see the lots there, their status (active, on hold, in transit) and the kilograms left. Lots held at intake can be released from here by a supervisor or compliance manager.

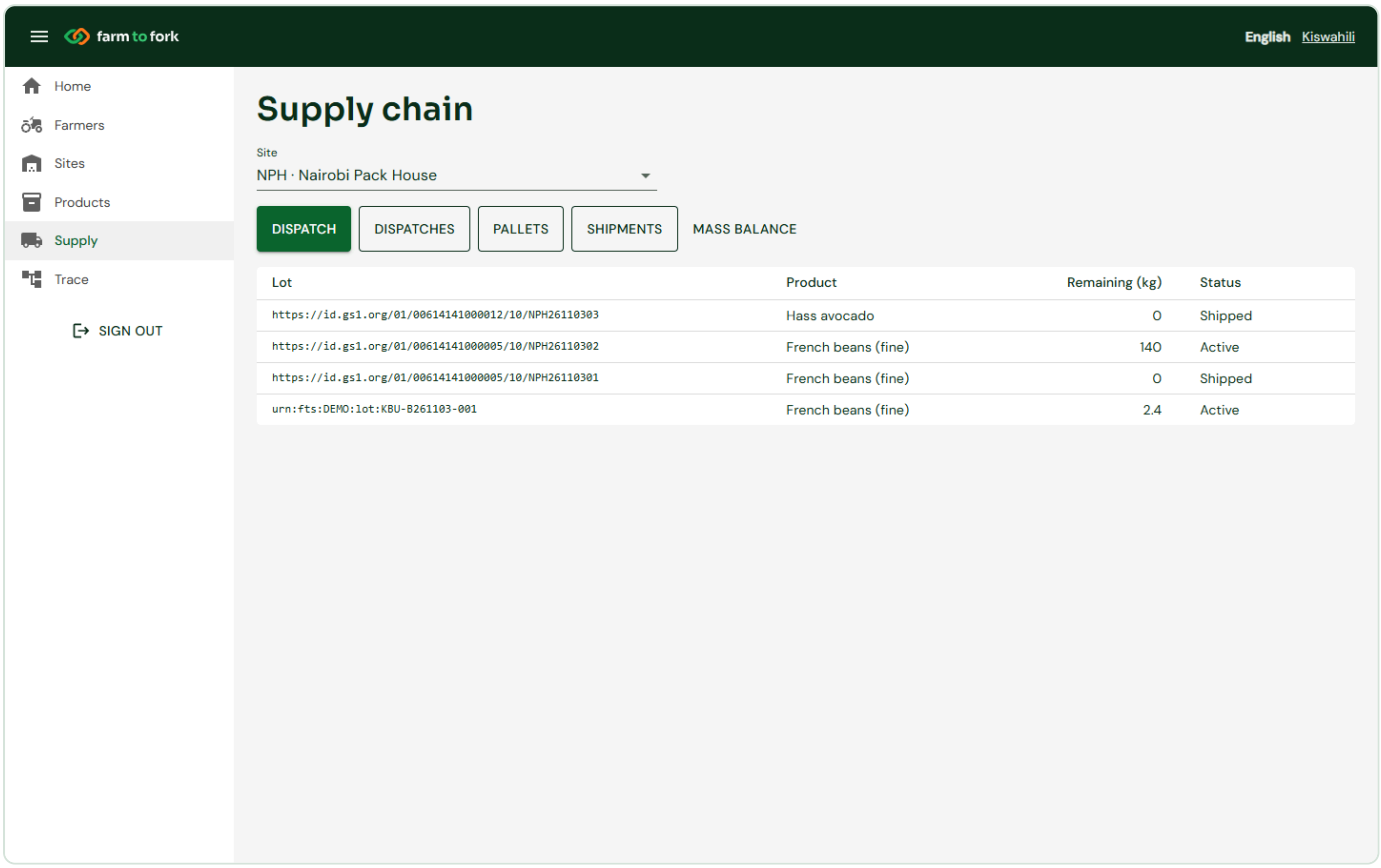


Figure 26. Supply: the lots at a site.

Dispatching to another site

1. On the site's page choose **Dispatch**.
2. Choose the destination, then scan (or type) each batch or lot going on the truck.
3. Enter the vehicle, driver, seal number and temperature, and save.

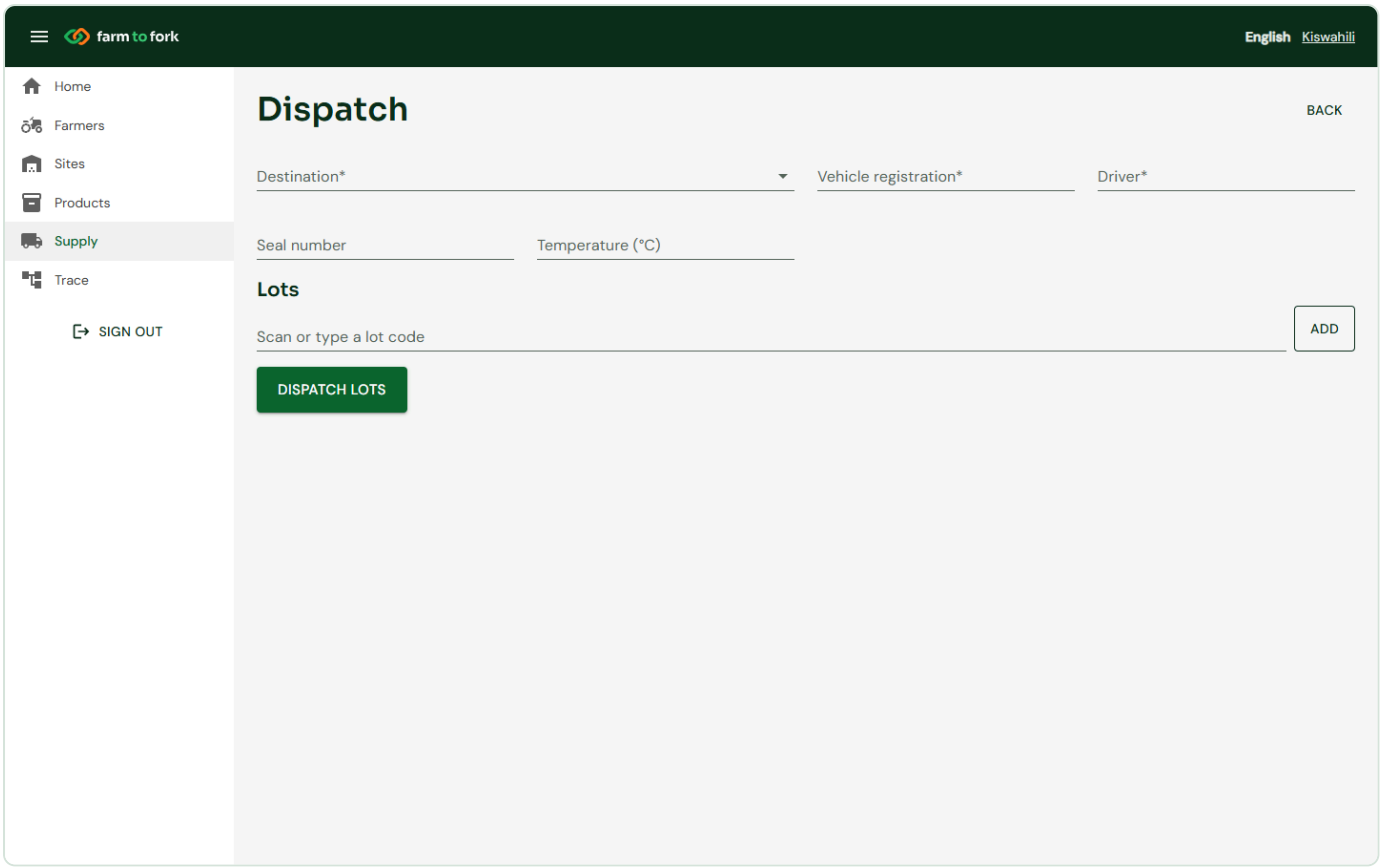


Figure 27. A new dispatch.

The dispatch list shows open dispatches. Record each **custody handover** (from one handler to the next) while the goods are on the road. An administrator can cancel a dispatch that has not arrived.

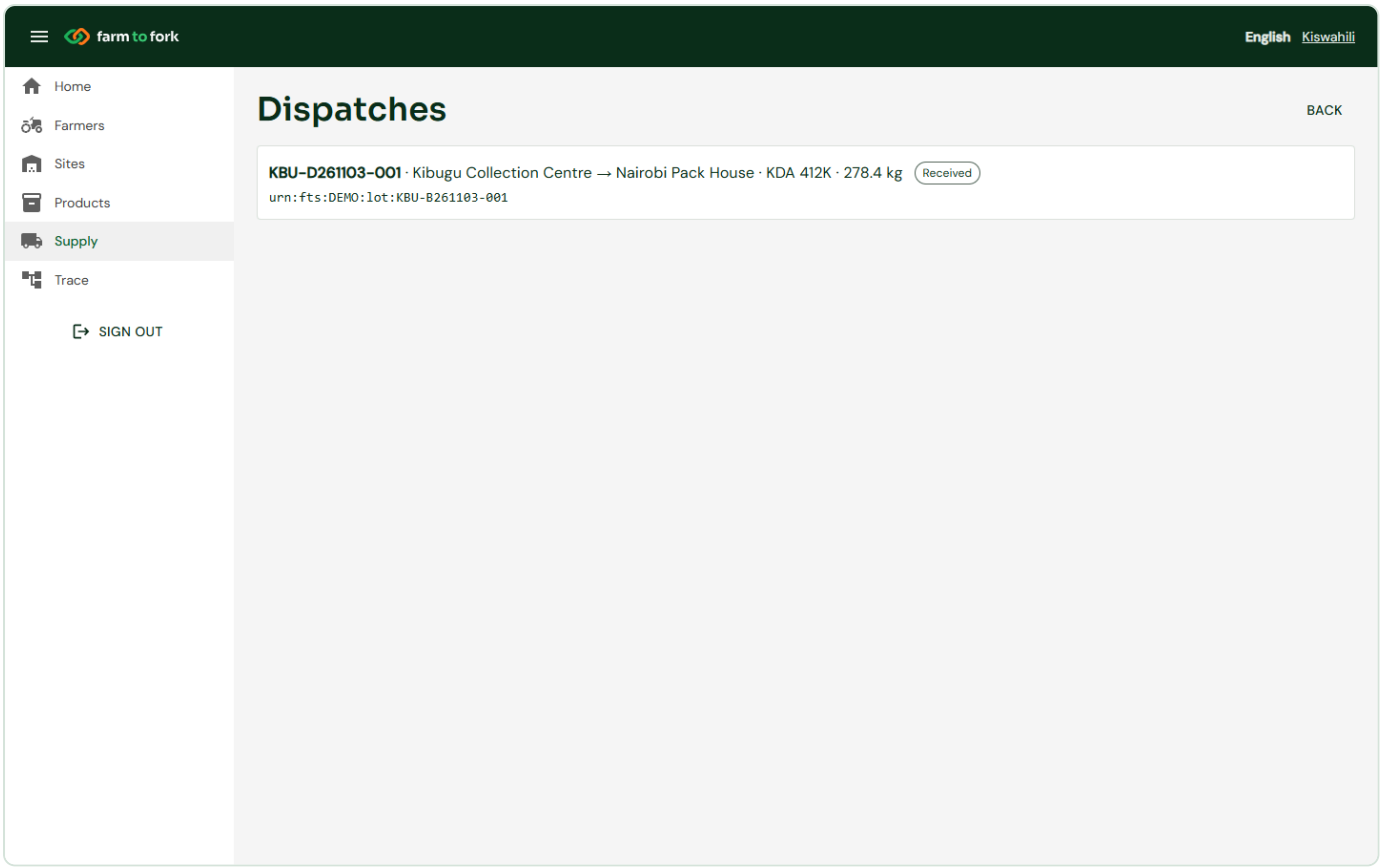


Figure 28. Dispatches and custody handovers.

Receiving at the pack house, with quality control

The pack house supervisor opens the arriving dispatch, scans what arrived and records the received kilograms and the intake result: **accepted**, **held** or **rejected** (held and rejected lots need a note). Lots on the dispatch that were not scanned are reported as short.

