

# Commodity Setpoint Desk Guide

Transit temperatures are not always storage temperatures. Freeze points, RH bands, top-ice rules, and a desk workflow for shippers and brokers using USDA tables.

ProspectSentinel

~12 min read

USDA AH-66 + HB 669

For shippers & reefer desks

Transit Guide

Cold Chain Index

Precool Estimator

Claim package checklist

## Executive brief

AH-66 publishes storage requirements; HB 669 publishes transit protective services and commodity notes. They agree more than they disagree — but **transit practice sometimes runs slightly warmer than the absolute storage optimum** to reduce freeze risk at floor level, accommodate mixed loads, or reflect origin differences (e.g., citrus by growing region).

Desk workflow: identify commodity → storage context (CCI) → transit setpoint & ice rule (Transit Guide) → freeze point margin → mix constraints.

## Reading a setpoint like an operator

| FIELD                    | QUESTION IT ANSWERS                                         |
|--------------------------|-------------------------------------------------------------|
| Transit temperature band | What thermostat world are we living in?                     |
| Highest freezing point   | What is the hard floor before ice-crystal damage?           |
| RH band                  | Is this a wet high-RH crop or a dry onion/garlic/nut world? |
| Top-ice                  | Is contact ice allowed, useful, or forbidden?               |
| Chilling flag            | Is “colder” actually injury?                                |
| Ethylene / group         | Who can share the air?                                      |

All of the above are encoded in [Produce Shipper Transit Guide](#) (transit-first) and [Cold Chain Index](#) (storage-first + protein/dairy).

## Freeze margin thinking

Near-freezing commodities (many Group 1 and 6 items) live next to their freeze points. Supply air that is too cold, blocked floors, or deep winter conduction can freeze product even when the thermostat “looks right.” HB 669 discusses circulating warmed air under loads in cold weather and using floor racks/pallets to protect product.

**Practice:** For tight freeze margins, verify return air and pulp, not only the digital setpoint screenshot.

## Shipper one-pager process

1. Look up each SKU in [Produce Shipper Transit Guide](#).
2. If multi-SKU, run Mix — if fail, split or multi-temp.
3. Confirm precool complete ([Reefer Precool Time Estimator](#)).
4. Write setpoint, continuous/cycle, and “do not mix with” on BOL/rate con attachments.
5. Probe pulp at load and unload; keep the strip.

## When setpoints become a claim file (eCFR pointer)

**USDA tables define the temperature world.** When arrival quality becomes a dispute, federal claim-procedure rules for interstate motor carriers live in a different place: [49 CFR Part 370](#) (investigation and voluntary disposition of loss and damage claims). Produce condition disputes may also implicate [7 CFR Part 46 \(PACA\)](#).

- Physics / setpoint evidence → this paper, [Produce Shipper Transit Guide](#), [Perishable Claim Analyzer](#)
- Claim package & process checklist → [Freight claim package checklist](#)
- Minimum claim/suit timing themes → [Claim deadline calculator](#)

Educational only — not legal advice. Confirm current eCFR text, Carmack/contract terms, and carrier rules tariffs.

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## FAQ

- ▶ Is this official USDA guidance?
- ▶ Can I share these with customers?
- ▶ Where are the interactive tools?

## Sources & interactive tools

- [USDA AH-66 — The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks \(2016\)](#).
- [USDA AMS HB 669 — Protecting Perishable Foods During Transport by Truck](#)
- **Federal rules (eCFR):** [7 CFR Part 46 — PACA regulations](#) · [49 CFR Part 370 — Principles and practices for the investigation and voluntary disposition of loss and damage claims](#)
- [Cold Chain Index](#) — 200+ commodity storage/transit matrix + co-load checker
- [Produce Shipper Transit Guide](#) — dock setpoints, mix load, checklist
- [Reefer Precool Time Estimator](#) — half-cooling-time style estimator
- [Perishable Claim Analyzer](#) · [PACA Good Arrival Calculator](#) · [Produce Truck Rate Explorer](#)
- [Freight claim package checklist](#) · [Claim / Carmack deadline calculator](#)

## IMPORTANT NOTICE

This publication modernizes and explains **public USDA guidance** and, where noted, points to **public federal regulations on eCFR.gov** for educational use by shippers, brokers, carriers, and operators. It is **not** an official USDA or DOT document, and it is **not** legal, insurance, PACA advocacy, food-safety certification, or professional claims advice. Always verify current commodity specifications, contracts, and the *current* eCFR text with the controlling authority and your counsel.

Primary sources: USDA-ARS Agriculture Handbook 66 (2016); USDA-AMS Handbook 669, *Protecting Perishable Foods During Transport by Truck* (1995, reprinted 2008), including Load Compatibility Groups from USDA Marketing Research Report 1070 (Lipton & Harvey, 1977). Selected federal regulation entry points: [7 CFR Part 46 \(PACA\)](#); [49 CFR Part 370 \(freight claims\)](#).

## Full series

00 Cold Chain Operating System

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01 The Reefer Is Not a Precooler

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02 Colder Is Not Safer

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03 Ethylene: The Invisible Load Killer

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04 USDA Groups 1–8: The Mixed-Load Playbook

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05 Airflow, Load Patterns & Multi-Temp Zones

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07 Protein, Dairy & Eggs on the Same Trailer

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08 CA, MAP & When Gas Matters

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09 From Temperature Log to Claim

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10 Seasonal Produce Desk

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