



THE PRODUCE PACKING GUIDE

Every grower lot. Every grade. Every pallet traced.

From field bin to customer pallet, complaint and recall

A capability and evaluation guide for packhouses, repackers, coolers and fresh-produce shippers who want grower lots, intake checks, cooling, wash water, grading, packing and dispatch in one connected record.



GROWER LOT TO PALLET

WATER, COLD CHAIN, GRADES

TRACE AND RECALL

Global edition / October 2026

v5ultimate.com

Scope: practical orientation, not legal advice. Photos are staged; lots, values and numbers are worked examples.

INSIDE THE GUIDE

Field bin to pallet, lot by lot.

Produce arrives alive, perishable and in large, mixed quantities. It is cooled, washed, graded, packed and shipped within hours or days. This guide follows one intake of Gala apples and shows what each step must leave behind.

01 / FRAME

pp. 03–05

Rules, scope, one day

U.S. Produce Safety Rule or Part 117, EU hygiene and marketing rules, Canada, Codex and private schemes; one packing day.

02 / INTAKE

pp. 06–09

Grower to cooler

Grower approval and specifications, the harvest record at intake, cooling and pulp temperature, and water that touches produce.

03 / PACK

pp. 10–15

Grade, repack, inspect

Grading and class, lot splits and merges, QC inspection, holds, pack and label checks, cold store and shelf life.

04 / CONTROL

pp. 16–19

Clean, fix, train

Equipment and sanitation, corrections versus corrective actions, complaints and CAPA, people and hygiene.

05 / SUSTAIN

pp. 20–25

Measure, trace, share

Scales and thermometers, packout and OEE, traceability lot codes, a mock recall, portals, records and AI.

06 / APPLY

pp. 26–35

Evidence map, tools, sources

Evidence map, four worksheets, roadmap, four-week evaluation and 20 linked sources.

Who it is for. Packhouse and operations managers, food safety and quality teams, cold store and dispatch, grower relations, technical teams supplying retailers, and anyone choosing a system for fresh whole fruit and vegetables.

How to read it. Every operational page ends with a teal Where V5 fits panel. Everything above it is practice and regulation, useful whether or not you ever use V5. Regulatory statements cite numbered sources; check the current text for your commodities and markets.

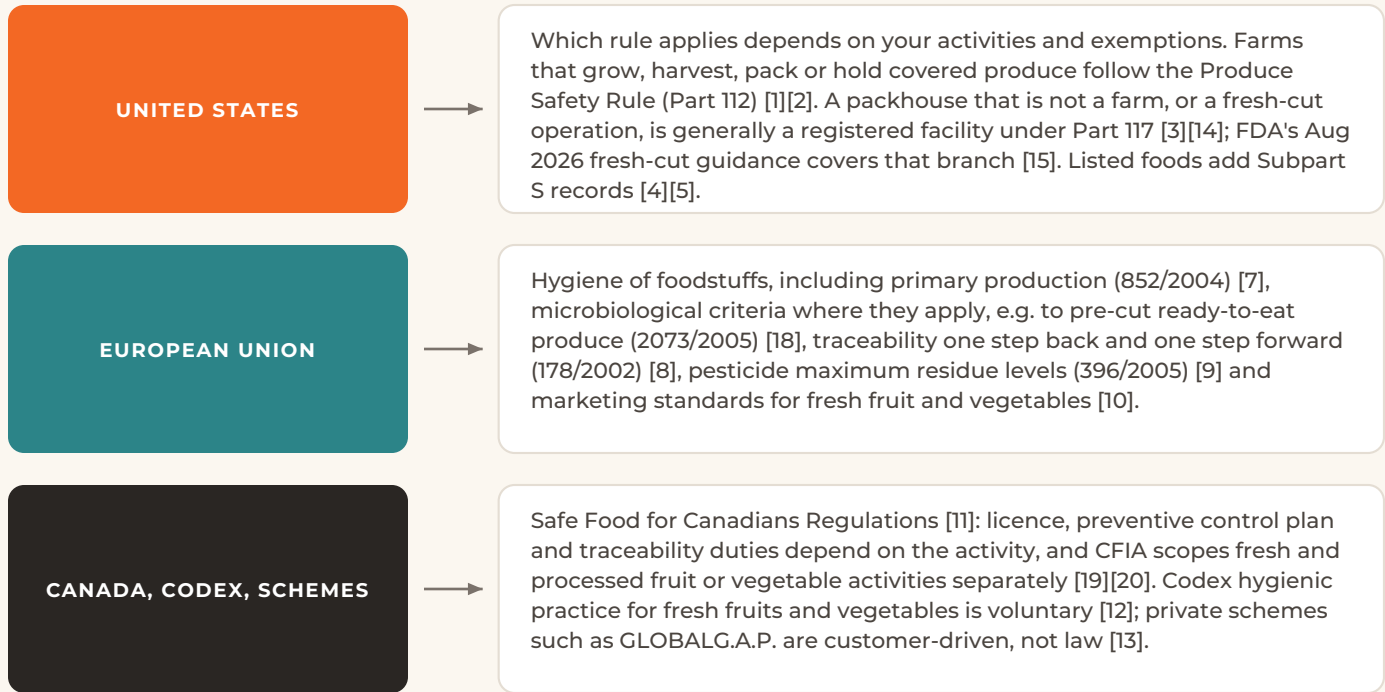
WHERE V5 FITS

V5 records the receiving, cooling, checking, grading, packing and dispatch work your food safety plan and procedures define. It does not decide which rules apply to you, approve growers, set limits, release lots or decide recalls. Grower and field details are recorded as captured at intake; V5 does not connect natively to farm-management platforms.

FRAME / 01

Which rules reach your packhouse?

Fresh produce sits on the line between farm and factory. Which rules apply depends on whether your packhouse counts as part of a farm, what you pack, and where it is sold.



Covered or not?

Part 112 lists produce it covers and an exhaustive list of produce rarely eaten raw that it does not, such as potatoes and sweet corn [1].

Listed or not?

Fresh leafy greens, tomatoes, peppers, cucumbers, melons, herbs, sprouts and tropical tree fruits, plus fresh-cut fruits, vegetables and leafy greens, are on FDA's list, with exemptions [5].

Write the scope down

Commodities, sites, markets, schemes and which rules apply, as a controlled document with an owner.