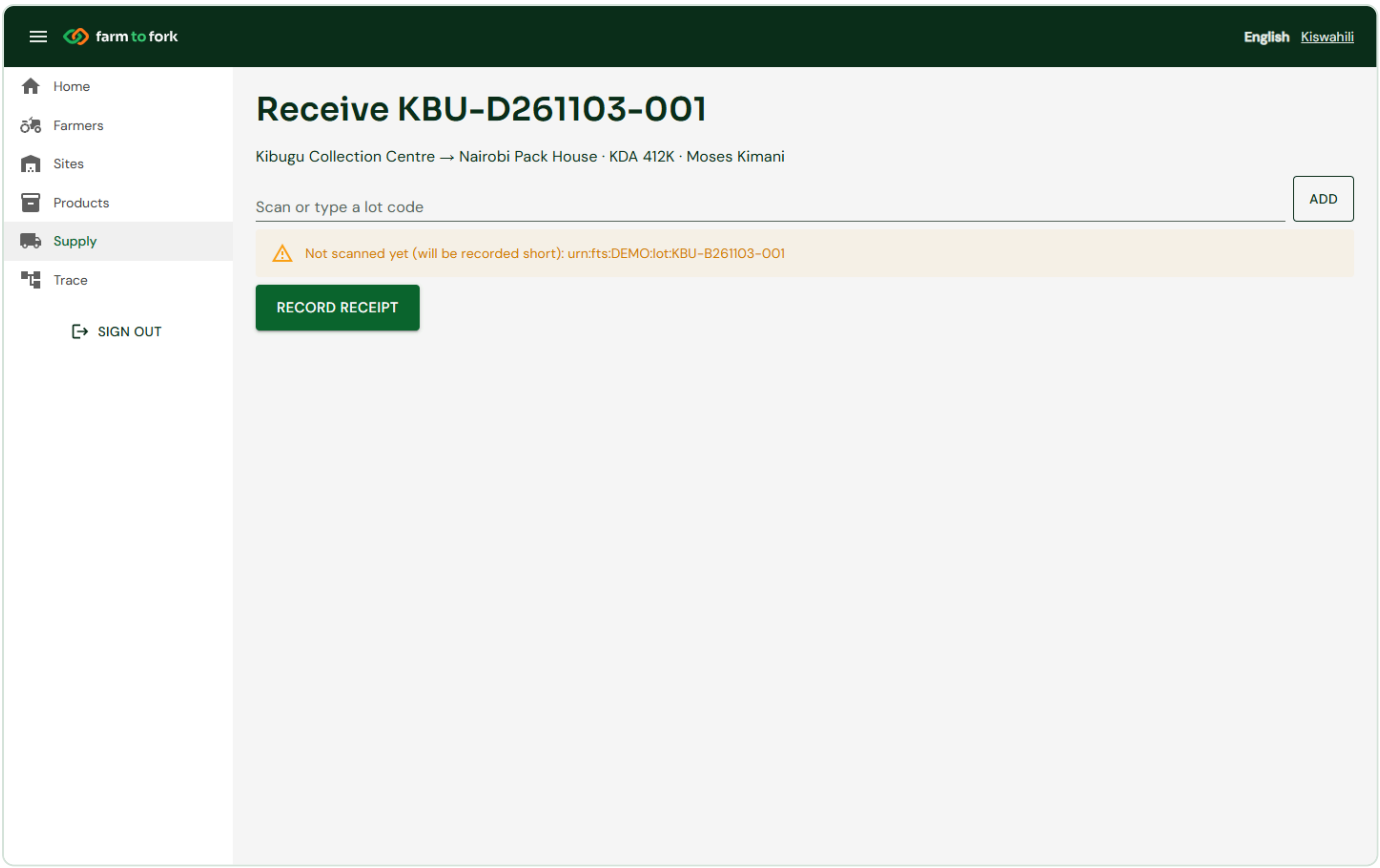


Figure 29. Receiving a dispatch (here, one already received).

Processing and packing

Process records washing, sorting, cutting, drying, milling, blending and other transformations with their input and output lots. **Pack** turns lots into a **pack lot**: choose the product, the number of cartons, the net kilograms and the input lots. The system gives the pack lot a GS1 lot number and best-before date and shows its label.

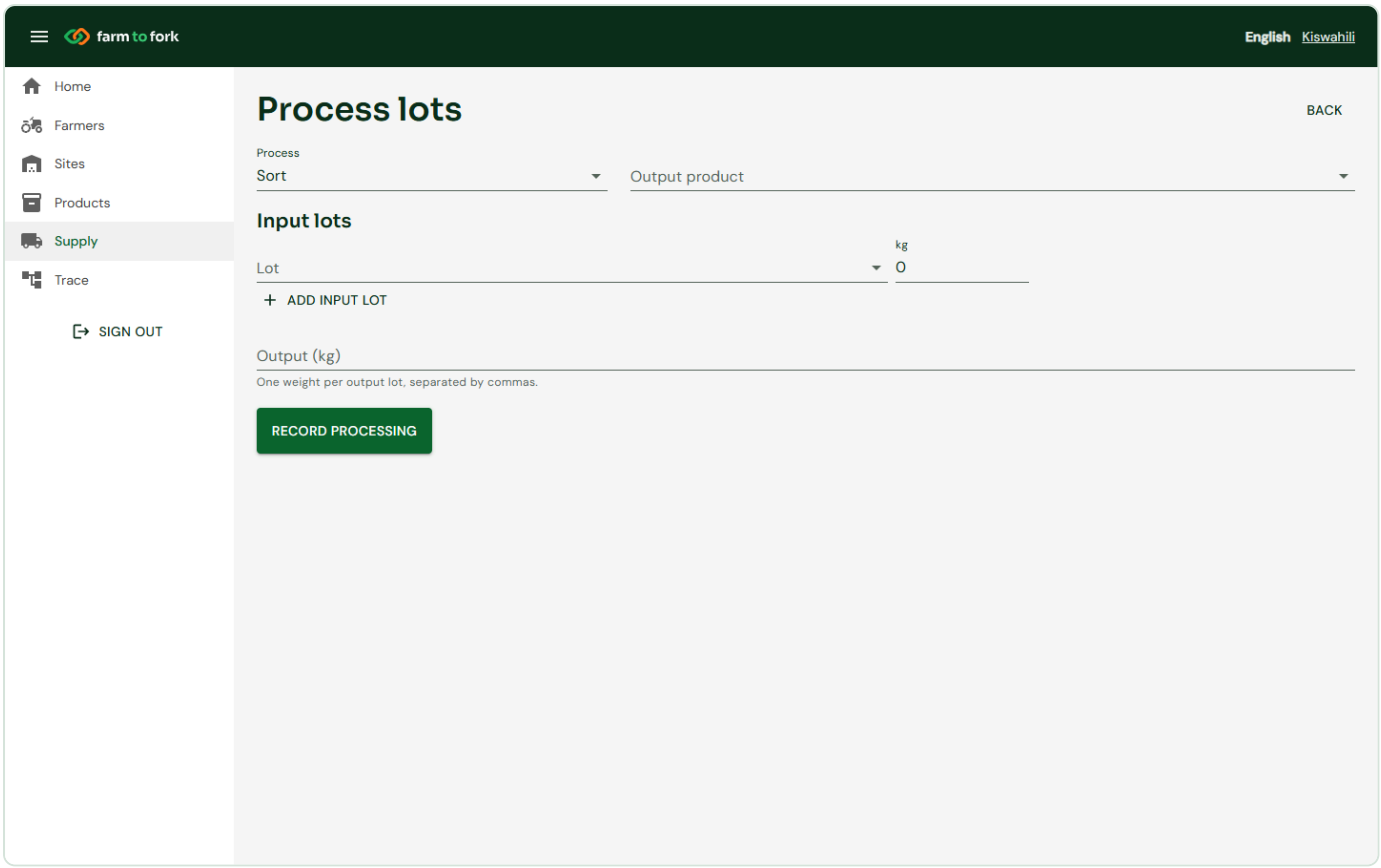


Figure 30. Recording a processing step.

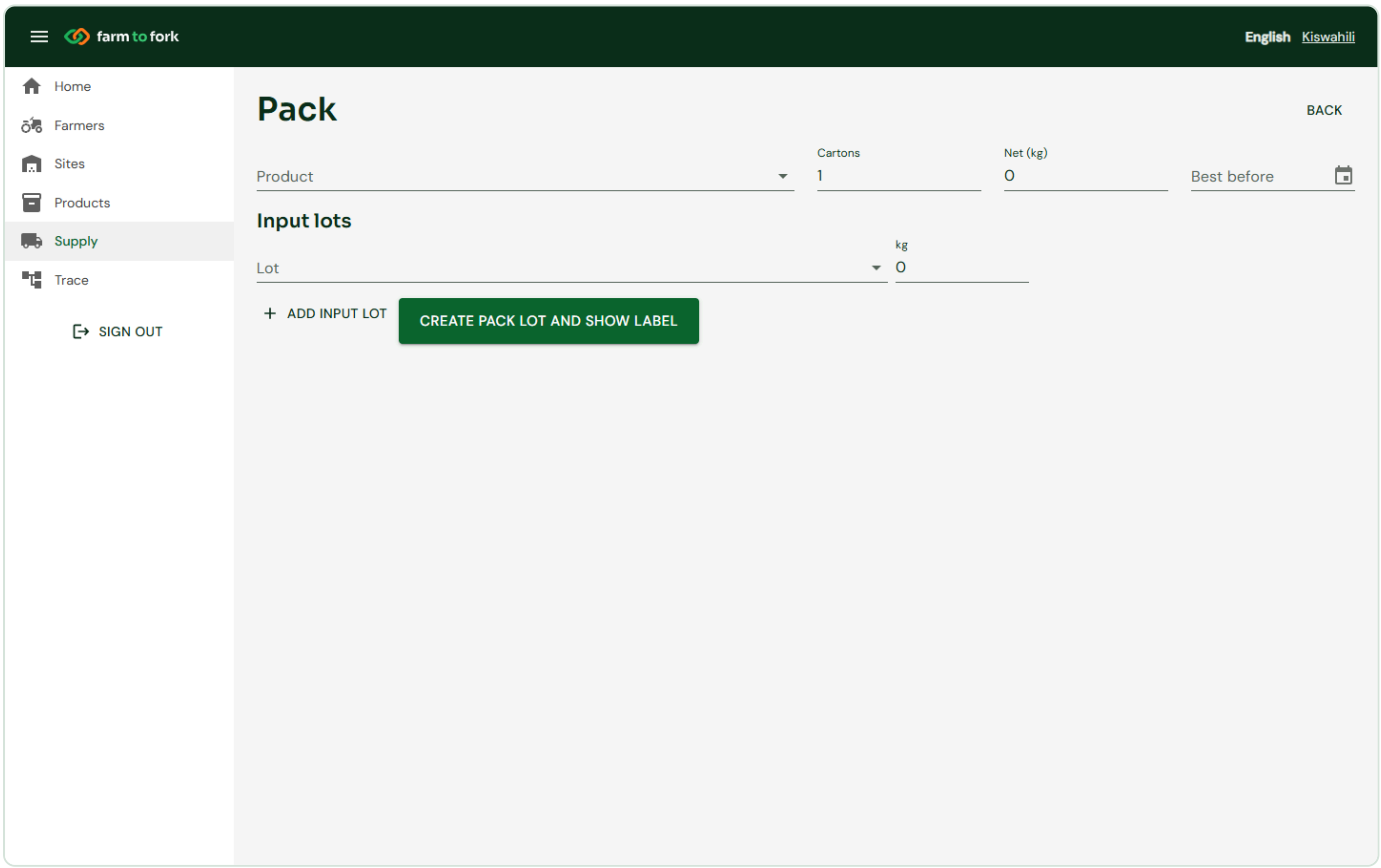


Figure 31. Creating a pack lot.

The pack label (100 × 60 mm) carries the product, GTIN, lot number, dates and the **QR code** consumers scan.

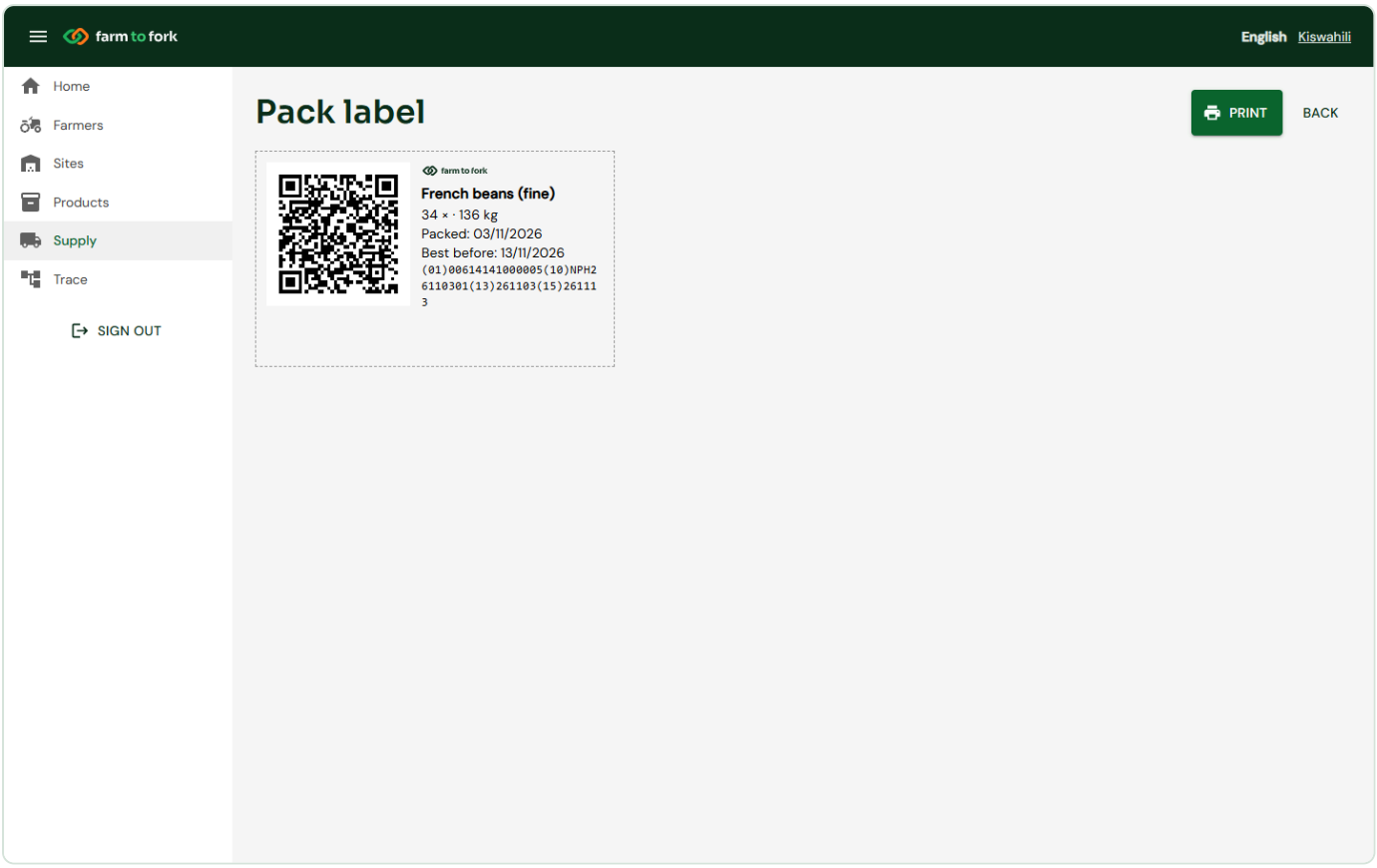


Figure 32. A pack label with its QR code.

Pallets

Packed cartons move on pallets. Build a pallet from one or more pack lots; it gets an **SSCC** (the GS1 pallet number) and a 100 × 150 mm label. A pallet can be taken apart while it is still at the site.

