TODD EINHORN: A GROWING NAME IN HORTICULTURE AND POMOLOGY

Todd Einhorn has been recognized as a national leader in tree fruit science while serving as a very proficient researcher and associate professor at Michigan State University. Now, having been awarded the Martin and Judith Bukovac Endowed Professorship, even more possibilities for advancements in his field are becoming clearer and more in reach.

Todd Einhorn grew up in New Jersey. But beyond the inevitable indoctrination of instate rock’n’roll, New Jersey is The Garden State. And Todd was influenced by the part of that state that reasonably carries that name.

Urban New Jersey obscures the state’s many beautiful deciduous wooded enclaves. As fortune had it, his home was situated at the end of a small street that yielded to such a place, overflowing with herbaceous and woody plants, with a winding brook where he spent weeks engineering dams, waterfalls and rock bridges, a pond of lily pads (the fish and animals of which decades later became the subject of nightly bedtime stories to his children), open fields, wild blackberries and the box turtles that ate them, and shaded understories of ferns.

Einhorn was at peace and very much living in the present moment in such a wondrous place. He was particularly drawn to the trees. He can bring to mind the exactness of myriad individual trees, their form, shape, and characteristics. He essentially knew all of them by their traits, though as a youth he was unaware of their taxonomy. He credits the vast time spent in solitude in these very small woods with his interest in woody plants. After an initial year or so studying literature, they compelled him in his undergraduate studies.

Einhorn was fascinated with the study of woody plant physiology. That fascination carried his academic foundation. He could not have been more fortunate as an undergraduate student at Colorado State
University to have incredible minds, such as Cecil Stushnoff and Cleon Ross, to teach him this subject matter. He consumed the information avidly.

Prior to and during his undergraduate degree, Einhorn worked in a woody plant nursery (Fort Collins Nursery). The owner and managers of this business were so profoundly inspirational, and they shared their vast knowledge profusely and in exemplary fashion modeled the use of improvisation. Einhorn came to recognize this beautiful attribute as inherent to growers.

With nursery colleagues, he farmed vegetable acreage for summer farmer markets during his evenings and weekends, and he converted half of his basement to a propagation facility. Einhorn likens his daily educational pursuits (academic, vocational, and through tinkering) to living out a dream. He became an arborist, a discipline with such a perfect interplay among physicality, skill, and plant knowledge that it so critically informed the continuation of his career.

He was certified via the International Society of Arboriculture and found himself more comfortable one hundred feet in the air, balanced on limbs the size of pencils, his weight supported by a rope, than on the ground. During this time, possibly through the combined transmittance of passion from Cecil Stushnoff and Harrison Hughes, Einhorn merged his interests of tree physiology and food systems, and has since been on a trajectory of joyful discovery in pomology—a road that was paved by the mentoring of his PhD advisor Horst Caspari and his selfless introduction of Einhorn to the international pomology research community.

He vividly recalls the stacks of papers (many from ASHS journals) that adorned his desk from the first day he arrived at the research center. They became living documents in his life. They propelled his drive. Their authors comprised a lexicon of valued scripture for him. And now, he can freely interact with those iconic scientists. In fact, he has developed strong peer relationships with many of them.

Einhorn enjoyed a short stint as an associate professor at CSU-Fresno prior to joining Oregon State University at a research center in Hood River, OR. His research focus was pear and sweet cherry horticulture and physiology. He became fully entranced with pears and immersed himself in experiments with very precise instruments worth tens of thousands of dollars.

In 2016, Einhorn accepted a position in tree fruit physiology at MSU from positions that were vacated with the simultaneous retirements of Jim Flore and Ron Perry, two pillars of the pomology world. MSU
facilitated his growth. He felt the MSU Horticulture Department, steeped in an amazing history of tree fruit research, is comprised of the most open and collegial individuals.

Recently, Einhorn was awarded a rotational endowment, the Martin J. and Judith Bukovac Endowed Professorship in Tree Fruit Physiology. The endowment was gifted to advance a fundamental area of fruit science that would, concomitantly, benefit the Michigan tree fruit industry.