WHERE V5 FITS

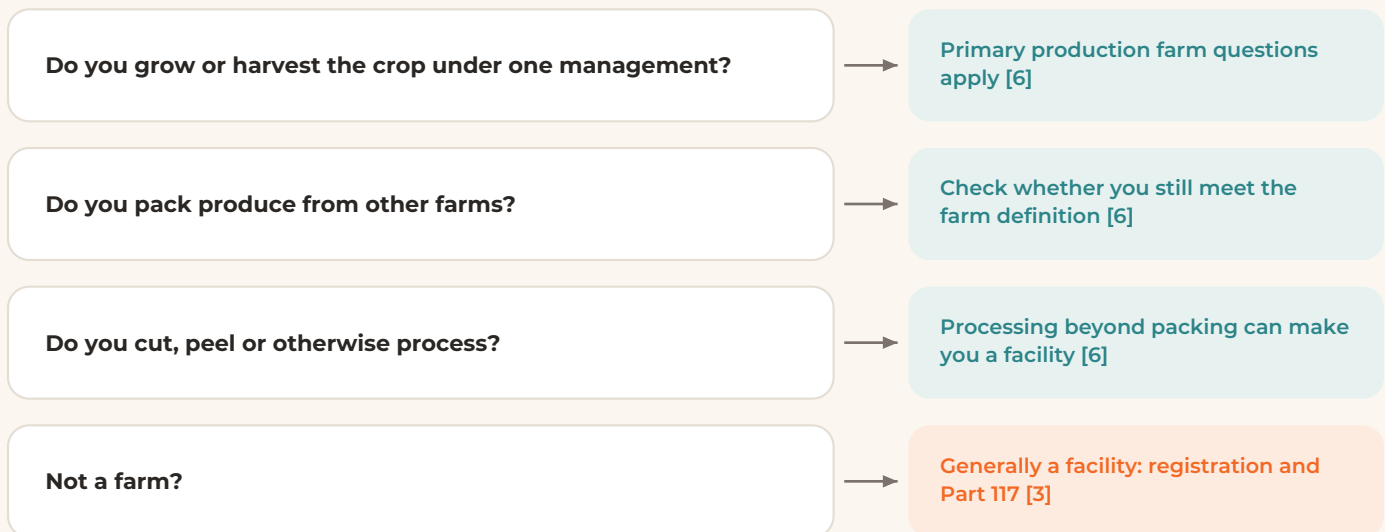
Keep scope, food safety plans, procedures and grower specifications as controlled documents with revisions, owners and review dates. V5 does not classify your operation, decide coverage or tell you which foods are on the list.

Sources: [1], [2], [3], [4], [5], [7], [8], [9], [10], [11], [12], [13], [14], [15], [18], [19], [20] (linked on pages 33–35)

FRAME / 02

Farm or facility? Ask it first.

In the U.S., the definition of a farm decides much of the rest. A primary production farm can pack and hold raw agricultural commodities and stay a farm, including some it did not grow [6]. Read the definition for your own case.



A simplified prompt for your own review, not a determination. The definition has many conditions; your counsel or regulator decides.

Part 112 in practice

Worker training and hygiene, agricultural water, soil amendments, animals, equipment, tools and buildings, and records [1].

Part 117 in practice

Good manufacturing practice and, unless exempt, a written food safety plan with hazard analysis and preventive controls [3].

Traceability either way

Subpart S applies by food and activity, not by farm or facility status; initial packers keep specific records [4].

WHERE V5 FITS

Whichever rule applies, the records look similar: who did what, to which lot, with what value, when. V5 can hold both kinds of procedure as controlled documents and run the checks they define.

Sources: [1], [3], [4], [6] (linked on pages 33–35)

FRAME / 03

One packing day.

A worked example: intake lot GR-2291, 24 bins of Gala apples from Grower 14, block 3, packed into Class I trays for two retail customers. Times and values are an example only.

05:30	●	Pre-operational check of line, flume and packing tables recorded
06:00	●	Scales and thermometers checked; wash water sanitiser measured
06:20	●	Bins received; grower, block and harvest date captured; lot assigned
06:40	●	Pulp temperature and condition sampled; lot released to line
07:00	●	Wash and dump; water checks every hour per your plan
08:15	●	Optical grader sorts by size and colour; class I and II split
09:30	●	Trays packed, labelled with lot and pack date; QC sample
11:00	●	Pallets built, scanned to cold store and to the order

One lot, many outputs

One intake becomes several grades and pack sizes for several customers. Each output must still point back to GR-2291.

Orange is where risk lives

Water that touches produce and the pack label are where a mistake spreads fastest.

Recorded at the time

U.S. Part 112 records include actual values and are created when the activity is performed [1].

WHERE V5 FITS

Packing runs sit on the schedule with commodity, grade, line and customer. Kiosk steps capture who did what, with which lots and values, and the lot record grows as the day runs.

Sources: [1] (linked on pages 33–35)

INTAKE / 01

Know the grower, specify the crop.

Packhouses rarely make what they ship; they receive it. Grower approval and a clear specification are the first control you have over hazards that start in the field.

Grower

Name, location, fields or blocks, contact, scheme status

Commodity

Variety, maturity, size and defect limits

Field inputs

Spray records and pre-harvest intervals where your scheme asks

Residues

Market MRLs and any test results you rely on

Packaging

Bins, trays, film, labels, approved revision

Residue limits are per market

The EU sets maximum residue levels for pesticides in food, including fresh produce [9]. Other markets set their own; hold the limits you work to with the specification.

Schemes ask for evidence

Retailers often require growers to hold a recognised certificate such as GLOBALG.A.P. [13]. That is a customer requirement, not a legal one.

Approve before you pack

An unknown grower or block cannot be traced or recalled properly. Approve the source, then record it every delivery.

WHERE V5 FITS

Approved supplier lists, qualification, documents and scorecards apply to growers, so an unapproved grower is visible at intake. Growers can upload certificates through the supplier portal where configured; a person reviews each one before it counts.

Sources: [9], [13] (linked on pages 33–35)

INTAKE / 02

The harvest record starts at the dock.

Field bins arrive with a grower ticket. What is captured at receipt is the start of every trace. For listed foods, U.S. initial packers must keep specific records linked to a traceability lot [4].



INITIAL PACKER RECORDS, 1.1330(a) [4]

- Commodity and variety
- Date received
- Quantity and unit
- Farm location
- Field or growing area name
- Harvester name and phone
- Harvest date
- Cooling location and date
- Traceability lot code assigned
- Packed product description
- Packed quantity and unit
- Packing location and date
- Reference document type and number

Summarised. 1.1330 also covers sprouts and has exceptions; read the full text.

WORKED EXAMPLE: ONE RECEIPT

Commodity	Gala apples, 24 bins, 9,600 kg
Grower / field	Grower 14, block 3, as named by the grower
Harvest date	From grower ticket GT-60418
Intake lot	GR-2291
Status	Pending inspection, then released to line

WHERE V5 FITS

Receiving records grower, field or block, harvest date, quantity, reference document and condition, and assigns the lot. Fields can be configured to match the records your plan needs. Values from a grower ticket photo can be read for a person to confirm; AI never accepts a lot.