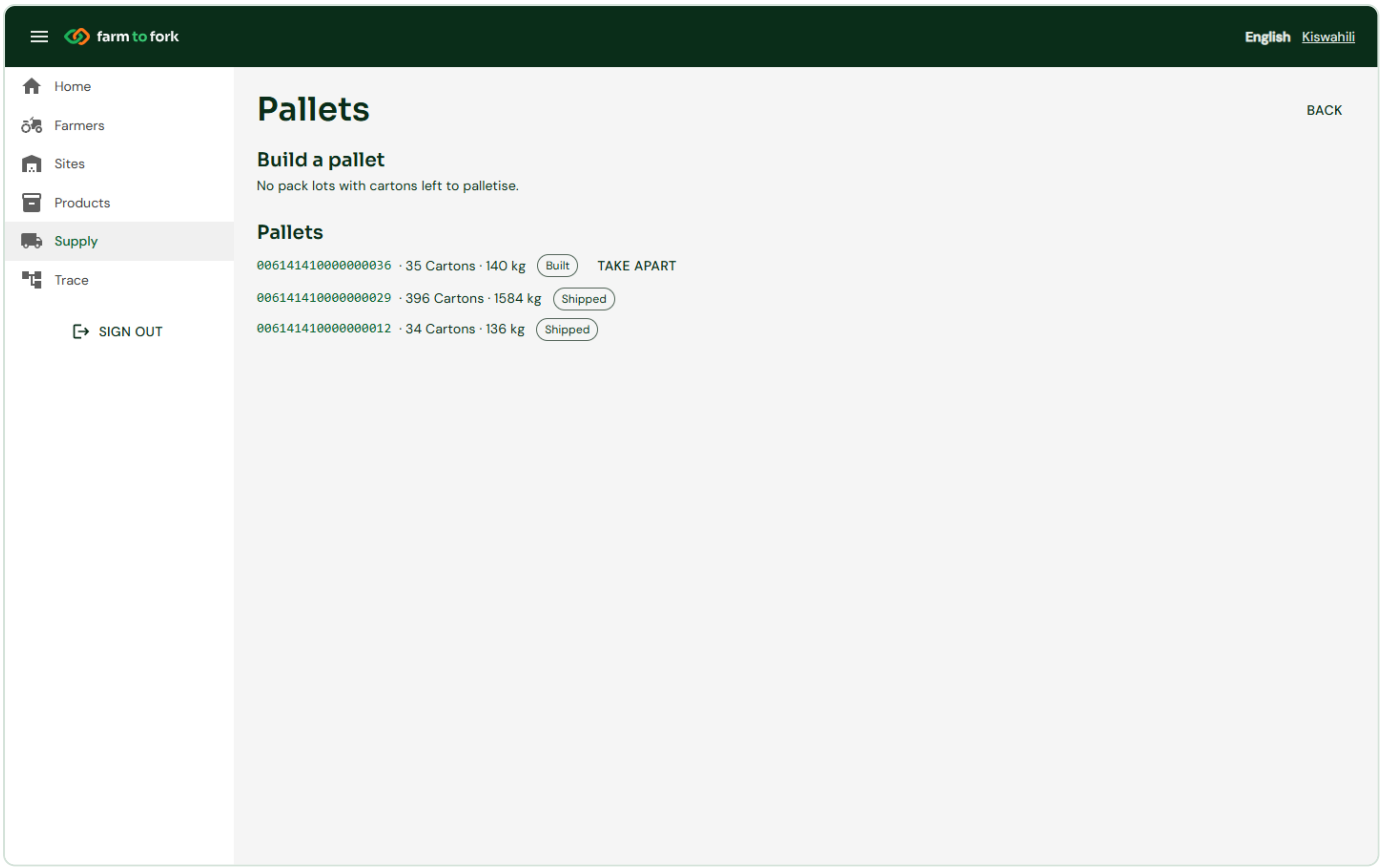


Figure 33. Pallets.

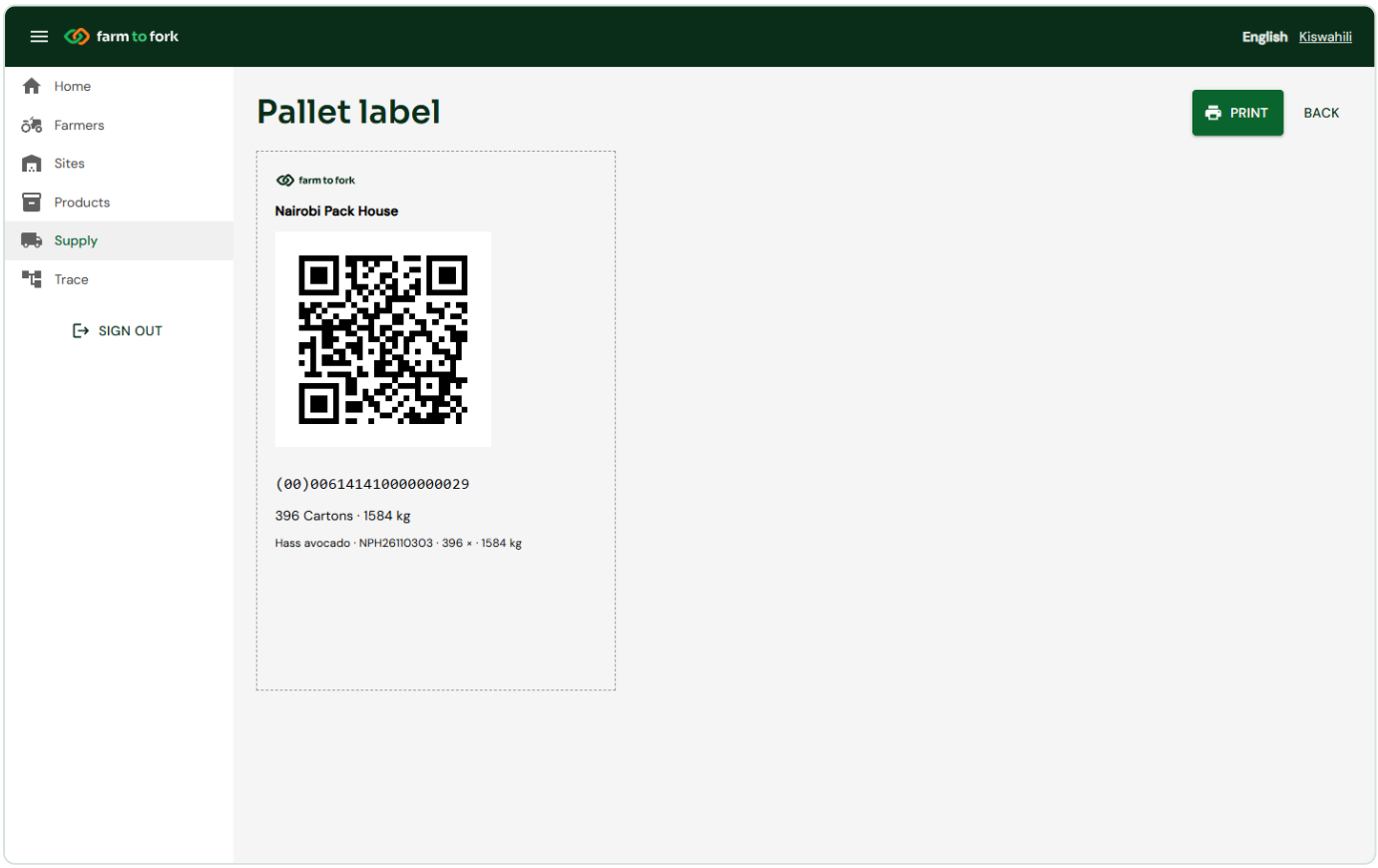


Figure 34. A pallet label.

Buyers and shipments

Logistics officers keep the list of **buyers** (code, name, country, contact e-mail) and create **shipments**: choose the buyer and the pallets, and enter the purchase order, container, seal, phytosanitary certificate, export permit and AFA reference.

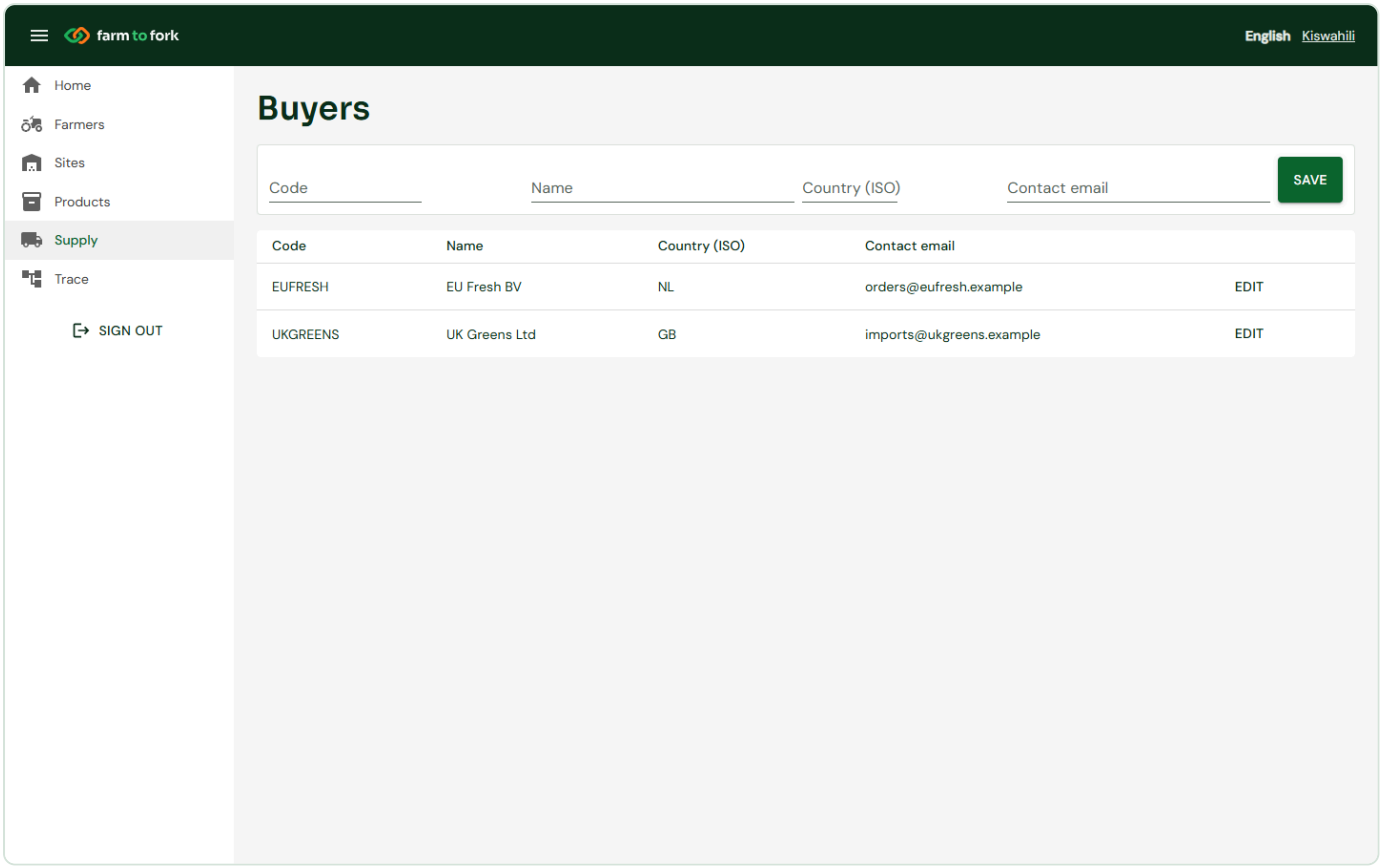


Figure 35. Buyers.

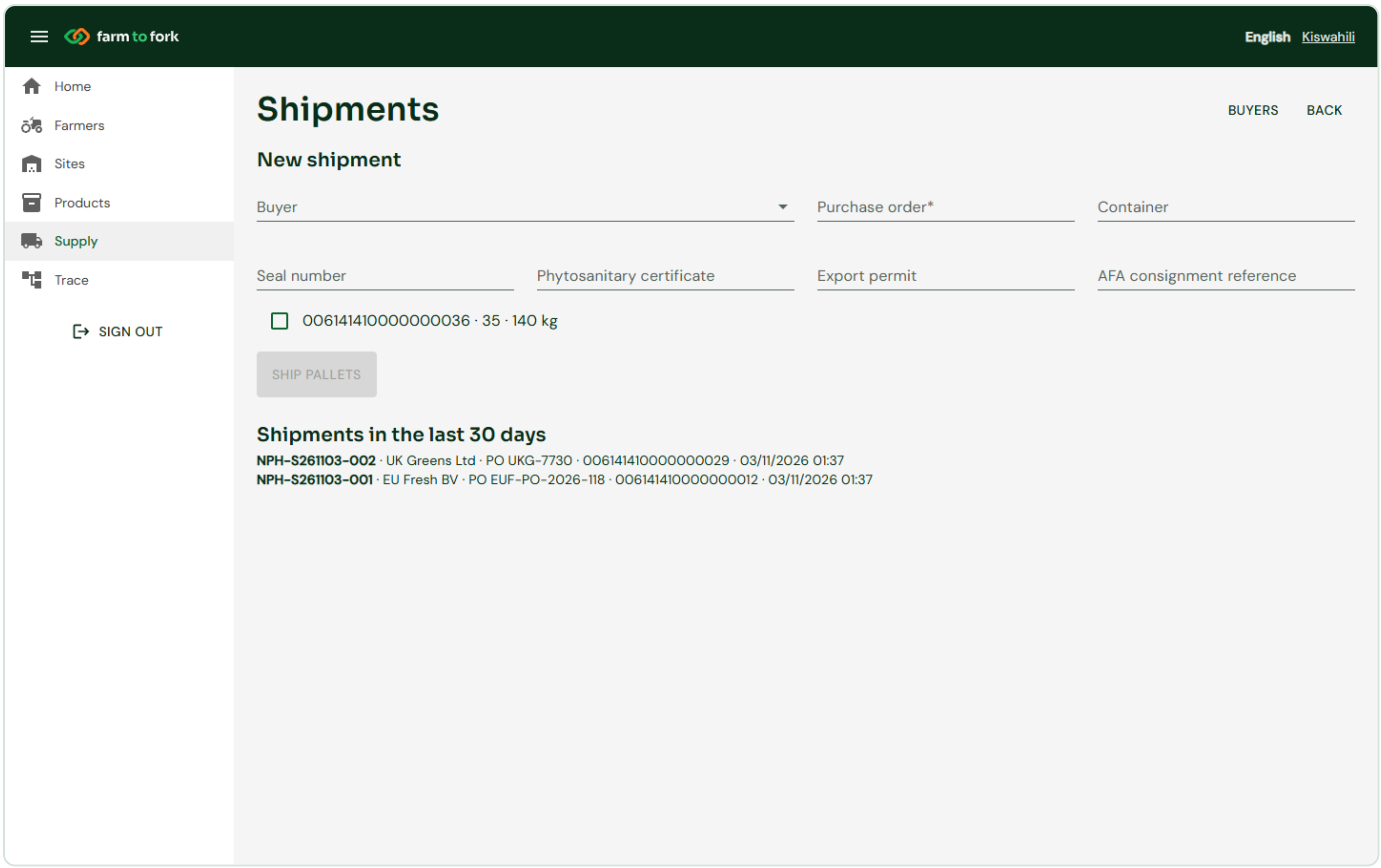


Figure 36. Shipments.

