Freeze-Drying Batch Log

One page per batch. Weigh every tray before and after to learn your machine's real numbers.

Batch # _____ **Food / batch name** _____ **Date** _____

Machine _____ **Trays** _____ **Room temp (°F)** _____ **Settings** _____

CYCLE TIMELINE



FREEZE

Food frozen solid on the shelves

hours _____

DRY

Vacuum on; ice turns to vapor

hours _____

EXTRA DRY

Last bound moisture comes off

hours _____

STARTED	FREEZE DONE	DRY DONE	FINISHED
day / time	day / time	day / time	day / time

Total cycle hours _____ Stages vary by machine and food; record what your display shows, and any extra dry time you add.

TRAYS AND WEIGHTS

Tray	Food	Prep (circle one)	Before (g/oz)	After (g/oz)	% water removed	Notes
1		sliced · cooked · raw · pre-frozen			%	
2		sliced · cooked · raw · pre-frozen			%	
3		sliced · cooked · raw · pre-frozen			%	
4		sliced · cooked · raw · pre-frozen			%	
5		sliced · cooked · raw · pre-frozen			%	
6		sliced · cooked · raw · pre-frozen			%	
All					%	

% water removed = (before – after) ÷ before × 100. Example: 1,000 g in, 180 g out = 82%. Weigh trays without lids and subtract the empty tray weight.

DONE AND SEALED

- ☐ Doneness checked: cut piece dry and crisp in the middle
- ☐ Packed while trays still warm
- ☐ Mylar heat-sealed / jar lid sealed
- ☐ Oxygen absorber added (cc × count): _____
- ☐ Bags / jars: _____ Size: _____

Notes and next time

LABEL AND STORAGE

Container _____

Packed on _____

Check / use by _____

Stored at _____

LABEL: FOOD · BATCH # · DATE

Season Ledger

One line per batch. Copy the totals from each batch page to see your real averages.

Batch #	Date	Food	Trays	Before	After	% removed	Hours	Bags	Notes

Totals: add the hours and bags at the bottom of each page. Divide total hours by batches for your real average cycle; the planner and cost calculator use it.

Quick Reference

Doneness, oxygen absorbers, storage and the most common fixes. Sourced; your manual comes first.

Is it done?

- Cut a piece from each tray in half. A dark spot in the middle means moisture: return the trays for more drying (UMN Extension).
- The inside of a thick piece should feel dry, not cool or sticky, and the texture should be crisp (LSU AgCenter).
- Weigh a tray, add dry time, weigh again. When the weight stops dropping, it's dry (LSU AgCenter).
- Wet spots, cold centers or a rubbery texture mean more dry time.

Sources: UMN Extension, Preserving food at home: Freeze-drying; LSU AgCenter, Freeze-drying at home FAQ.

Storage

- Package right away, while trays are still warm; use Warm Trays if they have cooled (Harvest Right).
- Long term: heat-sealed mylar with an oxygen absorber. Vacuum-sealed plastic bags: about 2-3 years; zip-top bags: a few months (Penn State Extension).
- Thick (5-7 mil) mylar without a clear window protects best (USU Extension, 2026).
- Store cool, dark and dry (LSU AgCenter, UMN Extension). Label every bag with the food, batch # and date.

Sources: Harvest Right FAQs; Penn State Extension, Let's Preserve: Freeze-Drying; USU Extension, Can I Freeze-Dry That? (2026).

Oxygen absorbers

- USU Extension: a quart container needs one 50 cc absorber; a gallon container or #10 can needs 300 cc; a 5-gallon container needs three 500 cc packets.
- Airy freeze-dried food leaves more air in the bag; many suppliers suggest larger sizes for it. Follow your supplier's cc chart.
- Once a pack is opened, use absorbers within about 15 minutes; store unused ones in an airtight glass jar (USU says up to 6 months).
- Foods should be below 10% moisture for absorbers (USU): only package food that passes the doneness checks.

Source: USU Extension, Oxygen Absorbers fact sheet.

Common fixes

- **Vacuum error:** drain valve fully closed; door gasket clean and seated; door fully latched; hose and fittings tight; pump oil clear and at level; gas ballast open on the HR Premier pump (Harvest Right).
- **Food still wet:** single thin layer below the tray rim; uniform pieces; halve berries; add extra dry time (Harvest Right; Penn State).
- **Cloudy or milky oil:** change it now, whatever the interval (Harvest Right, Blue Alpine).
- **Slow cycles:** room 50-75°F (Harvest Right); clear vents; clean condenser coils.
- **Defrost:** between every batch; no hair dryer or heater; drain hose drops vertically, never submerged (Harvest Right).

Sources: Harvest Right FAQs and owner's manual; Blue Alpine FAQs; Penn State Extension. See our troubleshooting guide for more.

Inventory & Rotation

Log every bag or jar as it goes on the shelf. Use the oldest first; cross it off when used.

Batch #	Food	Packed	Bags / jars	Size	Absorber	Location	Check by	Used

Tip: open one bag from each batch after a few months. If the food has gone soft or chewy, it picked up moisture; eat it soon and check your seals.

Pump & Maintenance Log

Track oil changes, cleaning and anything unusual alongside your batches.

Date	After batch #	Oil changed / filtered	Gasket & chamber cleaned	Vacuum check / notes

Oil-change intervals: Harvest Right FAQ (Premier pump every 20-30 batches, Standard every 4-5); Blue Alpine (every 5-10 cycles). Change cloudy or milky oil right away.

Cost per batch, quick math

- **Electricity** = machine watts ÷ 1,000 × cycle hours × your $/kWh.
- **Packaging** = bags × price per bag + absorbers × price per absorber.
- **Pump oil** (oil pumps) = price of one oil change ÷ batches per change.
- **Total** = electricity + packaging + oil + the food itself.
- The free calculator does this with sourced defaults: batchandtray.com/cost-savings-calculator/