Sources: [4] (linked on pages 33–35)

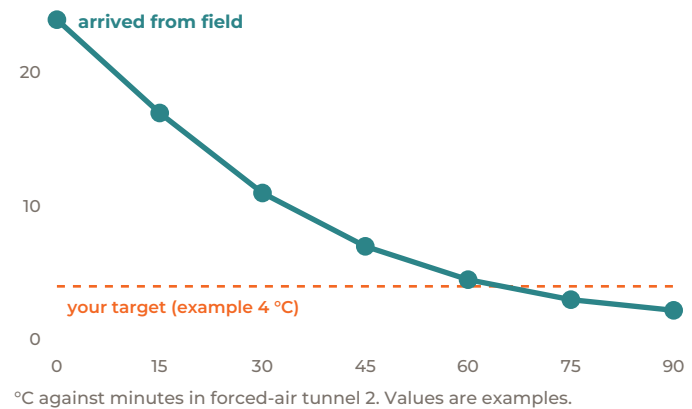
INTAKE / 03

Field heat out, fast and recorded.

Removing field heat slows decay and microbial growth. Forced air, hydro-cooling and room cooling all need records: when cooling started, what was reached and where.



STRAWBERRY LOT SB-118 · PULP TEMPERATURE (WORKED EXAMPLE)



Cooling is a KDE

For listed foods, the cooling location and date are part of the initial packer record when cooling happens before packing [4].

Targets are commodity-specific

Optimum temperatures differ widely; tropical fruit can be chill-damaged by temperatures that suit berries. Set them per commodity.

Probe the warmest fruit

Centre of the pallet, centre of the fruit, calibrated thermometer, actual value recorded.

WHERE V5 FITS

Cooling can run as a timed task on the lot, with start time, location and pulp readings against your target. Supported connected sensors can send readings where configured; otherwise operators enter values. V5 does not set cooling targets.

Sources: [4] (linked on pages 33–35)

INTAKE / 04

Water that touches produce.

Dump tanks, flumes, sprays, hydro-coolers and ice can spread one contaminated fruit to a whole lot. The water's quality and the sanitiser in it need to be checked and recorded.

The U.S. criterion

Where water directly contacts covered produce during or after harvest, contacts food-contact surfaces, makes ice, or is used for hand washing, there must be no detectable generic E. coli in 100 mL, and untreated surface water must not be used [1].

Pre-harvest water differs

U.S. Produce Safety Rule only: pre-harvest water assessments applied from 7 Apr 2025 (large farms), 6 Apr 2026 (small) and 5 Apr 2027 (very small) [16].

Sanitiser is not a tick

Record the measured concentration and pH at the frequency your plan sets, with the action when out of range.



WASH FLUME F-1 CHECKS (WORKED EXAMPLE)

07:00	Free chlorine within your range; pH recorded	OK
08:00	Free chlorine within range; water temperature recorded	OK
09:00	Free chlorine below range; dosing corrected; re-check	HOLD
09:15	Re-check within range; product since 08:00 reviewed	OK

WHERE V5 FITS

Water checks run as timed kiosk tasks with ranges; an out-of-range value can open a deviation and hold the product packed since the last good check. Water test results can be recorded in Lab & QC. V5 does not choose sanitisers, ranges or test frequencies.

Sources: [1], [16] (linked on pages 33–35)

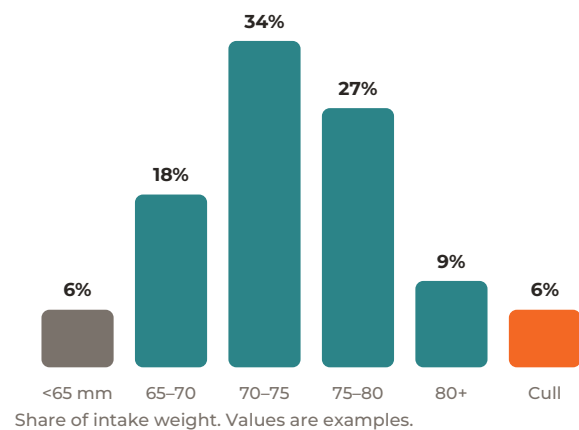
PACK / 01

Grade by rule, not by eye alone.

Graders sort by size, colour and defects into classes and counts. Grade is a commercial promise and, in some markets, a legal one: the EU sets marketing standards for fresh fruit and vegetables [10].



GR-2291 · GRADER OUTPUT BY SIZE (WORKED EXAMPLE)



Classes have tolerances

Marketing standards define classes and allowed tolerances; inspection checks a sample against them. Check the current text for your commodity [10].

Calibrate the grader

Size and colour settings drift. Check them against hand-measured samples at start-up and after changes.

Culls are a lot too

Juice, processing and waste outlets need their own records, or the mass balance never closes.

WHERE V5 FITS

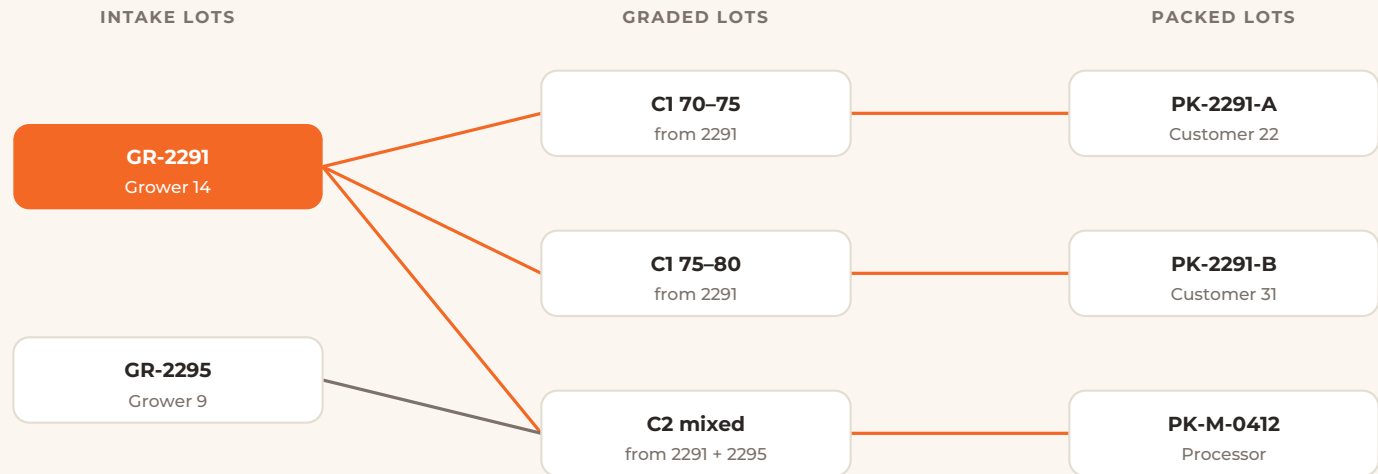
Grading outputs can be recorded as child lots of the intake lot with class, size and weight. Supported connected graders can send counts where configured. Packout reports show what each grower lot became.

