

# ALASKA

Where Growing Tree Fruit Is Impossible—  
But Less Impossible Than It Used to Be









To Paraphrase Archimedes,

“Give Me a Rootsock Hardy Enough And I  
Can Grow an Apple on the North Pole!”

**Apple Rootstock trial, Palmer, Alaska, Jan. 2014**

**Temperature: -25F Wind: 30 knots**

**Temperature during a thaw 2 weeks earlier: +50F  
(of appx. 1280 "zone 2" seedlings, 38 survived)**

















## Raised Beds for Trees An Advantage Where Soils Are Cold ?

Warmer Soil in Spring = Longer Growing Season

Root Zone Larger

Improved Tilth

Cold Air Drains Away from Tree = Improved Frost Protection







































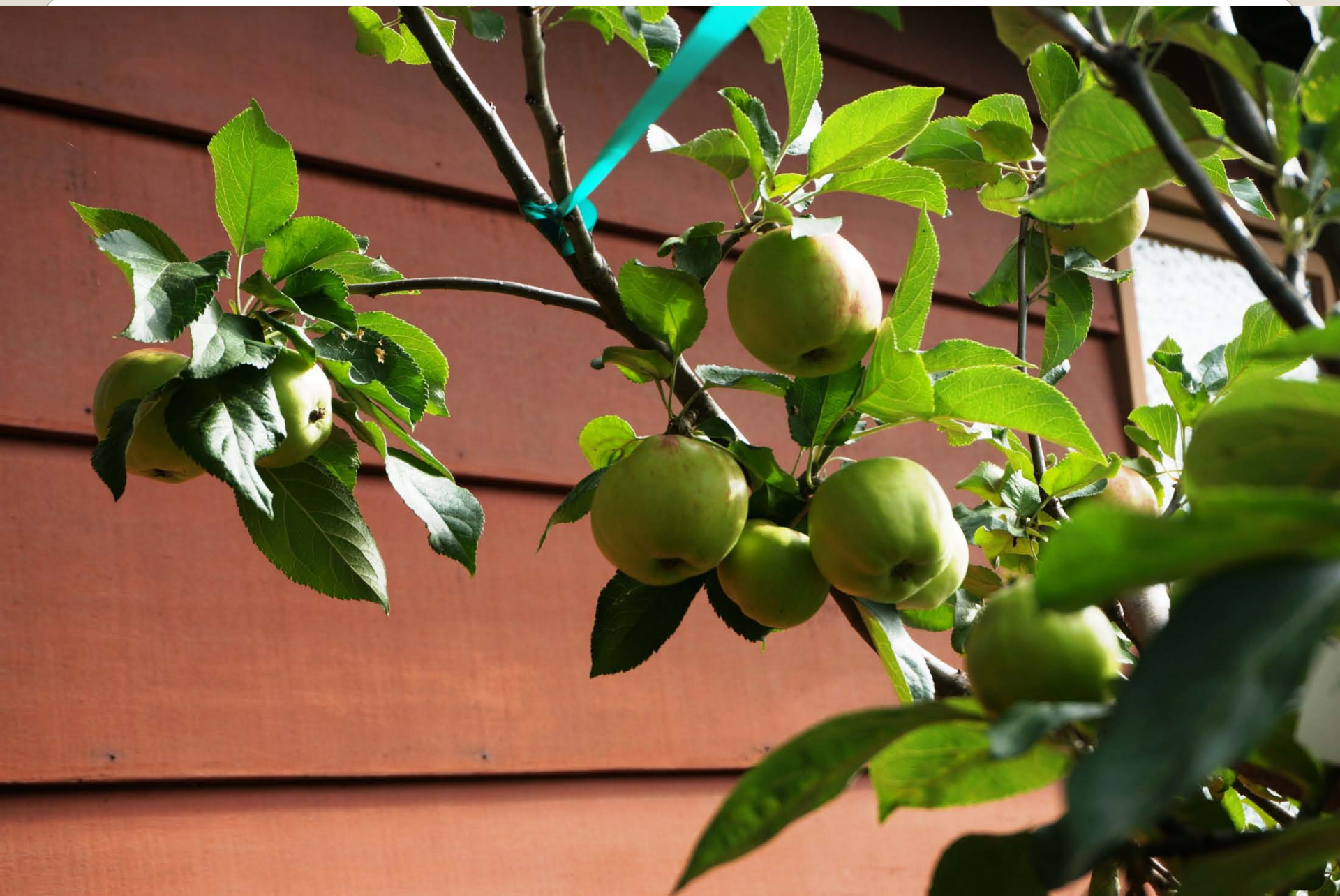


















My Favorite Apples For Anchorage and the  
Matanuska Valley:

**Rescue (crab), Lubsk Queen,  
Carroll (TW), Garfield King,  
Oberle (TW), BM 50602 (TW)  
Prairie Sun**

Stand-By Apples:

**Norland, Parkland, Yellow Transparent,  
Kerr (crab), Heyer 20**

Promising:

**Prairie Sensation, Lobo, Valentine,  
Samo, Miller's Red Ruby, Simonette ,  
Rosybrook (crab), Carlos Queen, Heyer 6**



**WHAT HAVE I LEARNED???**

1. **COLD WINTERS DO NOT KILL APPLE TREES!** (-41F versus -43F etc. etc. etc.)
2. COLD **WINTERS** DO NOT KILL APPLE TREES!  
(apples are fully dormant by the time **winter** arrives)
3. **COLD** WINTERS DO NOT KILL APPLE TREES!  
(but warm ones are death traps)

IT IS **NOT** HOW COLD IT GETS THAT MATTERS.

IT IS ***HOW FAST*** IT GETS COLD.



