



## Fungal connections in Kazakhstan

Posted by [Michael Phillips](#)

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[Michael Phillips](#)

[Fungal connections in Kazakhstan](#)

August 15, 2015 11:18PM

**Moderator**

Registered: 11 years ago

Posts: 621

The domesticated apple made it by trade routes to Europe and from there to America. A traveler typically would have brought seeds along to sprout, all the more so on the first legs of this long journey. Import of Kazakhstan apple strains in the last few decades by researchers in Geneva and elsewhere have been seeds as well, I suspect. Open-pollinated serendipity is the principle focus, particularly as regards lost genetics on the disease immunity front. You can only cross a Red Delicious with a Golden Delicious so many times before important gene lines are lost in the pursuit of flavorless flavor.

I'm wondering about mycorrhizae species of fungi that have affiliation with Kazakhstan apple roots. These symbiotic fungi from the fruit forests where *Malus domestica* originated would include all species associated with any plants in that ecosystem, given the way mycorrhizae species trade with multiple partners in the soil. Has anyone looked into this? I certainly don't expect the soil food web from Asia to be the same as North America . . . but then again this partnership with soil fungi is the principle means by which plants hone immune function. Have we possibly overlooked one of the most basic connections in breeding more disease-resistant fruit?

[Lost Nation Orchard](#)

Zone 4b in New Hampshire

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[Paul Weir](#)

[Re: Fungal connections in Kazakhstan](#)

August 21, 2015 01:15AM

Registered: 11 years ago

Posts: 187

I would agree that there is surely important things lost in the transfer of seeds (only) to be grown on another continent. The soil born relationship of those same trees was paramount to their evolution. Is there perhaps soil fungi in Kazakhstan that are superior apple specific allies that may lead to healthier more capable trees?? I would venture a yes to that question.

Now how to get some of that living soil out of that area for some trials? Be them in lab or field . . .

Count me in for joining you for a week long holistic orchard intensive in Alma Ata, Kazakhstan.

Paul

[Gopher Hill Apples](#)

Zone 8 in California

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[Claude Jolicoeur](#)

[Re: Fungal connections in Kazakhstan](#)

August 21, 2015 05:48AM

Registered: 11 years ago

Posts: 226

Paul Weir Wrote:

-----  
> Count me in for joining you for a week long  
> holistic orchard intensive in Alma Ata,  
> Kazakhstan.

Let me know when you go as we have some contacts... This is my wife's city of origin and she still has cousins over there!

[Jolicoeur Orchard](#)

Zone 4 in Quebec

Author, [The New Cider Maker's Handbook](#)

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[Tim Bates](#)

[Re: Fungal connections in Kazakhstan](#)

October 06, 2015 09:20AM

Registered: 11 years ago

Posts: 58

Besides counting me in---once upon a time when UC Berkley was still doing their chartered work--research for every one's benefit not just corporate goofballs, they had been doing apple research in Kaz. They found a wasp (or midge?) that overwintered actively by eating coddling moth larvae (and other tidbits). They actually came to my farm and put up a bunch of corrugated cardboard around trunks and branches and released lots of wasps and checked the cardboards in early spring to see if the wasp was doing it's job. Apparently they thought it was. Next they wondered if the wasp would survive here and one woman came back and found some evidense that they were still around the next year. And the money was running out (no money to be made if the wasps naturalized and actually helped growers get some better control) and that was it. I did write a letter in the middle of all this saying that they needed to take an apple grower along (me) next trip to Kaz--someone thought that was a good idea---but like I said no money to be made so the funds ran out. So, I have been dreaming of Kazakhstan off and on for many years. Thanks for reminding me of that story, Michael. And Claude has relatives in Alma Alta--let's go...err it is expensive to get there. Everyone send hundreds more to Michael's war chest and...

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