Sources: [10] (linked on pages 33–35)

PACK / 02

Split, merge, keep the thread.

One bin becomes three grades. Three growers' small lots become one customer order. Every split and merge is a place where traceability can break.



Example lot codes. Orange shows everything that carries GR-2291.

When a new code is assigned

Under Subpart S, a traceability lot code is assigned at initial packing of a raw agricultural commodity or when a food is transformed, and not for other activities such as shipping [4].

Mixed lots widen recalls

Combining growers into one packed lot is legal and common, but a problem with one grower then reaches every pack from the mix.

Keep merges deliberate

Decide, by commodity and customer, when mixing is allowed and record the inputs every time.

WHERE V5 FITS

Lot genealogy records splits and merges at grading, repacking and pallet building, with quantities, so a trace from any grower lot reaches every pack and customer. Repacked lots keep the link to their source lots.

Sources: [4] (linked on pages 33–35)

PACK / 03

Inspect a sample, record the defects.

Quality control in a packhouse is mostly sampling: size, firmness, sugar, colour, defects and decay, against the specification of the customer who will receive it.



SAMPLE OF 40 FRUIT, PK-2291-A

Firmness	Customer spec	In range
Soluble solids	Customer spec	In range
Bruising	spec %	2 fruit
Decay	Zero tolerance	0
Size conformity	Class tolerance	39 / 40

Example plan and results. Sample sizes, methods and limits are yours and your customers'.

Sample plans, written

How many fruit, from where in the lot, how often, and what fails. Without a plan, the same lot can pass and fail.

Photos help

A photo of the defect with the record settles arguments with a customer or grower later.

Feed back to growers

Defect trends by grower and block are the most useful thing you can tell a grower.

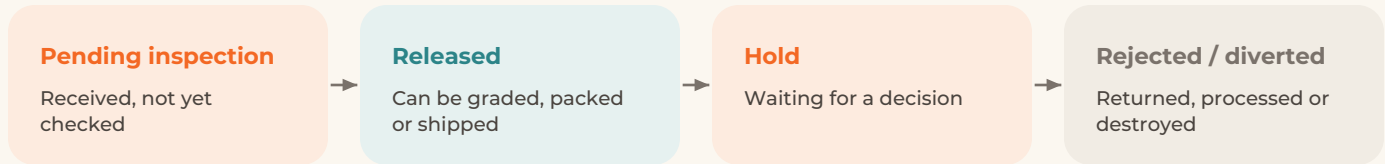
WHERE V5 FITS

Lab & QC holds inspection plans, specifications by customer and results with photos; out-of-spec results can hold the lot and open a deviation. Grower scorecards can draw on results. Analysts and reviewers sign; V5 does not approve results.

PACK / 04

A hold that actually holds.

Produce waits hours, not weeks. A lot on hold for a water check, a residue result or a customer query must be visibly and physically stopped, or it ships by default.



A WORKED HOLD

At 09:00 the flume check on F-1 is low. Product packed since the last good check at 08:00 is **PK-2291-A pallets 3-5**. They are placed on hold in cold store row 4. The picking screen will not offer them and the dispatch scan rejects them. At 09:40 the food safety lead reviews the readings and the corrective action, decides and records the disposition, and releases or diverts each pallet with a reason.

Hold by scope, not by hunch

The time window since the last good check defines what is held. Pallet-level records make that list quick.

One named decision

Only roles you authorise can change a hold, and the reason stays in the record.

Customers wait too

If held product is already on a truck, the hold needs a phone call, not just a status.

WHERE V5 FITS

Lots and pallets carry status; a held or rejected lot is blocked at picking and at the dispatch scan according to your workspace rules. Holds link to the deviation that caused them, and release is recorded by an authorised person.

PACK / 05

Every pack carries its lot.

A tray, clamshell or bag label is what links a supermarket shelf to your intake lot. Pack checks prove the right product went into the right pack with the right label.

Lot on every pack

Print the traceability lot code, or a code that links to it, on the case or pack your customer receives. Agree the format with each customer.

Marketing labels

EU marketing standards set particulars such as origin, class and variety where they apply to the commodity [10].

Artwork is controlled

Labels and films are printed to an approved revision; old stock is reconciled out on change.



PACK CHECKS ON PK-2291-A (WORKED EXAMPLE)

Start	Label revision matches order and customer	OK
Start	Lot code and pack date legible	OK
Every 30 min	Tray weight on 5 packs	OK
10:10	Country of origin missing on one roll	HOLD
End	Labels issued vs used vs returned	OK

WHERE V5 FITS

Label printing can use data from the lot record so codes, dates, class and origin come from the record, not a keyboard. Label and weight checks run as timed kiosk tasks; supported checkweighers can send results. A person approves label content.

PACK / 06

Cold store, first expiring out.

Packed produce waits in cold rooms for orders. Temperature, humidity where it matters, location, status and the age of each pallet decide what can ship and what must go first.



Pallet as the unit

A pallet label linked to its lots lets you find, hold and ship by scan.

Age and life

Record pack date and the shelf life your customer expects; pick oldest suitable first.

Ethylene and odour

Some commodities should not share a room. Keep compatibility rules with locations.

ROOM 4 • PALLETS BY DAYS SINCE PACK (WORKED EXAMPLE)



Pallets at day 3 and later are offered first to orders that accept them. Counts are examples.

Excursions need a decision

Record the reading, the cause and what was decided about the produce in that room, by whom.

Pick by rule

FEFO or customer-specific age limits, enforced at the scan.

Count what you lose

Shrink in cold store is margin; record it by lot and reason.

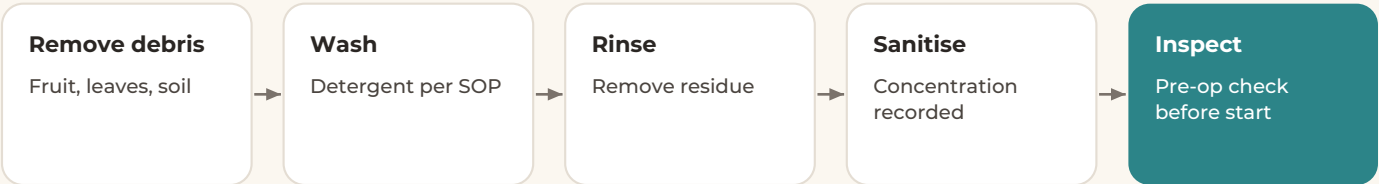
WHERE V5 FITS

Warehouse locations, pallet labels, status and dates support FEFO picking and cycle counts. Room checks run as timed tasks; supported connected sensors can send readings where configured.

