



Tractor and Truck Museum News Spring , 2012



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Ag History Center Reception June 13th

On June 13th the Heidrick Ag History Center is hosting a reception with some delicacies and wine tasting to thank its supporters and sponsors. Of course we will feature agricultural products. Capay Valley Vineyards, Seka Hills Wine & Olive Oil, Simas Family Vineyard, Berryessa Gap Winery, Copper Hill Olive Oil, Lucero Olive Oil, and Z Specialty Food have already agreed to provide a tasting with more surprises ahead.

You'll see our newest exhibits, mingle with friends, and meet our team. The Center will launch new technology that begins to tell the story of agriculture and define the elements that created California's culture in the late 1800's. The event also features guest story tellers who will walk you through history. Ed and Sue Claessen, authors of *Making Tracks*, will tell the story of how Best and Holt established track type tractors. Doug and Matt

Veerkamp will tell the Caterpillar story and share how their passion for collecting evolved.

The event is free if you have sent in your support in the last 12 months, and we encourage you to bring a guest! If you haven't contributed, admission is \$20. But there is time to become a supporter. Whether you are a potential new supporter or you just haven't gotten around to renewing your support, it is easy to fill out the membership form (on our website) and send it to us with your check or credit card information.

We continue to breathe new life and resources into the Ag History Center, and we want our supporters to get connected or reconnected to the living history our museum offers. We hope you will join us to see what's new, enjoy mingling with your neighbors, and experience the magic of vintage tractors.

The Culture of Agriculture New Technology Launches on June 13th

Agriculture has a distinct culture of its own. Depending on where you live, what crop you cultivate or what herd you drive, and what century you farmed in, agriculture has many facets. If you don't know the story first hand, you've probably heard stories from your ancestors.

One of the objectives of the Heidrick Ag History Center is to tell the history that directly relates to the collections housed at the museum. At the **Reception on June 13th**, we will unveil the first stories, and we'll continue to add stories over time. Bring your cell phone. "Guide by Cell" provides a connection; just dial the phone number and you'll hear the story begin:

The culture of agriculture was influenced by mechanization in California and illustrates the powerful character of invention. On-farm mechanization was closely tied to the inventive efforts of local farmers, ranchers, and mechanics....

You'll have to stop by the museum to listen to more of the story. Don't forget to **bring your cell phone**, we'll give you the phone number when you arrive on June 13th.

It won't end there. As interns continue to record historical scholarship, we will have more information in future newsletters.

Interns & Volunteers Get it Done

*The historical data for this project is a result of our university student internship project, support from **The Morning Star Company**, and the scholarship of **Ed and Sue Claessen**, authors of **Making Tracks**.*



Plan a Gift

Place us in your Will or Trust!

Donate Stocks or Real Estate!

Consider making a tax deductible investment in safeguarding the genius of our forefathers who invented agricultural and transportation vehicles. Name the Heidrick Ag History Center as a beneficiary in your Will or Trust.

Our budget is supplemented by people like you. We do not receive federal funding.

This collection is not just a part of Woodland of Yolo County. It is an historical representation of an American agricultural experience.

Contact Lorili Ostman, Executive Director, for more information on how to plan a major gift to support the Ag History Center.
530.666.9700
lorili@aghistory.org

The Harris Story

Grain Production

The Russians introduced mechanized agriculture to California in 1836 at the Fort Ross settlement. The outpost was established as an agricultural base to supply northern settlements with food and carry on trade with Alta California. During this time period an early description of the archaic methods of grain harvesting was described by Yegor Chernykh, a graduate of Moscow Agricultural School. "Throughout California reaping is done with sickles and threshing with horses in the most wretched fashion. They construct a round threshing floor, from 5 to 8 sazhen (35-56') in diameter, and enclose it with a wooden or stone wall. They spread sheaves of wheat throughout this contrived thresher to a depth of 1 to 2 arshins (28-56") then they drive from 70 to 150 horses inside, and they spur them with whips, so that the kernels are dislodged by the hoofs in constant motion." Yegor responded by building a wood thresher modeled after the design of Andrew Meikle Thresher, a Scotsman, credited with inventing the drum style threshing machine that could be operated with wind power, horse power, and eventually steam power. Patented in 1788, it increased the production of grain and is still used in harvesters today. Yegor could thresh 350-550 sheaves per day.

Early California wheat production began to blossom in the 1850's.

Binders, Headers, Threshers and Combine Harvesters were imported from Eastern manufacturers. Soon California inventors began to produce their own ideas to improve production and save labor during harvest.

Combine models in California were considerably larger than the Midwest and East Coast counterparts. Farmers on the West Coast learned how to drive large teams of horses and mules as a result of their experience with gang plows and headers. The difficulties associated with controlling large teams induced manufacturers to perfect steam engines and track-laying tractors to pull large combines.