Mass balance

The mass-balance page compares what went into each process or pack lot with what came out, against the product's maximum yield, and flags anything that does not add up.

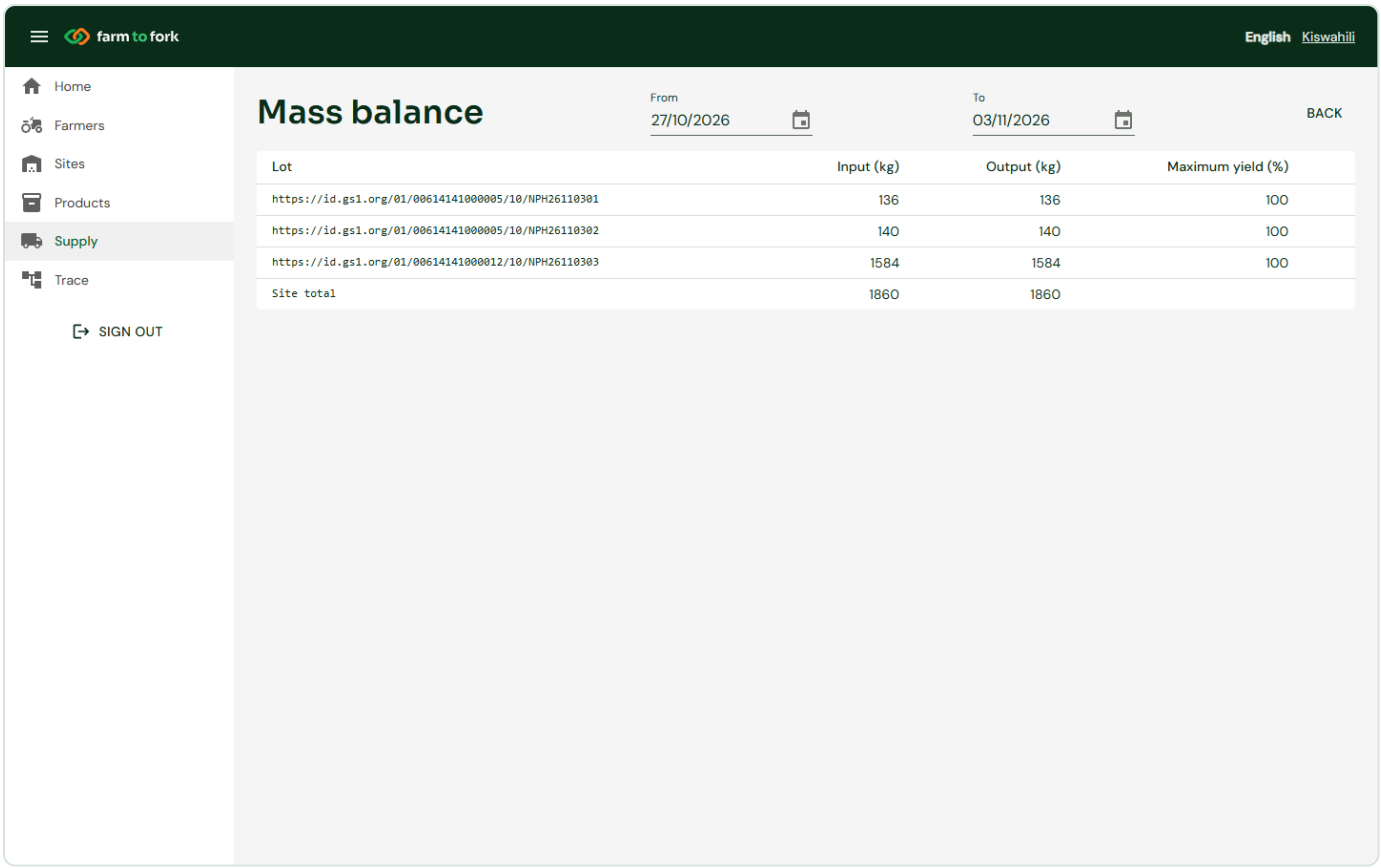


Figure 37. Mass balance.

9. Trace

Trace answers two questions in seconds: *where did this come from?* (backward, to farmers and plots) and *where did it go?* (forward, to shipments and buyers).

1. Choose what to start from: a **lot, pack lot, pallet or QR code** (type it, or scan the label with a USB scanner), a **farmer**, a **plot** or a **spray product**.
2. For a code, choose the direction: both ways, backward or forward.
3. Choose **Trace**.

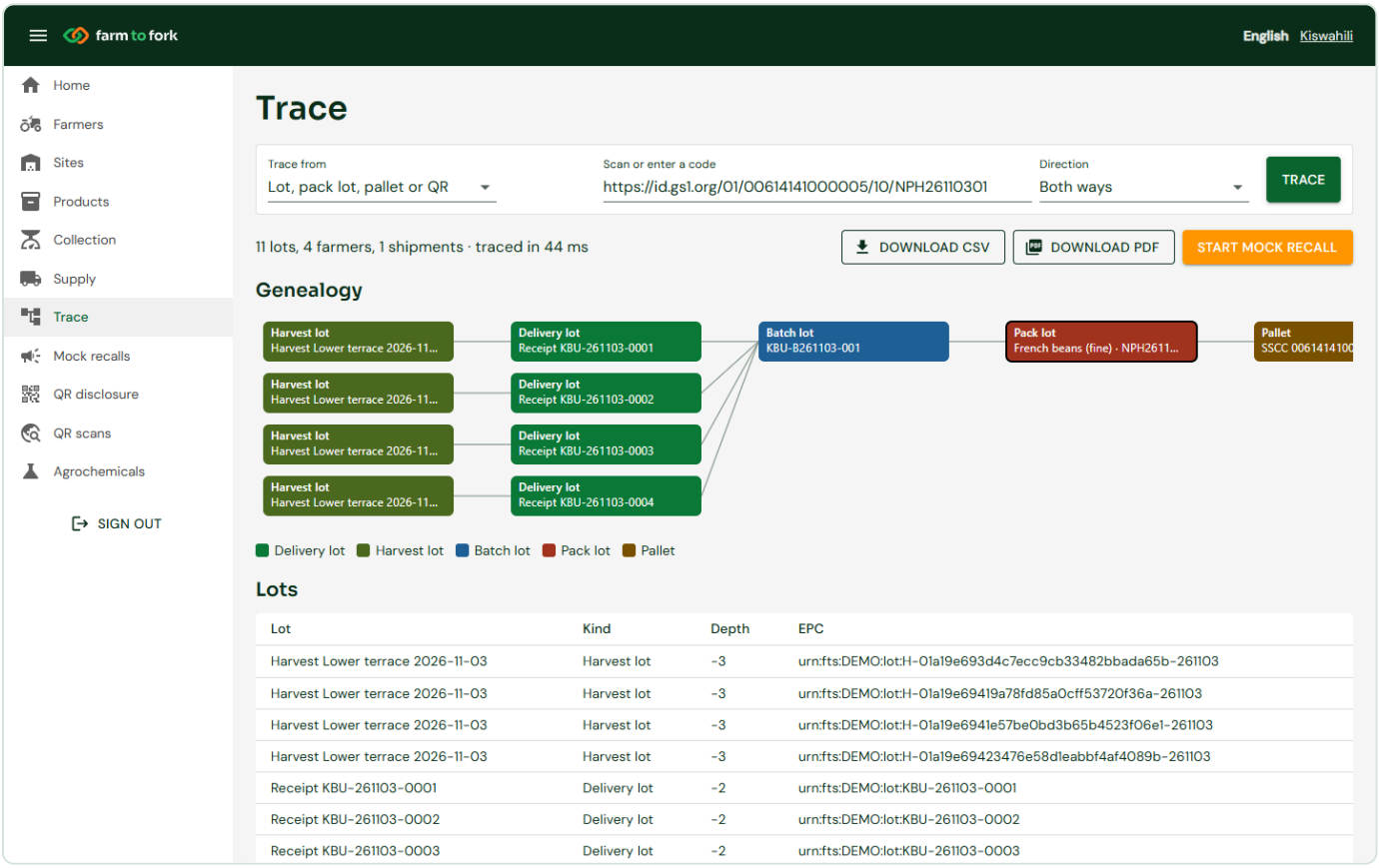


Figure 38. A trace from a pack lot: summary, downloads and the genealogy graph.

The result starts with a summary and the **genealogy**: every lot drawn as a box, coloured by kind (harvest, delivery, batch, process, pack lot, pallet), from the farms on the left to the buyer on the right. Below it are tables of the lots, farmers (with kilograms delivered), plots, field activities in the 90 days before each harvest, everyone who handled the goods, the shipments and the buyers.

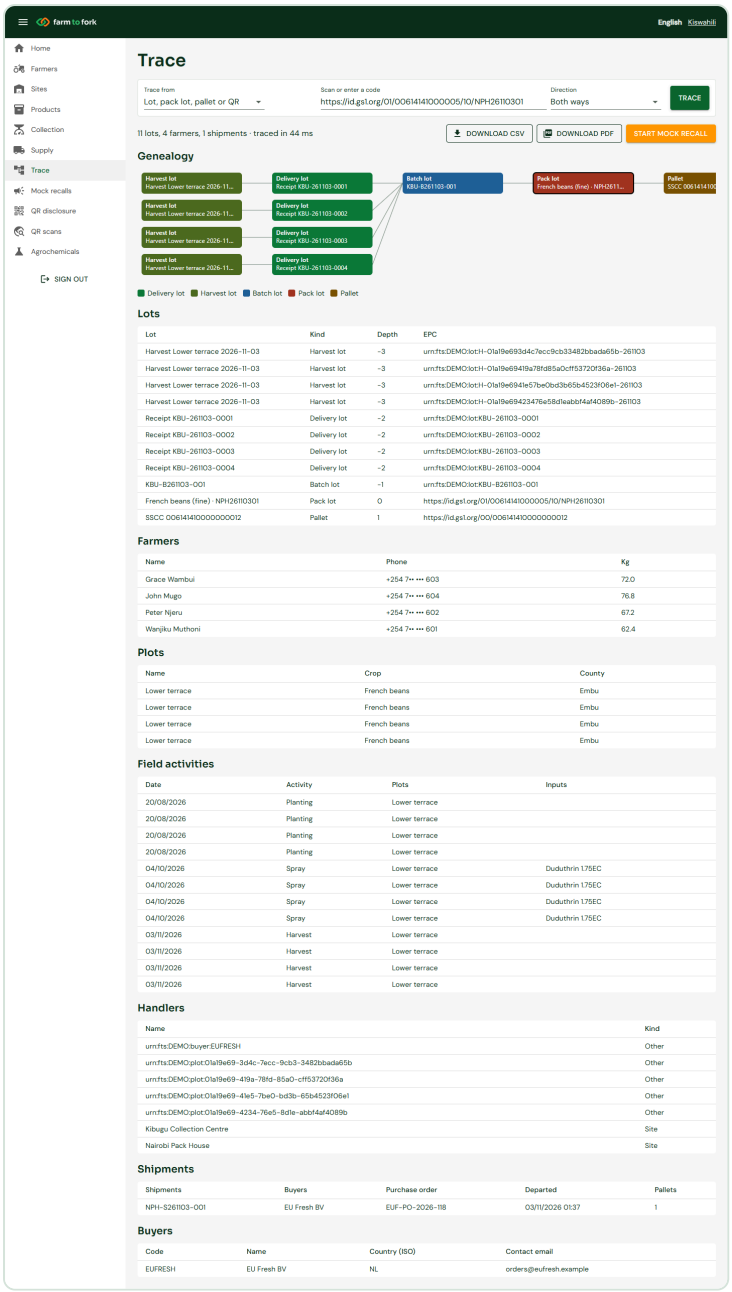


Figure 39. The complete trace report.