CONTROL / 01

Clean surfaces, sound tools.

Brush beds, rollers, conveyors, bins and packing tables touch thousands of fruit. In the U.S., equipment and tools must be cleanable and maintained, and food-contact surfaces cleaned and sanitised as needed [1].



WHAT THE U.S. RULE SAYS ABOUT EQUIPMENT AND TOOLS (112.123) [1]

Design	Adequate design and workmanship so it can be cleaned and maintained
Installation	Installed and maintained to allow cleaning of it and adjacent spaces
Storage	Stored to protect produce and avoid attracting pests
Seams	Smoothly bonded or maintained to minimise build-up

Hardest to clean first

Brush beds and porous materials hold moisture and organisms. Plan their cleaning and inspection specifically.

Environmental sampling

Many packhouses sample surfaces and drains for indicator organisms or *Listeria*; frequencies and sites are yours.

Bins go back to fields

Reusable bins and RPCs move between farm and packhouse. Clean, inspect and record them.

WHERE V5 FITS

Sanitation and pre-op checks run as checklists with photos, signatures and times; a failed check can block the line's next run. Equipment records hold maintenance and cleaning history. Swab results can be recorded with sites and zones. V5 does not validate cleaning.

CONTROL / 02

Correct now, prevent next time.

A low sanitiser reading is fixed in minutes. A pattern of low readings needs a cause. Telling the two apart keeps the system honest and the paperwork proportionate.

CORRECTION

Act on the spot: re-dose the flume, re-check, hold and review product since the last good check. Record what happened, what was done and by whom.

CORRECTIVE ACTION

When it repeats, affects shipped product or reveals a weak procedure: find the root cause, fix it, check that the fix worked and update the procedure and training.

WORKED EXAMPLE: AN ESCALATION

Week 1	Three low flume readings on Monday mornings	Corrections
Week 2	Trend reviewed; deviation opened	DV-044
Cause	Dosing pump primed late after weekend shutdown	Found
Action	Start-up checklist adds pump prime and first check	Done
Verify	No low readings over next 8 Mondays	Closed

Under Part 117, corrections and corrective actions are distinct terms with their own record expectations [3]. Follow the definitions in the rule that applies to you.

WHERE V5 FITS

Deviations link to the lot, equipment, people and readings, and can be escalated to CAPA with root cause, owners, due dates and effectiveness checks. AI can suggest a classification or draft a summary for a person to edit.

Sources: [3] (linked on pages 33–35)

CONTROL / 03

Complaints, causes and lasting fixes.

Soft fruit at a distribution centre, a foreign object in a bag, a wrong label, a residue query from a retailer. Each complaint links to a pallet and a grower lot; patterns lead upstream.

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graph TD; Contain --> Investigate; Investigate --> Act; Act --> Verify; Verify --> Contain; CAPA((CAPA))
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Start from the pallet
The pack code gives the packed lot; the lot gives the grower, field, cooling and water records.

Look across growers
If complaints cluster by grower or block, the cause is probably in the field, not the line.

Agree effectiveness first
Decide what evidence shows the action worked, and review it on a date.

WORKED EXAMPLE: A CAPA FROM SOFT-FRUIT COMPLAINTS

Problem	Two retail complaints of soft, bruised apples
Linked lots	Both packed from GR-2291 and GR-2304, Grower 14
Cause found	Bins left in sun 4 hours before cooling; no intake time recorded
Action	Harvest-to-cool time added at intake; grower briefed
Effectiveness	No bruising complaints from Grower 14 over 10 weeks
Status	Closed after review

WHERE V5 FITS

Complaints link to pallets, lots and grower records; CAPA links to its sources, with root-cause workflow, owners and effectiveness checks. Supplier corrective action requests can go to growers through the supplier portal where configured.

CONTROL / 04

Trained, clean and permitted.

Packhouse teams are often large, seasonal and multilingual. Hygiene, the right training for each check, and clear permissions matter more when people change every season.

Training and hygiene

The U.S. Produce Safety Rule requires training for personnel handling covered produce, including hygiene, and records of it [1].

Illness and injury

People with illness or wounds that could contaminate produce are kept away from it, as your procedures and the applicable rules require [1][7].

Roles and permissions

Who may record a water check, release a hold, change a label, sign off a trace. Write it down and enforce it.

EXAMPLE COMPETENCE AND PERMISSION MATRIX

	Pack check	Flume check	Release hold	Sign off trace
Line operator	Trained	—	Not permitted	Not permitted
Water technician	—	Trained	Not permitted	Not permitted
QC inspector	Trained	Trained	Not permitted	Not permitted
Food safety lead	Trained	Trained	Trained	Trained

Seasonal starts. Onboarding hundreds of people in a week needs short instructions at the step, in the operator's language, on tablets that work with gloves and in cold, wet rooms.

WHERE V5 FITS

Document control keeps procedures under revision with read-and-understood training. The skills matrix can block untrained people at the kiosk where configured, and role permissions decide who can record, review or release.

Sources: [1], [7] (linked on pages 33–35)

SUSTAIN / 01

Trust the scale and the probe.

Every weight on a pack and every temperature in a cold room is only as good as the instrument. Checkweighers, platform scales, probes and test kits all need checks you can show.



START-OF-SHIFT CHECKS (WORKED EXAMPLE)

Checkweigher CW-2 (test weight)	Within your tolerance	OK
Probe T-11 (cold store)	Ice-point check within tolerance	OK
Chlorine test kit lot	Expired yesterday	HOLD

Fail means look back

An instrument out of tolerance raises the question: what did it measure since its last good check?

Graders and sizers

Optical settings and mechanical sizers on planned maintenance, with verification after service.

Legal metrology

Scales used for net quantity may fall under weights-and-measures rules in your market. Check locally.

WHERE V5 FITS

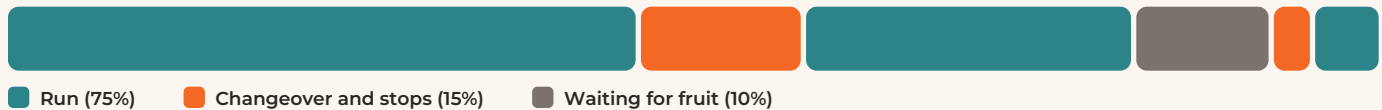
Each scale, probe, grader and test kit can have an equipment record with calibration schedule, results, certificates, planned maintenance and use history. Out-of-calibration equipment can be blocked at the kiosk. Predictive failure analytics are not offered today.

SUSTAIN / 02

Packout and where the day goes.

In produce, the most important number is often packout: how much of what arrived became saleable product, by grade. Line time lost to changeovers and jams is the second.