During the harvest of 1880 few machines operated in California. By 1881 the first were under construction in Stockton (a river front town convenient for shipping). By 1888, more than 500 were in use. Machines developed by Best, Haines Houser, Holt, Matteson & Williamson, Shippee and others were in demand.

In 1890 George H. Harris arrived in Stockton and worked with Shippee Harvester Works before he moved on to Matteson & Williamson. In 1902 Harris started his own harvester repair shop. In 1904 the Harris Manufacturing Company was incorporated to repair and build harvesters producing the first successful auxiliary gas motor-powered combine harvester.

Business boomed. By 1915 Tractors were becoming more

popular. Horse drawn harvester production was decreasing. The Harris name became famous for designing and producing the first successful auxiliary motor-powered combined harvesters. You can see an example of the **Harris Standard "Giant" Harvester** at the Heidrick Ag History Center.



Built in 1920, the Harris Combine has a four cylinder gas engine, 55 horsepower, and a 24 foot header. It took 5 people to operate: 2 sack sowers, a header tender, a separator attendant and a tractor driver. This Harris harvester would average 1200 to 1300 sacks per day or 60 to 65 tons.

The adoption of distinctive labor-saving techniques carried over to

grain sowing activities. An 1875 USDA survey showed that over one-half of Midwestern farmers used grain drills, but that virtually all California farmers sowed their grain. The use of broadcast sewers in California reflected a rational response to the state's own price environment. Among the broadcasting equipment used in California were advanced high-capacity end-gate seeders designed and manufactured locally. Where California seeders sowed up to 60 acres a day in 1880, drilling could seed about 15 acres per day and a man roadcasting by hand could seed roughly 7 acres per day.

The **Harris Twin Broadcast Seeder** donated to the Heidrick Ag History Center by Randy & Rodney Wescott is a barn-ready example of how a 1919 (or later) seeder was mounted on a wagon made in the 1800's. It is a typical illustration of on-farm ingenuity. According to a sales brochure it sold for \$100. The seeder was deemed especially useful for Western conditions, simple in construction, yet strong and well built. Two distributors throw grain in both directions, uniformly planting up to 25 acres per hour of wheat, barley, oats, rice, and other field crops. The feeding regulator has an extra large capacity hopper that holds two full sacks of grain. The pin tooth sprocket drive eliminates troubles and delays common to chain drive seeders.

Stop by the Heidrick Ag History Center to see two examples of

how the Harris Manufacturing Company was part of the cultural evolution of grain production and harvesting.



Extensive research and scholarship were made by Historical Consultant Lorry Dunning. Excerpts from The Evolution of California Agriculture: 1850-2000 by Alan Olmstead and Paul Rhode, and from Jack Alexander's work on "The California Combined Harvester" also contributed to this article

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## Innovations in Grain Transport

California transporters were just as hands-on in pioneering new approaches to hauling grain. Innovations in transport paralleled innovations in harvesting.

The Hays family, founders of the Hays Antique Truck Collection at the Ag History Center, made significant strides in grain transport. According to Don Hays, grain was transported in burlap

bags prior to the 1940's. The bags were sewn closed then dropped in the field for pickup later by the crew. When grain transport transitioned to bulk hauling, **flat bed wagons or trucks with side racks** were used. You can see examples of early transportation at the museum. Farmers would haul bulk grain from their fields **with bobtail trucks** to a rural warehouse where the front of the truck was picked up and the grain was dumped out the back end.

Pop and Don Hays used doubles (semi and trailer) to haul bulk grains that would unload through holes in the trailer floor. Don recalls that there was a lot of hot and dirty handwork in the unloading process.

When Don worked for his father at Hays Trucking, the company had just finished building a twenty-foot semi trailer with a hopper built on the bottom. It was heavy. The sides were made of plywood bolted on to stakes that fit into the stake pockets. It was a converted flat bed. The sides were stored in the hopper bottom and what looked like a cardboard box was developed. With testing, a similar hopper trailer was built to trail behind the semi. It was designed to be converted from a bulk trailer to a flat bed at the unloading site to transport other types of commodities on the return trip. However, it proved too heavy to haul a reasonable payload.

Trucking was generally slow during the winter and trailer building provided work for some of the

drivers. Frames and iron tubing were machined by local companies. When all the pieces were accumulated, the crew at the Hays shop could assemble two trailers per day using the main jig. You could hear the word “saw” shouted out by all when the iron fell to the floor and alerted workers it was time to reset the machinery for the next cut. When they discarded the hacksaw and used an abrasive cutoff saw, production increased to three trailers a day.

Trailers went through several transitions in the next decades. Aluminum replaced wood, and a steel frame was developed to provide the strength to support lighter aluminum sheeting. The hopper trailer design evolved from a convertible floor model with wooden side racks to a non-removable hopper and a removable aluminum top.