Starting from a farmer shows everything made from their deliveries, and which buyers received it:

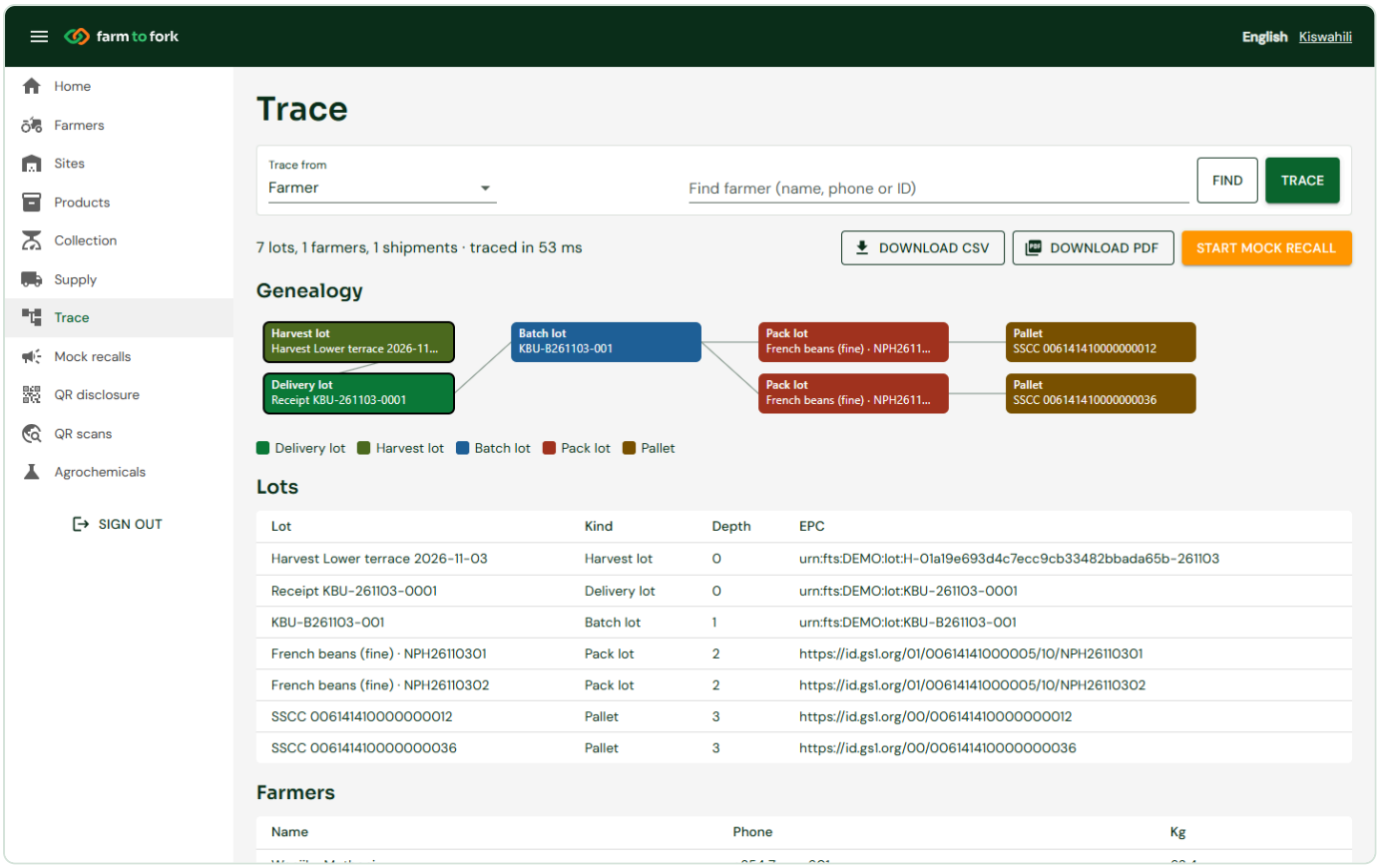


Figure 40. A trace from a farmer.

- **Download CSV** gives the whole report as a spreadsheet; **Download PDF** gives a printable A4 report. Both have the date and time in the file name.
- A **spray product** trace finds the produce of every plot sprayed with it within 180 days either side of today: useful when a product is withdrawn.
- Corrected records (reversed deliveries, cancelled dispatches) are left out automatically.

10. Mock recalls

A mock recall is a timed drill: how fast can you find and contact every buyer affected by a problem lot? The target is **within 4 hours**.

1. Start from the trace page with **Start mock recall**, or from **Mock recalls › New mock recall** with a lot code.
2. The system traces back to the lot's sources and forward again, so that sibling lots made from the same batch are included. It lists the stock still on hand, the shipments and the buyers to reach, and starts the clock.
3. Contact each buyer and choose **Mark reached** (add a note if useful).
4. When every buyer is reached, choose **Complete recall**. The time taken is shown against the target.

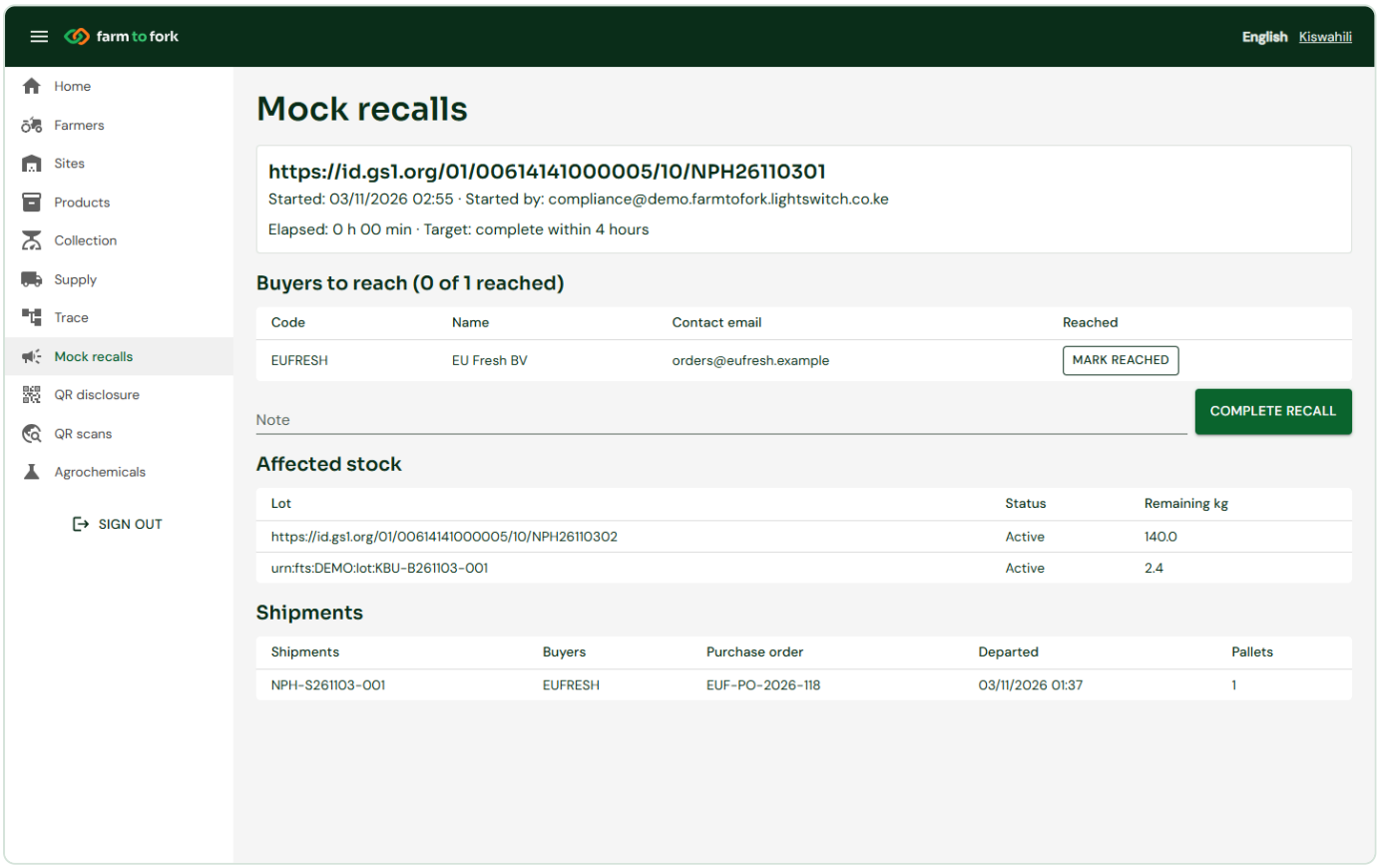


Figure 41. A running mock recall.

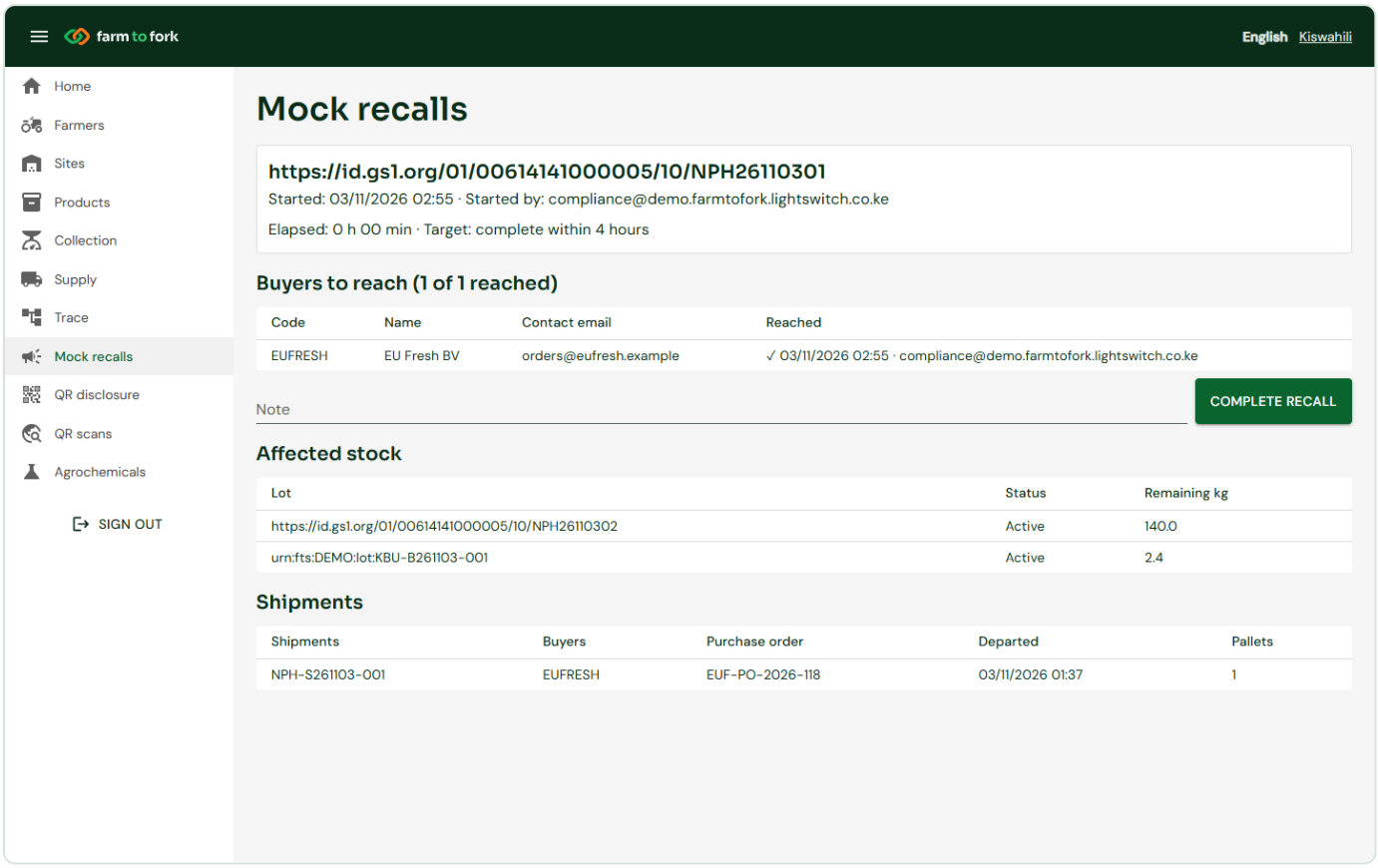


Figure 42. The buyer has been reached; the recall can now be completed.

The mock recalls page lists every drill with its progress and result.

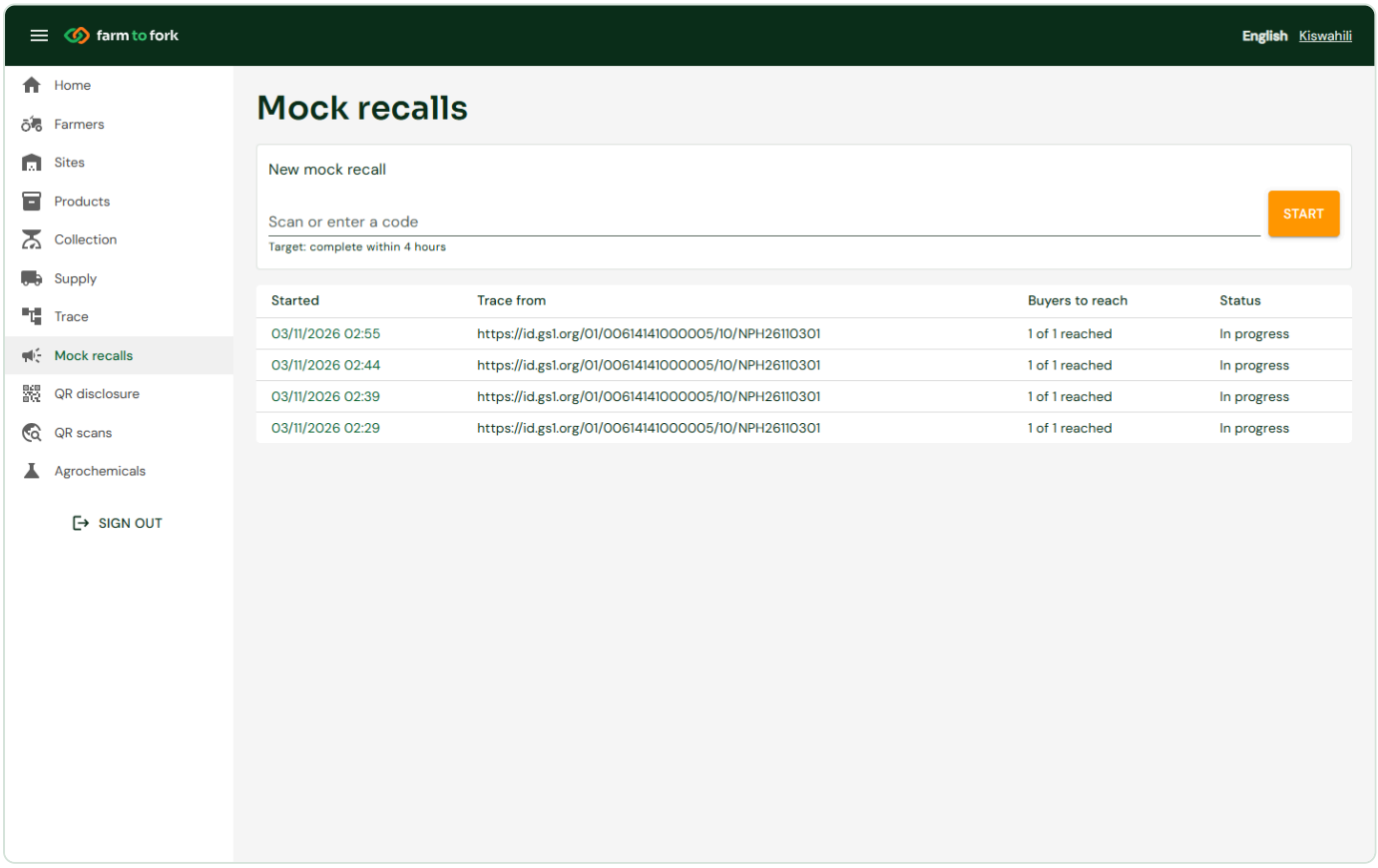


Figure 43. Mock recalls.