PACKING LINE 2 · ONE 8-HOUR SHIFT (WORKED EXAMPLE)



WORKED OEE ARITHMETIC

Availability

75%

6.0 h run of 8 h planned

Performance

90%

actual vs ideal trays per minute

Quality

97%

trays right first time

OEE

65.5% $0.75 \times 0.90 \times 0.97$

WORKED PACKOUT FOR GR-2291 (EXAMPLE)

9,600 kg received. Class I packed 7,970 kg; class II 1,056 kg; culls 576 kg. Class I packout = $7,970 \div 9,600 = 83.0\%$; total saleable 94.0 %. Reported by grower, this is what growers are paid on in many arrangements.

Sequence varieties

Fewer variety and customer changes per shift mean fewer label changes and fewer mistakes.

Fruit flow is the pacer

If the line waits for fruit, the cause is intake, cooling or the cold store, not the packer.

Give-away counts

Overweight trays are product given away. Track it with checkweigher data.

WHERE V5 FITS

Downtime reasons, changeovers, rejects, packout and OEE come from events your team and supported connected machines record, with reports and dashboards where your plan includes them. AI demand and yield forecasting and process anomaly detection are coming soon, not available today.

SUSTAIN / 03

Trace both ways, then act.

A grower reports that irrigation water on block 3 tested positive. Which intake lots came from it, which packs, which pallets, which customers, and what is still in your cold store?



24 hours, in order

For listed foods, U.S. records must be available to FDA within 24 hours of a request, and in some cases as an electronic sortable spreadsheet [4].

EU one step each way

Operators identify who supplied them and to whom they supplied, and withdraw and inform when food is unsafe [8].

The date moved

The rule stands, but 20 Jan 2026 is no longer the date: FDA proposed 20 Jul 2028 and Congress directed no enforcement before then [17].

WHERE V5 FITS

Lots link at intake, grading, repacking, pallet building and shipment, so genealogy can be followed forward from a grower lot or back from a pack code, with customers and quantities listed and exportable. Recall and notification decisions stay with your team.

SUSTAIN / 04

Time a mock recall, kilo by kilo.

Pick a grower and block nobody expects, start the clock, and see how long it takes to account for every kilogram that came from it.

- 0:00

Start: Grower 14, block 3 named; food safety lead opens the trace
- 0:03

Intake lots found: GR-2291, GR-2304
- 0:08

Graded and packed lots, including the mixed class II lot
- 0:15

Pallets, customers and shipped quantities listed
- 0:21

Stock in cold store found and placed on hold
- 0:30

Balance: received vs packed vs culls vs stock

BALANCE FOR GR-2291 (WORKED EXAMPLE)

Received	9,600 kg in 24 bins
Packed class I, shipped	7,970 kg to Customers 22 and 31
Packed class II (mixed lot)	1,056 kg, 640 kg in cold store
Culls to juice	576 kg
Recorded shrink	0 kg
Unaccounted	-2 kg (scale rounding, explained)

Times are an example of what to measure, not a benchmark. Include your customers: a trace that stops at your dock does not take a pack off a shelf.

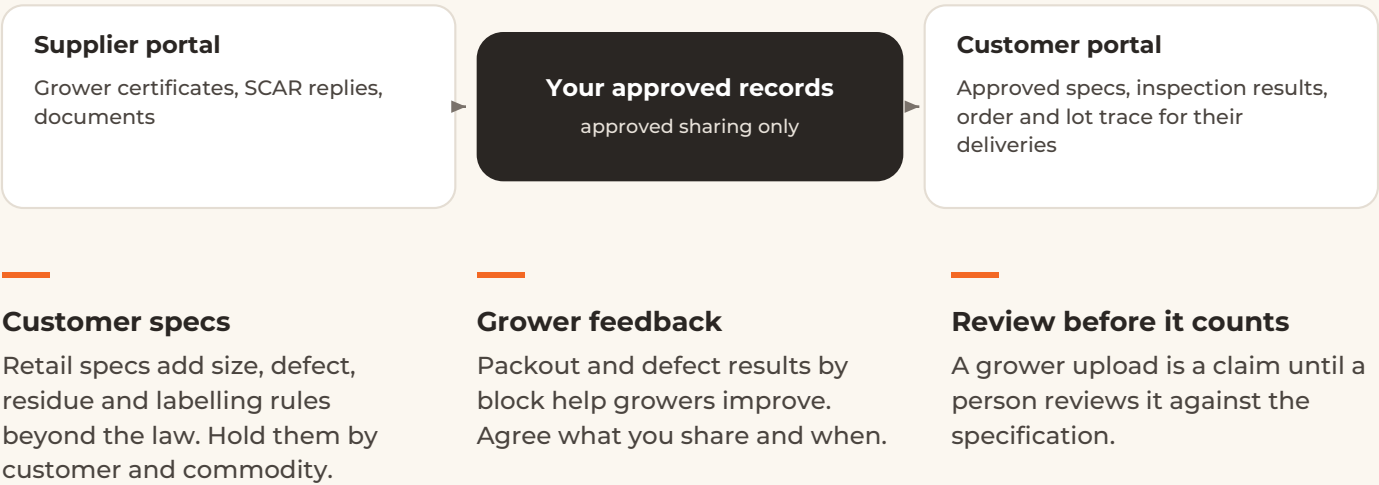
WHERE V5 FITS

Trace reports list lots, packs, pallets, customers and quantities from a grower lot or a pack code, and stock can be held from the trace. Mock recalls can be logged as exercises with times and findings that feed CAPA.

SUSTAIN / 05

Growers, customers, shared well.

Growers send certificates and receive packout and quality feedback; retailers ask for specifications, inspection results and lot information. Each sees only what you approve.



A SHARING POLICY TO AGREE BEFORE ANYONE LOGS IN

Inspection results	After review	Customer QA
Lot trace for their deliveries	On request, agreed scope	Customer QA
Packout and defects by block	Agreed timing	Grower
Other growers' data	Never	—
Grower certificates and SCARs	Reviewed before they count	Your QA

WHERE V5 FITS

A portal foundation gives customers and suppliers branded, read-only access to what you approve. Portal scope and permissions depend on configuration; check the current plan comparison for inclusion. Nothing is shared automatically from an open record.

SUSTAIN / 06

Trustworthy records. Honest AI.

Electronic records help only if they are made at the time, by a known person, with actual values, and if AI stays a helper under human control.

What a record holds

U.S. Part 112 records include actual values and observations, a description of the produce with any lot number, the location, and the date and time; they are made at the time and dated and signed or initialled [1].

Keep them long enough

Part 112 records are kept at least 2 years past creation [1]. Subpart S records may be electronic or true copies and must be legible and protected from loss [4].

Keep the history

Changes to a recorded value should show who, when and why, with the original still visible.