**(October) November and  
December are the killing months.  
By January, tree tissues are  
either fully dormant or already  
dead.**

**SUN SCALD in spring is a result of frost damage.**

**Although the scalds occur in the spring, the underlying cause is tissue damage from severe cold *during the preceding fall.***

**Thus, FROST PROTECTION PREVENTS SPRING SUN SCALD!**



**How to improve the odds of survival?**

**NO "EVENTS" late in the growing season or early in spring!**

**(No fertilizer! No water! No pruning! No browsing!**

**No anything that might stimulate growth or surprise the tree!**

***ANYTHING* that stimulates or prolongs late-season growth, or causes the tree to wake up too early, is a potential killer!**



**PICK ALL APPLES! As early as possible!**

**(The longer they stay on, the longer it takes the tree to shut down.)**

**TRUNK WRAPS and pvc tubes add significant frost protection. Ditto raised beds, upper slopes, south-facing aspects, high boles, near-by structures, wind-breaks, bodies of water (if not frozen), etc.**

**On a still, cold night, temperatures decrease dramatically from the top of a small tree to the bottom:**

**Delta T = up to 10F !**

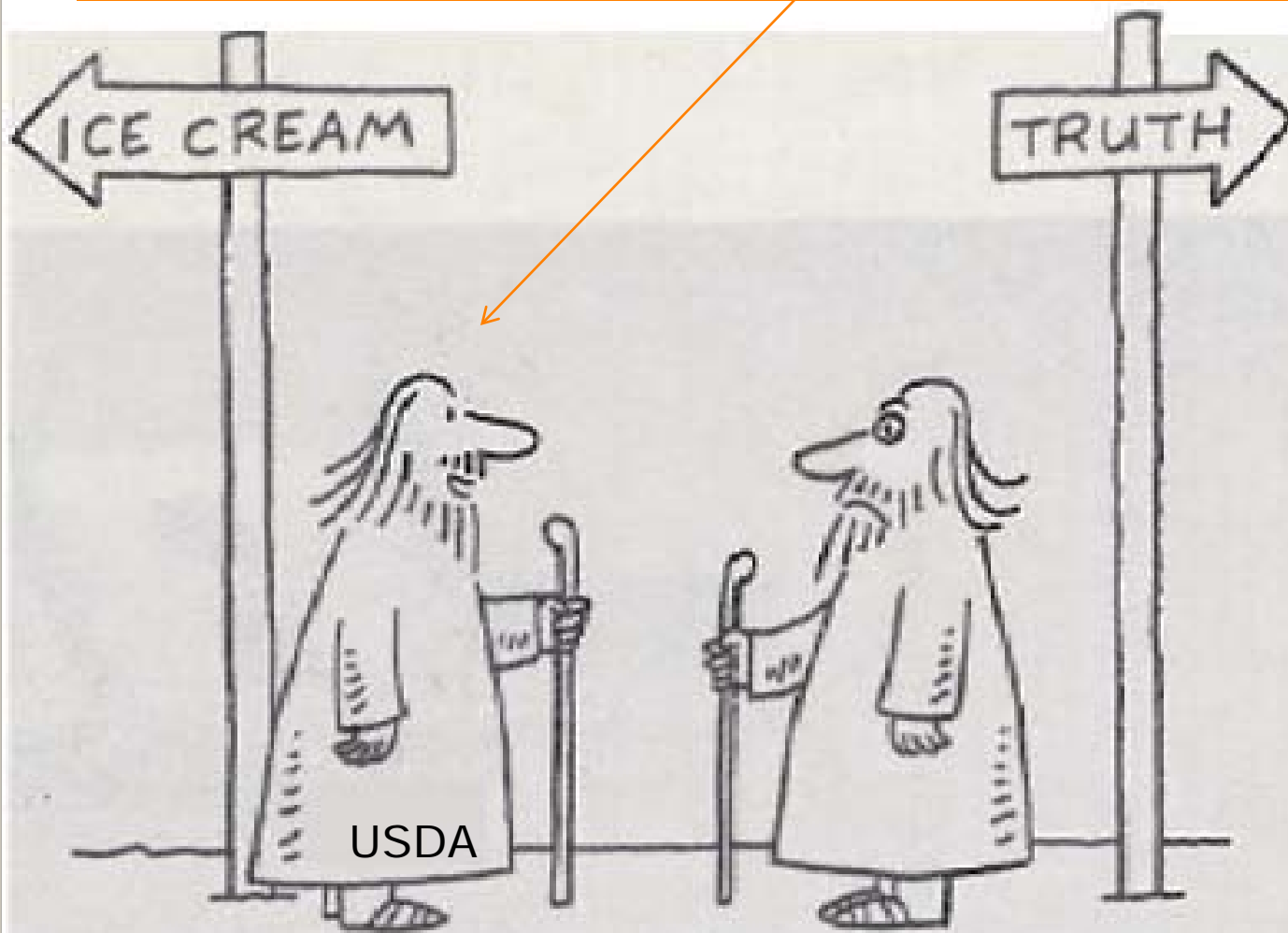
**Pick your cultivar, pick your rootstock and/or framework tree. IGNORE the “Hardiness Zone” propaganda!**

**The USDA zone system is ridiculously over-simplified and unreliable in the north. EARLY LEAF FALL is a more reliable indication of winter hardiness in apples.**

**Cultivars that are quick to lose their leaves in autumn are likely to be ready for cold snaps. Those that hold leaves late are most vulnerable.**

**And one last, sort of political-- but I hope humorous-- point:  
(Joe P., don't look!):**

# THE APOSTLE OF THE USDA PLANT HARDINESS ZONE SYSTEM ?



USDA

"I'll catch up—honest."

CHARLES BARSOTTI