11. QR disclosure and scans

Choosing what the QR page shows

Compliance managers decide, field by field, who may see what: **Everyone** (anyone who scans the pack), **Buyers only** (in the buyer portal) or **Nobody**. The fields are origin county, farmer names, harvest dates, pack and best-before dates, the handling timeline, site names and certifications.

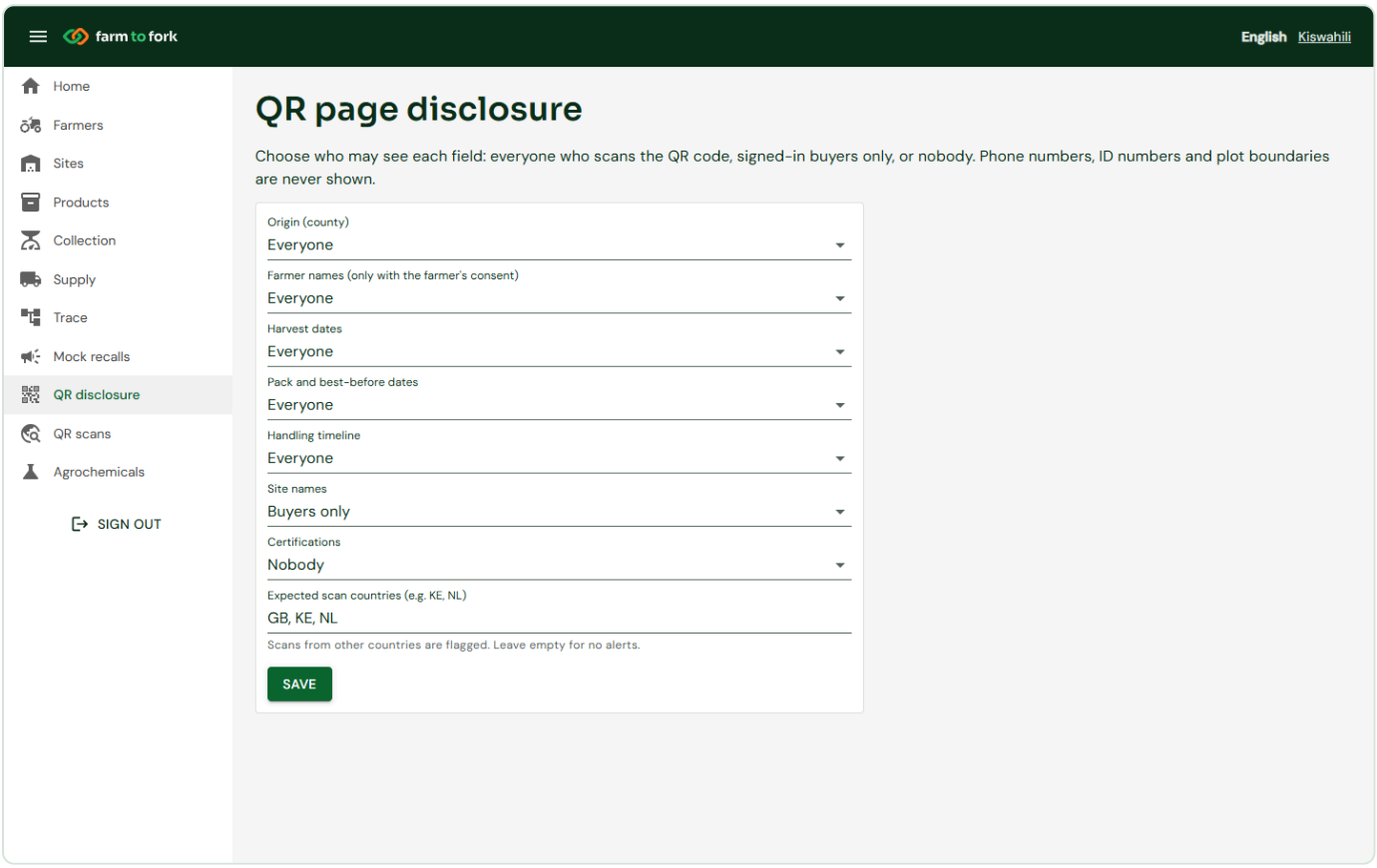


Figure 44. QR disclosure settings.

> **Privacy is built in**
>
> A farmer's name is shown only when the setting allows it *and* the farmer has agreed: for the public page their sharing consent must list `Public`; for a buyer it must name that buyer. Phone numbers, ID numbers and plot boundaries are never shown. When harvest or pack dates are hidden, the timeline steps that would reveal them are hidden too.

Scan alerts

Enter the countries where your produce is expected to be sold (for example `KE, NL, GB`). **QR scans** lists the scans of the last 30 days with the country and device; scans from any other country are flagged as **unexpected**, which can reveal diverted or counterfeit goods. Turn on **Unexpected countries only** to see just those.

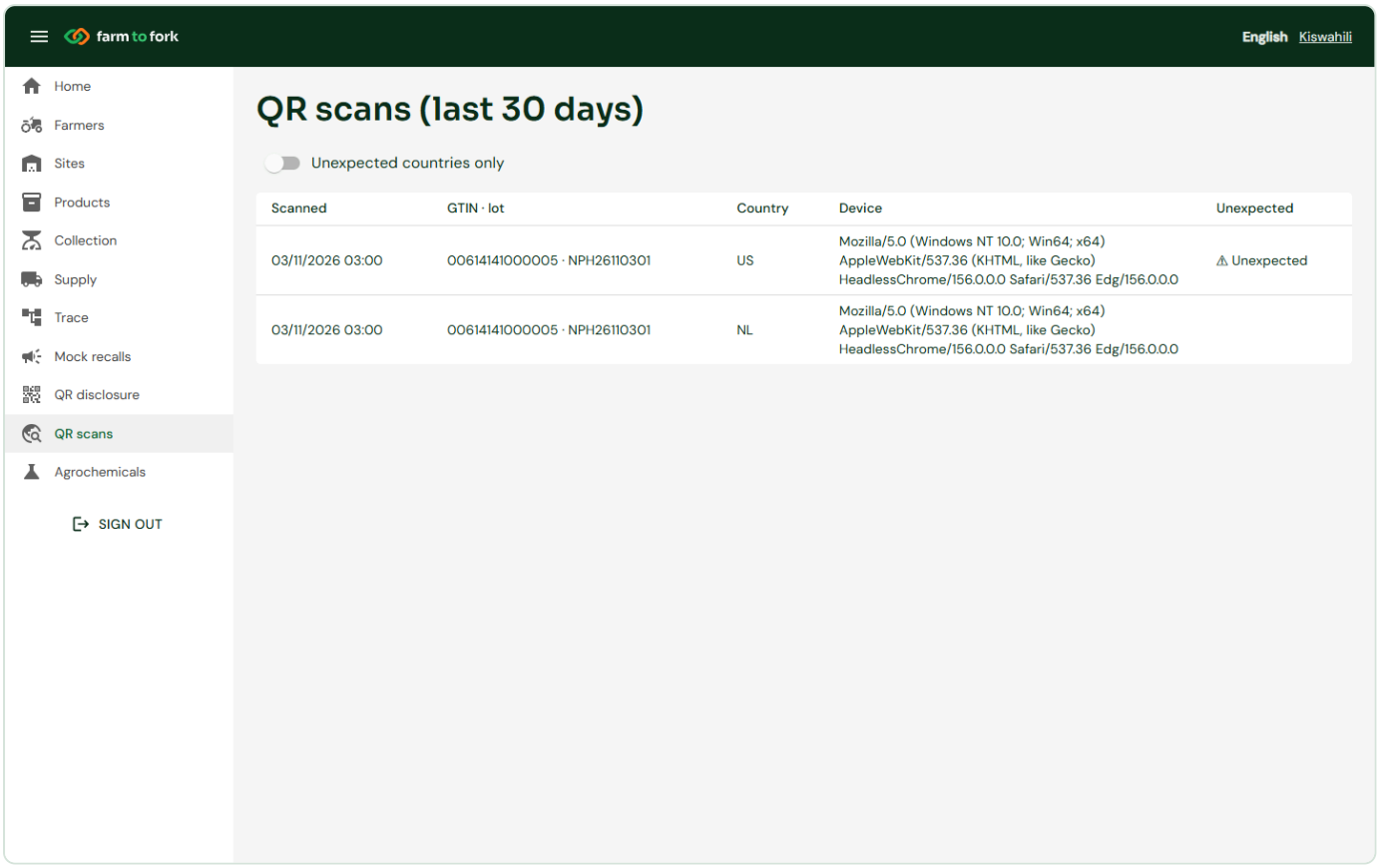


Figure 45. QR scans, with a scan from an unexpected country flagged.

12. Buyer portal

Buyers sign in on the same site and see **My shipments**: only the shipments sent to their company. Search by shipment number, purchase order, pallet SSCC or departure date (`yyyy-mm-dd`).

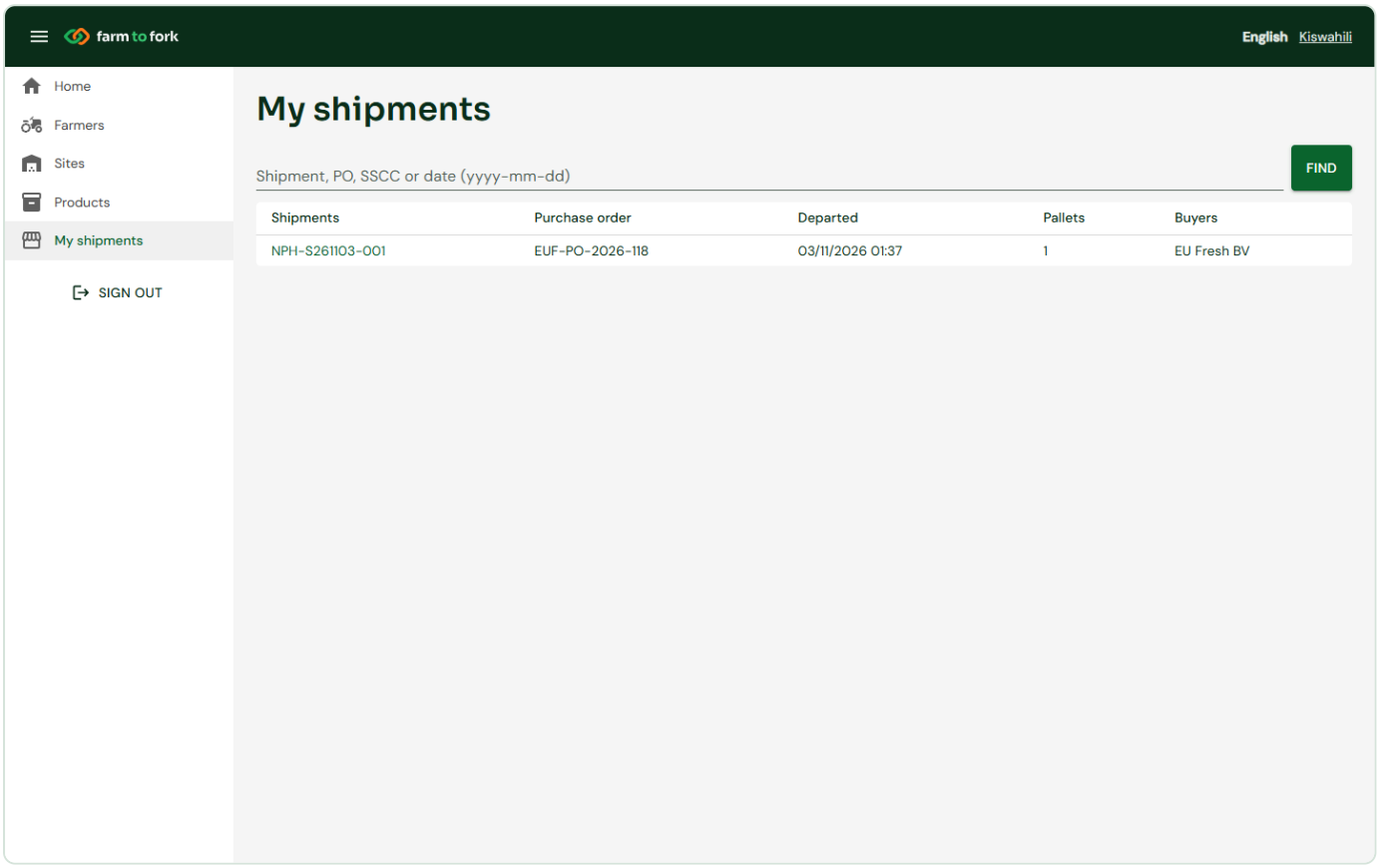


Figure 46. The buyer portal.