AI CAN HELP

- Read grower ticket or certificate values for a person to confirm
- Draft an SOP or inspection plan from an uploaded sheet for approval
- Suggest a deviation classification or draft a summary
- Explain a lot's history in plain language
- Find records and screens faster

AI NEVER

- Decides which rules or lists apply to you
- Approves a grower or accepts a lot
- Sets water, cooling or residue limits
- Releases a hold or decides a recall
- Predicts shelf life or yield today (forecasting is coming soon)

WHERE V5 FITS

Every record keeps who, what and when in an audit trail every plan can view; tamper-evident trails, electronic signatures and a validation pack are available where your plan includes them. AI features need configured provider access and human review.

Sources: [1], [4] (linked on pages 33–35)

APPLY / 01

Evidence map.

One page to check that every theme an inspector, auditor or retail customer may ask about has an owner and a record. Map it to the rules and schemes that apply to you [1][3][4][13].

THEME	TYPICAL EVIDENCE	WHERE IT LIVES IN V5	OWNER
Scope and plan	Farm or facility view, plan	Document control	Food safety
Growers	Approval, certificates	Suppliers, portal	Grower relations
Intake	Harvest KDEs, condition	Receiving	Intake
Cooling	Location, date, pulp temps	Timed tasks	Cold store
Water	Test results, sanitiser checks	Kiosk checks, Lab & QC	Water tech
Grading	Class, size, child lots	Lots, genealogy	Production
Inspection	Sample results, photos	Lab & QC	QC
Holds	Status, scope, decision	Lots, deviations	Food safety
Labels	Revision, codes, checks	Labels, kiosk checks	Packing
Sanitation	Pre-op, swabs, SOPs	Checklists, docs	Sanitation
Calibration	Scale, probe, kit checks	Equipment	Maintenance
Trace and recall	24 h export, mock recalls	Trace reports	Food safety
Training	Hygiene and task training	Skills matrix, docs	HR + QA
Complaints, CAPA	Linked lots, effectiveness	Complaints, CAPA	QA

Plan inclusion varies; some areas need Professional or Enterprise. Confirm against the current plan comparison before you scope a project.

WORKSHEET 01

Could you answer in 24 hours?

Pick one listed commodity you packed last month. Mark Yes, Partly or No, then note the gap and its owner.

	YES	PARTLY	NO
Commodity and variety Recorded for each intake lot, as received.	☐	☐	☐
Grower and field Farm location and field or block named as the grower names it.	☐	☐	☐
Harvest and cooling Harvest date, cooling location and date where cooling happened.	☐	☐	☐
Lot code assigned A traceability lot code assigned at initial packing, and recorded.	☐	☐	☐
Quantities Received and packed quantities with units.	☐	☐	☐
Reference documents Grower ticket, bill of lading or invoice type and number linked.	☐	☐	☐
Mixed lots Every input of a mixed packed lot recorded.	☐	☐	☐
Shipments Each shipment of the lot with customer, date and quantity.	☐	☐	☐
Export The above exportable as a sortable spreadsheet.	☐	☐	☐
Owner A named person who would answer the request, with a deputy.	☐	☐	☐

NOTES AND OWNERS

WORKSHEET 02

Ready for a water failure?

Walk through a real or invented low sanitiser reading or positive water test.
Mark Yes, Partly or No.

	YES	PARTLY	NO
Detect The operator knows the range and what reading counts as a failure.	☐	☐	☐
Correct Dosing can be corrected and re-checked within minutes.	☐	☐	☐
Scope Product since the last good check can be identified by pallet.	☐	☐	☐
Hold That product can be held, including any already on a truck.	☐	☐	☐
Decide A named person decides and records the disposition.	☐	☐	☐
Source For a positive test, the water source and its use are known.	☐	☐	☐
Grower link If the water is on a farm, affected intake lots can be found.	☐	☐	☐
Cause Repeated failures trigger a corrective action with a cause.	☐	☐	☐
Training The procedure and training are updated after the fix.	☐	☐	☐
Records Every reading, action and decision is in one record.	☐	☐	☐

NOTES AND OWNERS

WORKSHEET 03

Ask to see it work.

Questions for any software demonstration. Ask the vendor to show each one with your commodity and line, not a slide.

	SHOWN	PARTLY	NOT SHOWN
Unapproved grower Receive from a grower not on the approved list; show what happens.	☐	☐	☐
Harvest record Capture grower, field, harvest and cooling data at intake on a tablet.	☐	☐	☐
Split and merge Grade one lot into three and mix two growers into one pack.	☐	☐	☐
Low sanitiser Record a low flume reading; show the hold scope and deviation.	☐	☐	☐
Held pallet Try to ship a held pallet with the dispatch scan.	☐	☐	☐
Label Print a pack label from the lot record; change the revision.	☐	☐	☐
Scale out Fail a checkweigher check; list what it weighed since its last good check.	☐	☐	☐
Trace From a grower and block, list lots, packs, customers and quantities.	☐	☐	☐
Export Produce the trace as a sortable spreadsheet.	☐	☐	☐
Audit trail Show who changed a recorded value, when and why.	☐	☐	☐

NOTES AND OWNERS

APPLY / 02

Roll out in phases.

Start where value is visible and risk is contained, often traceability before the season peaks. Run paper and system in parallel until each phase is verified.

PHASE 1
Foundations

Scope, roles, procedures under document control, training records, equipment register with scale and probe checks.

PHASE 2
Intake

Grower approval, intake with harvest and cooling records, lot codes, status, cold store locations and pallet labels.

PHASE 3
Pack

Grading child lots, splits and merges, pack and label checks, inspection plans and holds; paper kept in parallel.

PHASE 4
Control

Water and sanitiser checks, sanitation and pre-op, deviations and CAPA, complaints linked to lots.

PHASE 5
Connect

Shipments and trace export, mock recalls, grower and customer portals, packout and OEE review.

Plan around the season. Go live before peak volume, not during it. Train seasonal staff on the tablet screens they will actually use, and tell retail customers early if lot codes or labels will change.

WORKSHEET 04

Find your first improvement.

Score each area today: E evidenced, P partial, G gap. Start with the gap that costs you trace time, held stock, complaints or audit findings.

	E	P	G
Grower approval Approved before packing; evidence kept	☐	☐	☐
Intake record Grower, field, harvest, quantity, lot	☐	☐	☐
Cooling Location, date, pulp temperatures	☐	☐	☐
Water Tests and sanitiser checks with actions	☐	☐	☐
Grading Child lots by class and size	☐	☐	☐
Splits and merges Inputs recorded every time	☐	☐	☐
Inspection Written plans, results, photos	☐	☐	☐
Holds Scope, block at dispatch, named decision	☐	☐	☐
Pack and label Revision, codes, weights	☐	☐	☐
Calibration Scales, probes, test kits	☐	☐	☐
Trace Both ways, timed, exportable	☐	☐	☐
Feedback Packout and defects back to growers	☐	☐	☐

NOTES AND OWNERS

APPLY / 03

A fair evaluation in four weeks.