In the 1960’s Don Hays made significant innovations to lighten the load. With the realization that the needs of transportation had changed, there was less need to convert hoppers back to flat bed trailers. Weight and production costs could be reduced by building a non-convertible trailer that would only be used for bulk hopper freight – the prototype for today’s modern hoppers. Aluminum side sheets supported the load and were secured by rivets that had a shear strength of three hundred pounds. Circles were cut into the I-beams to save weight and an ultra-light experimental model was built. In later production the father and

son team further reduced the weight by using hollow trailer axles for the air tank for braking.

Innovation continued and if a company made something better, Hays would incorporate it into the next hopper assembly. Between 550 and 650 hoppers were built by the crew at Hays Trucking. Today you can see bulk grain hoppers everywhere .



*Excerpts from "Building Trailers" written by Don Hays contributed to this article.*

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Current Major Contributors

At the Ag History Center we have enjoyed meeting you, showing you the collection, and hearing about your contributions to the museum, community, agriculture and transportation. You inspire us!

Dan Best II
 Fred Heidrick Sr. Family
 The Morning Star Company
 Traynham Trucking
 Terry Wilkinson
 Doug & Matt Veerkamp
 Bettina Chandler
 The Tremont Group
 Farm Credit West
 T&P Farms
 Don & Vesta Peart
 Wayne & Mary Ginsburg
 Mezger Trucking
 Fred and Sandra Heidrick
 Joe and Nancy Gnos
 C. J. Schneider
 Pioneer Equipment
 Circle G Ranch
 Susan Driver DBA Gary Driver Farms
 M&F Farms
 Pacific Coast Producers
 Lucchesi Family
 LAFTER Farms
 Bob Eoff
 Paul Leathers
 Kent Lang
 Richard and Becky Jenness
 Ag-Seeds Unlimited
 Gerald Rominger
 Eric Paulsen
 Joe Muller & Sons
 Charles Manhart
 Richie Brothers Auctioneers
 Shelly Hunt
 Compaction Rentals
 Blake and Melissa Harlan
 AlSCO—Geyer Irrigation
 BZ Bee Pollination
 Eaton Drilling
 Don Dobbas at Jim Dobbas Inc.
 R.C.L.
 Ed Akin

Volunteers and Local Businesses Get it Done

Volunteers, board members, community leaders, and supporters are moving mountains. One of the newest projects is the outdoor exhibition area. We are showcasing tractors, trucks, and implements. Energetic community members support these projects with their personal skills and resources. All is donated right down to the gravel and irrigation lines. Now we are looking for a truck load of lavender. Stop by often and see the transition. **Join our team,** we're getting things done.

Holt of California
William Driver
Valley Truck & Tractor Company
Valley Office Equipment
Home Depot
All Seasons Paint
OSH
MG Painting
Suburban Propane
Geni Products of Northern California
RDM Audio Visual Rentals
Costco
Duane Chamberlain
Steve Coppin
John Davis
Jeff Moody
Eugene Muhlenkamp
Greg Neuberger
Peggy and Larry Parker
Roy Pimentel
Don Pusich
Elizabeth Rocke
Frank Rodgers
Joseph Blair
Roger Austin
Richard Angelino
Jack Alexander
Edwin Anderson, Jr.
Don Boulet

Nancy Brazelton Philleo
Don Buckman
Gary Bunch
Norma Smityh
Richard Uchida
John Vesco
David Waltz
Randy Wescott
Richard Yoshizuka
Lorry Dunning
Robert Erkson
Harold Gibson
Mary Grazie
Paul Gulas
Dale Hall
Joe Hayes
Ed Heeney
Greg Heguiagaray
Clint Huring
Steve Hiatt
Rich Hinson
Honodel Charles
D. Kinyon
Victoria Maas
Jacqueline Mathews
Schwarzgruber and Sons



Holt of California Getting it Done in a Day

It was great to see Martin Cook drive up with a polished fork lift. So many of the activities at the Center require a lift, and this one easily moves vintage vehicles into place.



Restoration Team

It won't get done in a day. But thanks to the generosity of Bettina Chandler funds are provided to bring this early John Deere Wagon back to its original state.



What is this Artifact?

Most every week someone arrives at the museum to donate an agricultural artifact or antique tractor and truck that has been in their family for years. Sometimes the use of that artifact is subject to question.

Can you tell us what this trivet was used for? We'd really like to know. Each round is numbered from 1 to 16.



John Deere Arrives with Horsepower

Thanks to Valley Truck and Tractor for getting it done in a day.



Request for Lug Boxes

We are looking for *Ball and Dennison* tomato lug boxes. These lug boxes will round out a new exhibition scheduled for 2013. Just call us at 530.666.9700 to donate.