Opening a shipment shows its pack lots, the origin and harvest dates, the farmers (named only where the farmer agreed to share with this buyer; otherwise "Farmer (consent not given)"), the handling timeline and the lots it came from. **Download CSV** and **Download PDF** give the same information as a file for the buyer's own records.

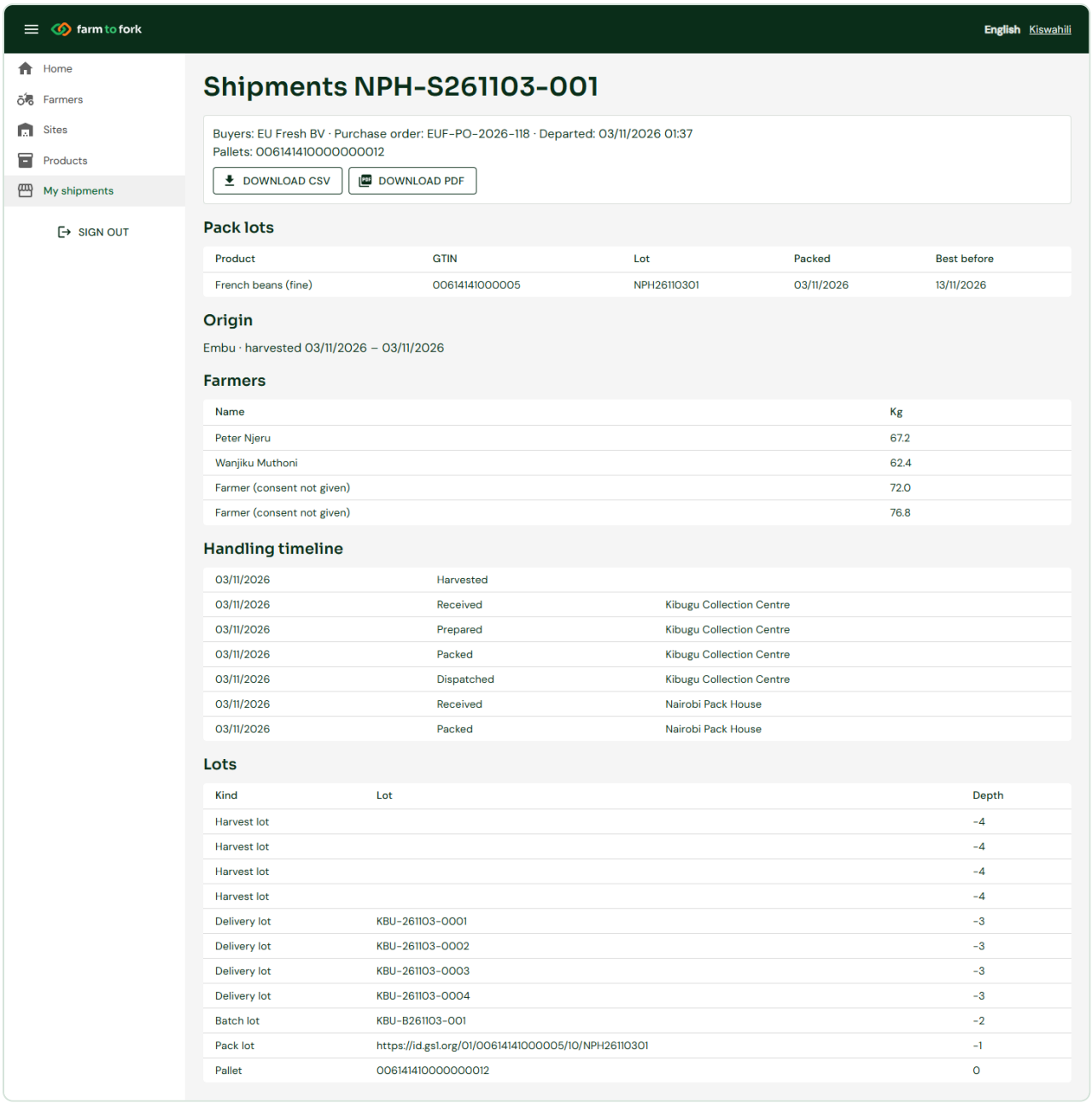


Figure 47. A shipment in the buyer portal.

> **A buyer sees nothing?**
>
> The buyer's user must be linked to the buyer company by an administrator (section 14), and the buyer must sign in again after the change.

13. The public QR page

Anyone who scans the QR code on a pack with a phone camera sees a short page about that lot: the product, where it was grown, harvest, pack and best-before dates, who packed it, the farmers who agreed to be named, and its journey. The page is small and fast, so it opens quickly even on a slow mobile connection. No sign-in is needed.

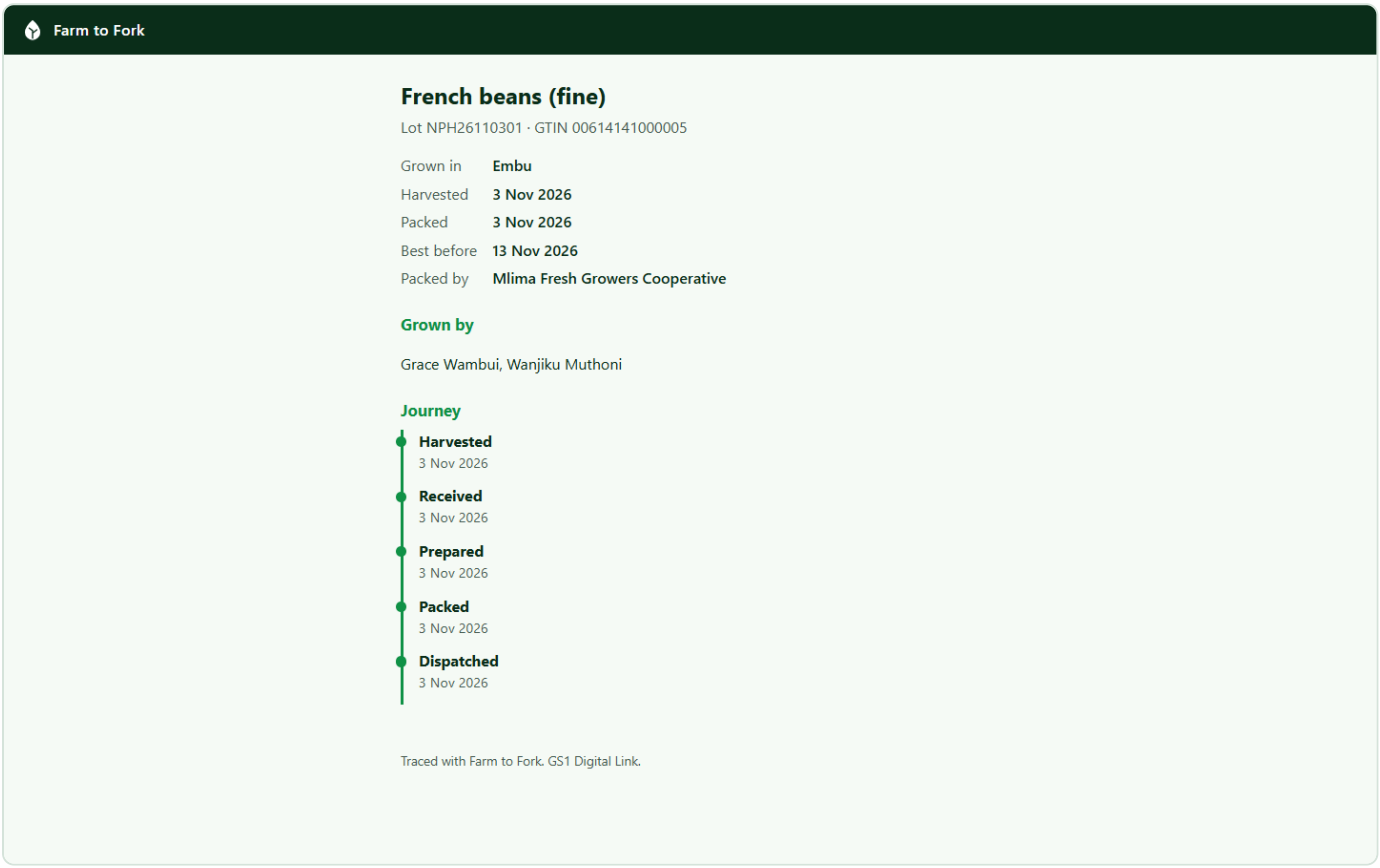


Figure 48. The public page opened from a pack's QR code.

A code that does not belong to this organisation, or a lot that does not exist, gets a short "not found" page that reveals nothing.

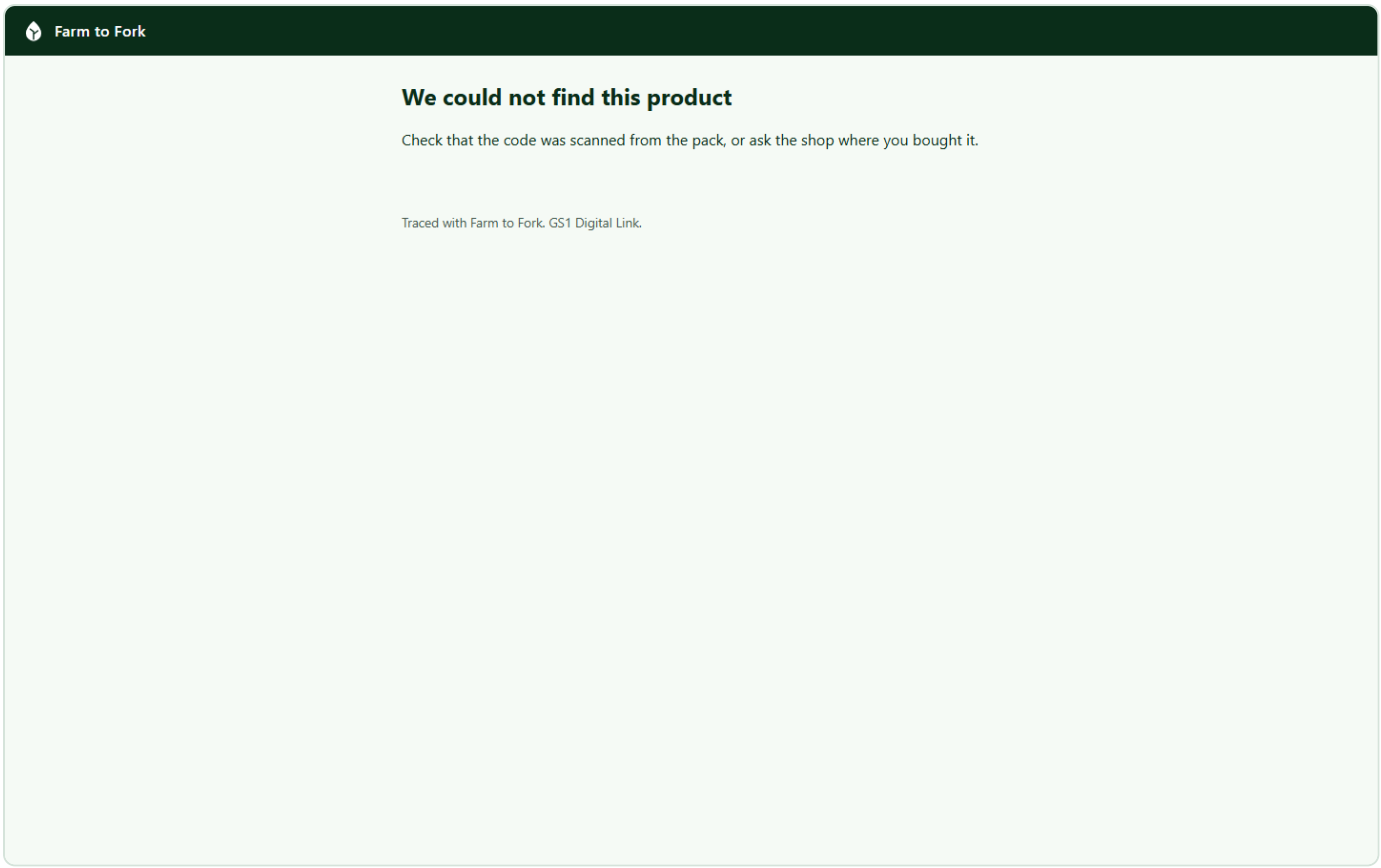


Figure 49. The page for an unknown code.

14. Users and access

Administrators manage users under **Users**: invite a user with their e-mail and a temporary password, give them roles, and limit them to sites.