A practical way to test any system with your own people and one real commodity, without touching live records.

WEEK 1

Agree the commodity, the line and the five questions that matter most. Load growers, specifications and intake fields.

WEEK 2

Run an intake end to end with test data: receipt, cooling, wash, grading, packing, cold store and dispatch.

WEEK 3

Break it on purpose: unapproved grower, low sanitiser, mixed lot, held pallet on a truck, failed scale.

WEEK 4

Run a timed mock trace from a grower block with an export, and a mock complaint. Review with every team.

Rules for the evaluation. Use test data only. Keep your current records and trace process live until a verified change is approved. Record what was shown, not what was promised.

ASK V5

“We pack [apples / berries / leafy greens / tomatoes] from [number] growers on [number] lines for [retail / food service / export] in [markets]. Our hardest moment is [e.g. tracing mixed lots fast]. Which workflows should we evaluate first?”

Start a 7-day free trial, no card required, or ask V5 on v5ultimate.com.

WHERE V5 FITS

Try V5 with your own commodity in a trial workspace using test data. The assistant can answer questions about features and plans; it does not give regulatory advice.

SOURCES

Keep the evidence close.

Primary sources behind this guide, checked October 2026. Click a title to open the publisher's page.

- | | | |
|-----|---|-------------------------|
| [1] | <u>U.S. eCFR, 21 CFR Part 112: Standards for growing, harvesting, packing and holding produce</u>
https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-112 | BINDING U.S. REGULATION |
| [2] | <u>FDA, FSMA Final Rule on Produce Safety</u>
https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-pro... | FDA GUIDANCE PAGE |
| [3] | <u>U.S. eCFR, 21 CFR Part 117: CGMP and preventive controls for human food</u>
https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-117 | BINDING U.S. REGULATION |
| [4] | <u>U.S. eCFR, 21 CFR Part 1 Subpart S: Additional traceability records</u>
https://www.ecfr.gov/current/title-21/chapter-I/subchapter-A/part-1/subpart-S | BINDING U.S. REGULATION |
| [5] | <u>FDA, Food Traceability List</u>
https://www.fda.gov/food/food-safety-modernization-act-fsma/food-traceability-l... | FDA OFFICIAL LIST |
| [6] | <u>U.S. eCFR, 21 CFR 1.227: definitions incl. farm and facility</u>
https://www.ecfr.gov/current/title-21/chapter-I/subchapter-A/part-1/subpart-H/s... | BINDING U.S. REGULATION |
| [7] | <u>Regulation (EC) 852/2004: hygiene of foodstuffs (EU)</u>
https://eur-lex.europa.eu/eli/reg/2004/852/oj | BINDING EU REGULATION |
| [8] | <u>Regulation (EC) 178/2002: General Food Law (EU)</u>
https://eur-lex.europa.eu/eli/reg/2002/178/oj | BINDING EU REGULATION |

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Sources, continued.

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|------|--|-----------------------------|
| [9] | <u>Regulation (EC) 396/2005: maximum residue levels of pesticides (EU)</u>
https://eur-lex.europa.eu/eli/reg/2005/396/oj | BINDING EU REGULATION |
| [10] | <u>Delegated Regulation (EU) 2023/2429: marketing standards, fruit and vegetables</u>
https://eur-lex.europa.eu/eli/reg_del/2023/2429/oj | BINDING EU REGULATION |
| [11] | <u>Canada, Safe Food for Canadians Regulations (SOR/2018-108)</u>
https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-108/ | BINDING CANADIAN REGULATION |
| [12] | <u>Codex codes of practice (incl. fresh fruits and vegetables, CXC 53-2003)</u>
https://www.fao.org/fao-who-codexalimentarius/codex-texts/codes-of-practice/en/ | VOLUNTARY INTERNATIONAL |
| [13] | <u>GLOBALG.A.P. farm and packhouse assurance standards</u>
https://www.globalgap.org/ | VOLUNTARY PRIVATE SCHEME |
| [14] | <u>FDA, FSMA Final Rule for Preventive Controls for Human Food</u>
https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-pre... | FDA RULE PAGE |
| [15] | <u>FDA, Guide to Minimize Biological Hazards in Ready-to-Eat Fresh-Cut Produce (final, Aug 2026)</u>
https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidan... | FDA GUIDANCE (NON-BINDING) |
| [16] | <u>FDA, Pre-Harvest Agricultural Water final rule and compliance dates</u>
https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-pre... | FDA RULE PAGE |

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[17] [FDA, Food Traceability Rule: current status and compliance date](https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-req...)

FDA RULE PAGE

<https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-req...>

[18] [Regulation \(EC\) 2073/2005: microbiological criteria for foodstuffs \(EU\)](https://eur-lex.europa.eu/eli/reg/2005/2073/oj)

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<https://eur-lex.europa.eu/eli/reg/2005/2073/oj>

[19] [CFIA, Fresh fruits or vegetables: requirements by activity](https://inspection.canada.ca/en/food-safety-industry/food-guidance-commodity/fr...)

CFIA GUIDANCE

<https://inspection.canada.ca/en/food-safety-industry/food-guidance-commodity/fr...>

[20] [CFIA, Processed fruit or vegetable products: requirements by activity](https://inspection.canada.ca/en/food-safety-industry/food-guidance-commodity/pr...)

CFIA GUIDANCE

<https://inspection.canada.ca/en/food-safety-industry/food-guidance-commodity/pr...>

How to read the status labels. Binding regulations are law in their jurisdiction. FDA pages and lists explain and apply the rules and may change. Codex texts are voluntary international references; GLOBALG.A.P. is a private scheme your customers may require.

SCOPE AND LIMITS

Practical orientation for evaluating fresh produce packing operations and software; not legal or regulatory advice, and not a list of every requirement. Requirements depend on commodity, whether you are a farm or a facility, process, jurisdiction and scheme. Water test frequencies beyond those summarised, sanitiser ranges, cooling targets, and residue limits are deliberately not given; take them from the current rules and your plan. Fresh-cut processing is pointed to Part 117 and FDA's fresh-cut guidance, not covered in depth. V5 capability statements reflect the V5 product reference reviewed on 1 October 2026 and depend on plan, configuration, devices and permissions. AI forecasting and anomaly detection are coming soon. V5 does not decide coverage, approve growers, set limits, release product or decide recalls, does not connect natively to farm platforms, and does not by itself make you compliant. Photography is illustrative; lots, results and charts are worked examples.



Every grower lot. Every grade. Every pallet traced.

See produce packhouse workflows at v5ultimate.com · Global edition · October 2026