Martin Bukovac is among Einhorn’s mentors. Einhorn feels that Bukovac will forever remain in a class alone as one of the brightest and most productive minds in horticulture.

The Bukovac award will allow Einhorn unprecedented luxury in delving into the deeper truths of tree fruit physiology. That is his specialty, and he has dedicated most of his career into unveiling its secrets and translating how those secrets, once unveiled, can best be of service.

The award itself is provided by an endowment from longtime ASHS Past President Martin Bukovac and his wife Judith, and its monetary prize is earmarked to pay for specific research needs and for broadening strategic partnerships. It also allows Einhorn to assume a 3-year professorship so that he can lead an effort to explore the intricacies of cold hardiness in plants.

Recognizably, this is a major task. And it doesn’t excuse Einhorn from keeping up with his existing responsibilities, which have been growing on their own.

Einhorn’s research focus is the development of management strategies for apple and tart cherry production systems, but he continues his valuable work with pear fruit. His participation in the Horticulture Department’s teaching mission, along with other new hires, has aided in the reinvigoration of the exciting horticulture curriculum at Michigan State University through his direct involvement in classroom instruction and in mentoring undergraduate interns and graduate students in his research and extension programs.

The mere presence of Todd Einhorn has provided a freshly stimulating and rewarding educational experience for students. According to William ‘Vance’ Baird, a colleague of Einhorn at MSU (and a generous supplier of content and context for this very profile), Einhorn’s outgoing and open personality (as well as his growing international reputation) has catapulted his successful engagement with growers and industry leaders throughout Michigan.

Einhorn is now a respected authority in tree fruit production systems, rootstock evaluation, and the use and effects of plant growth regulators. He has illustrated a broad-minded creativity in his work and enjoys experimental design. Also, he has proven himself to be a desirable contact for those who can benefit most from his work.

His affinity for, and his protection of, growers has driven much of his efforts. Growers can lose an entire crop yield with a frost event in the spring, killing off desired blossoms with buds after winter dormancy. Mid-winter freezing can also destroy fruit crops. Even before receiving the Bukovac award, Einhorn has been focused on developing protection strategies against such threats, thereby guarding growers while salvaging aspects of the food table for consumers.

Increasing cold hardiness is a vexing puzzle. Deciphering the interactions and critical factors that render fruit trees susceptible to death amid the tapestry of crops and cultivars takes a steady mind. It’s a dynamic process between plant genetics and an ever-changing environment. Einhorn’s goal is to
understand plant weaknesses and predict responses to episodic freeze events that aid grower decisions to protect and ensure a viable crop. Determining how vulnerable varying crops are to minor climate changes is critical. Einhorn notes that in many cases, “the difference between a full crop and no crop is typically only a few degrees.”

Einhorn’s early work in orchard establishment, training systems, and canopy architecture modification garnered significant attention for their innovation and effectiveness. His wide-ranging experience and his personal tenacity have molded him into an attractive candidate for ground-breaking collaborations. Those connections with cross-discipline collaborators are where he feels the truly exciting advancements often occur.

Einhorn solidified research partners among USDA and university scientists not only across the country but also internationally.

He has been an enthusiastic member of ASHS since 2002, and he loves the comfort and support that our organization has provided him while developing his career in horticulture and pomology.

Einhorn recalls the thrill, and terror, of his first ASHS symposium presentation, sandwiched between two of the terrific and inspirational minds of pomology, one of which was Alan Lakso, who among others was so incredibly approachable and giving with his knowledge. And what could better serve as fuel to ignite an enthusiastic, young, and unexperienced research mind as someone of this caliber exhibiting such openness and sharing of incredible knowledge?

He passes this along as an example of the enriching experiences and people he has benefitted from meeting during his involvement with ASHS. These have led to lasting professional and personal relationships. He claims to be further fortunate to have the annual meetings of the American Pomological Society, of which he serves as secretary, within the ASHS Annual Conference.

Todd Einhorn’s pursuits have already issued scientific benefit. But his selection as the Bukovac Endowed Professor will surely elevate his contributions.