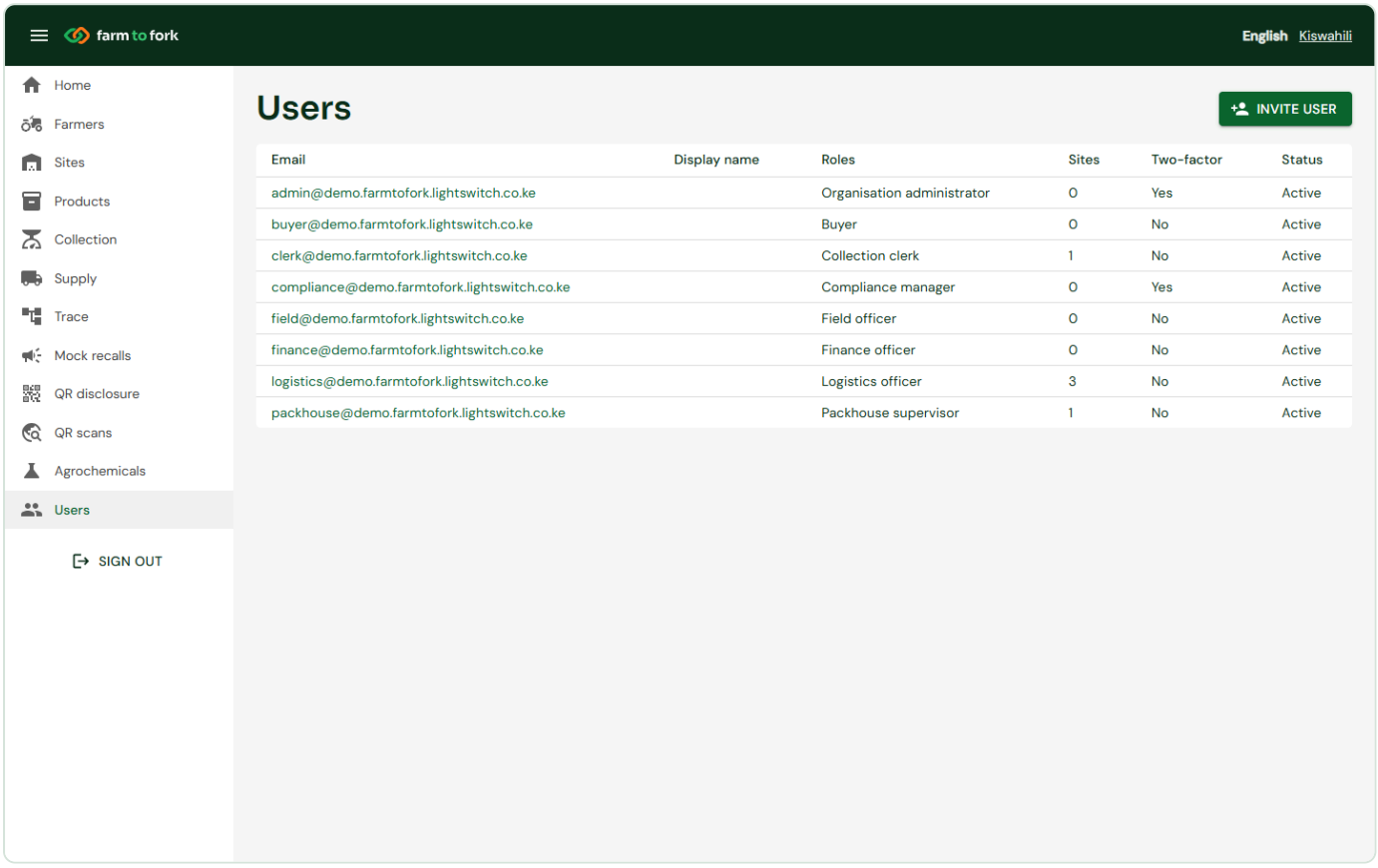


Figure 50. Users.

On a user's page:

- **Roles:** tick the roles the person needs (see section 3).
- **Sites:** for clerks, supervisors and logistics officers, choose the sites they work at. With no site, they cannot record anything at a site.
- **Buyers:** for a buyer user, choose the buyer companies they act for.
- **Disable** stops a user signing in; their records stay.

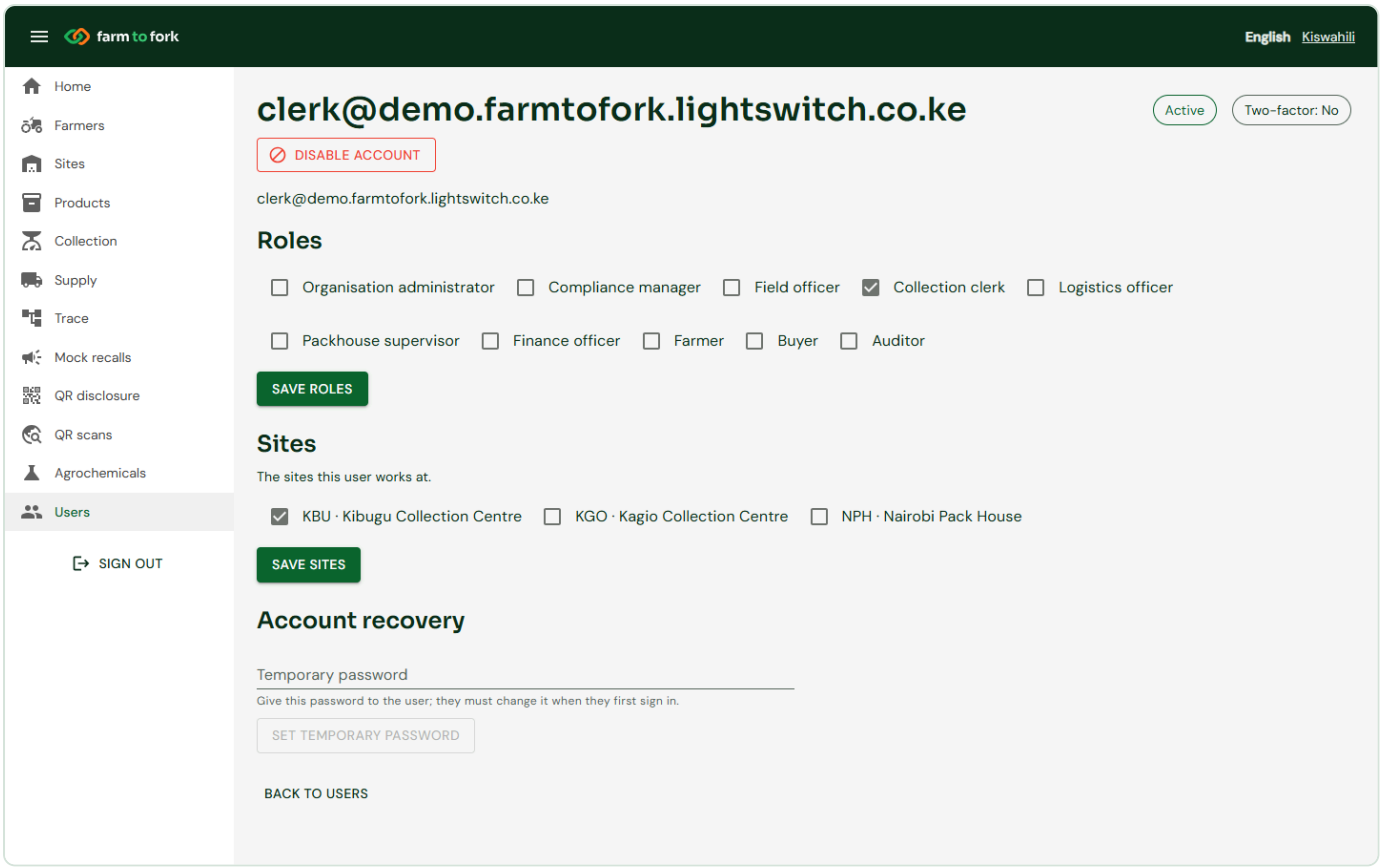


Figure 51. A collection clerk limited to one centre.

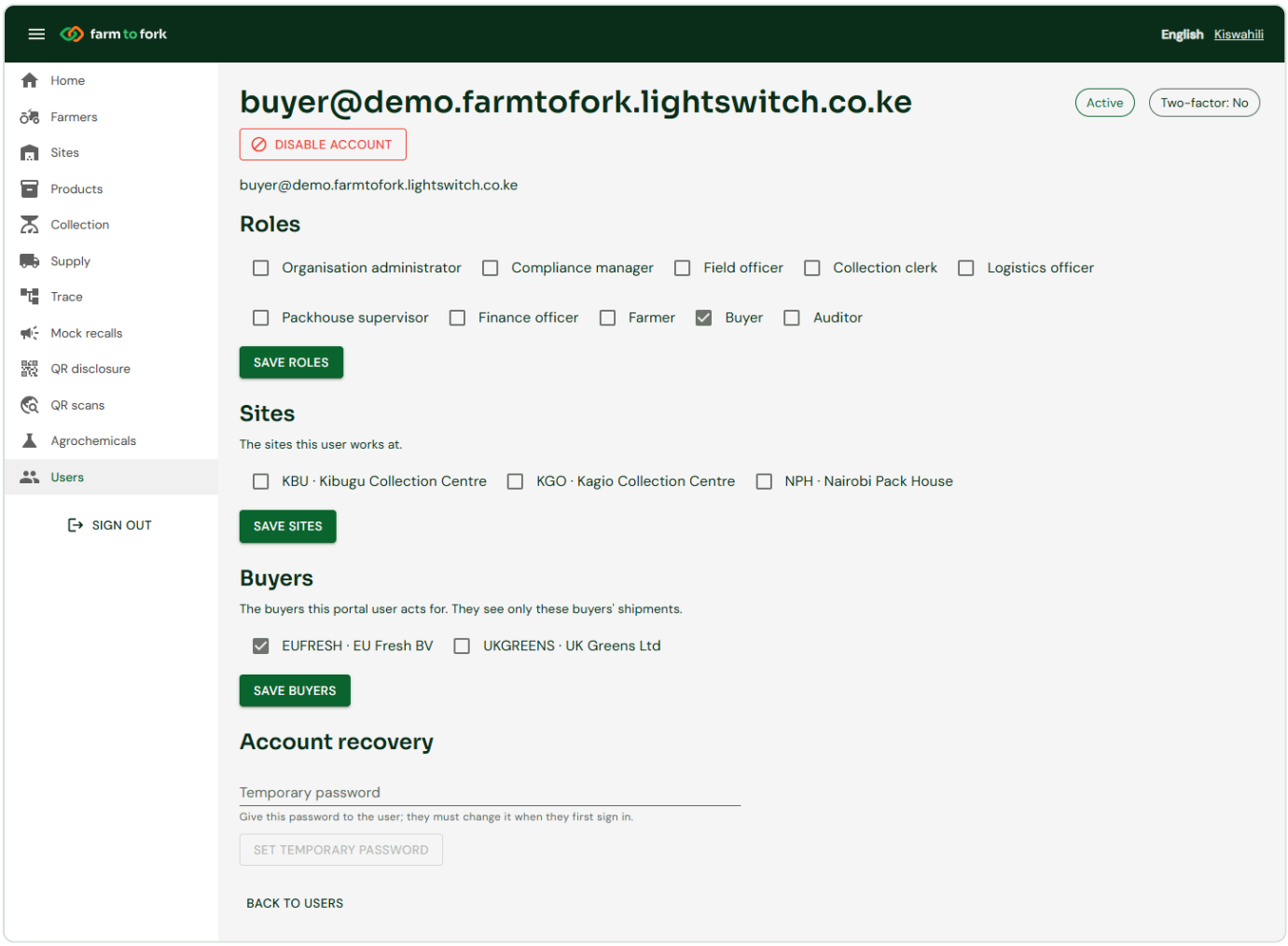


Figure 52. A buyer user linked to EU Fresh BV.

Changes to roles, sites and buyers apply when the person next signs in (within 5 minutes for a signed-in user).

15. Demo accounts

The demo at demo.farmtofork.lightswitch.co.ke has one user per role. All use the demo password given to you by Lightswitch.

Sign in as	Role	Try this
`admin@demo.farmtofork.lightswitch.co.ke`	Tenant administrator	Users, sites, products; everything else. Set up the authenticator first.
`field@…`	Field officer	Open Wanjiku Muthoni and her plot's activities.
`clerk@…`	Collection clerk (Kibugu)	Receive produce from 0712 345 601; build a batch; close the day.
`packhouse@…`	Pack house supervisor (Nairobi Pack House)	Pack the bean batch still on hand; print a label.
`logistics@…`	Logistics officer (all sites)	Ship the bean pallet that is built but not shipped.
`compliance@…`	Compliance manager	Trace a pack lot; run a mock recall; change the QR disclosure.
`finance@…`	Finance officer	View collection and supply records.
`buyer@…`	Buyer (EU Fresh BV)	Open the shipment and download its CSV.

Pack labels in the demo carry QR codes that open `qr.demo.farmtofork.lightswitch.co.ke`.
The demo uses GS1's documentation company prefix (0614141); real labels need your own GS1 prefix.

16. Glossary

Term	Meaning
Batch	Deliveries of one product pooled at a collection centre before they move on.
Consent	A farmer's recorded agreement, for data processing (required) or sharing their name with buyers or the public (optional, can be withdrawn).
Custody handover	A record that goods passed from one handler (driver, transporter, agent) to another while in transit.
Digital Link / QR code	The GS1 standard web address printed as a QR code on a pack: `…/01/{GTIN}/10/{lot}`.
EPCIS	The GS1 standard for traceability events (what, when, where, why). Every step in Farm to Fork is stored as an EPCIS event.
Genealogy	The family tree of a lot: what went into it and what was made from it.
GLN	GS1 Global Location Number, identifying a site.
GTIN	GS1 Global Trade Item Number: the product's barcode number.
Lot	A quantity of produce tracked as one unit: a harvest, a delivery, a batch, a processed lot or a pack lot.
Mass balance	Checking that what comes out of a process is no more than what went in, allowing for the product's yield.
MRL	Maximum residue limit: the most of a pesticide ingredient a market allows on produce.
PHI	Pre-harvest interval: the days that must pass after a spray before the plot may be harvested.
Reversing receipt	A correction that cancels a delivery receipt without deleting it.
SSCC	GS1 Serial Shipping Container Code: the number of a pallet.
Tenant	An organisation using Farm to Fork (a cooperative or exporter). Each tenant sees only its own data.

17. Problems and answers

What you see	What to do
"You are not assigned to any site."	An administrator must add your site on your user page (section 14). Sign in again afterwards.
A delivery is refused because of the pre-harvest interval.	The plot was sprayed too recently. The message gives the earliest harvest date. Check the plot's activities with the field officer.
Registration refused: the phone number or national ID is already in use.	The farmer already exists. Search for them on the farmer list instead of registering again.
Closing the day asks for a note.	Delivered and batched kilograms differ by more than the tolerance. Check for an unbatched delivery or explain the difference in the note.
The trace says "Nothing has been recorded for that code."	Check the code (scan it again), or that it belongs to your organisation.
The QR page says "We could not find this product".	The code is not one of your pack lots, or it was printed for another host. Check the label.
A buyer sees no shipments.	Link the buyer's user to the buyer company (section 14) and ask them to sign in again.
The authenticator code is refused.	Check the phone's clock is set automatically; codes change every 30 seconds.
"Attempting to reconnect" at the bottom of the page.	The connection dropped. Wait a moment, or reload the page; nothing saved is lost.

Farm to Fork by Lightswitch. Screenshots taken from the demo data with `docs/user-manual/tools/capture-screenshots.mjs`.