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50 Years (and more) of Pecans

Then vs. Now

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Early Fertilizer application circa 1930

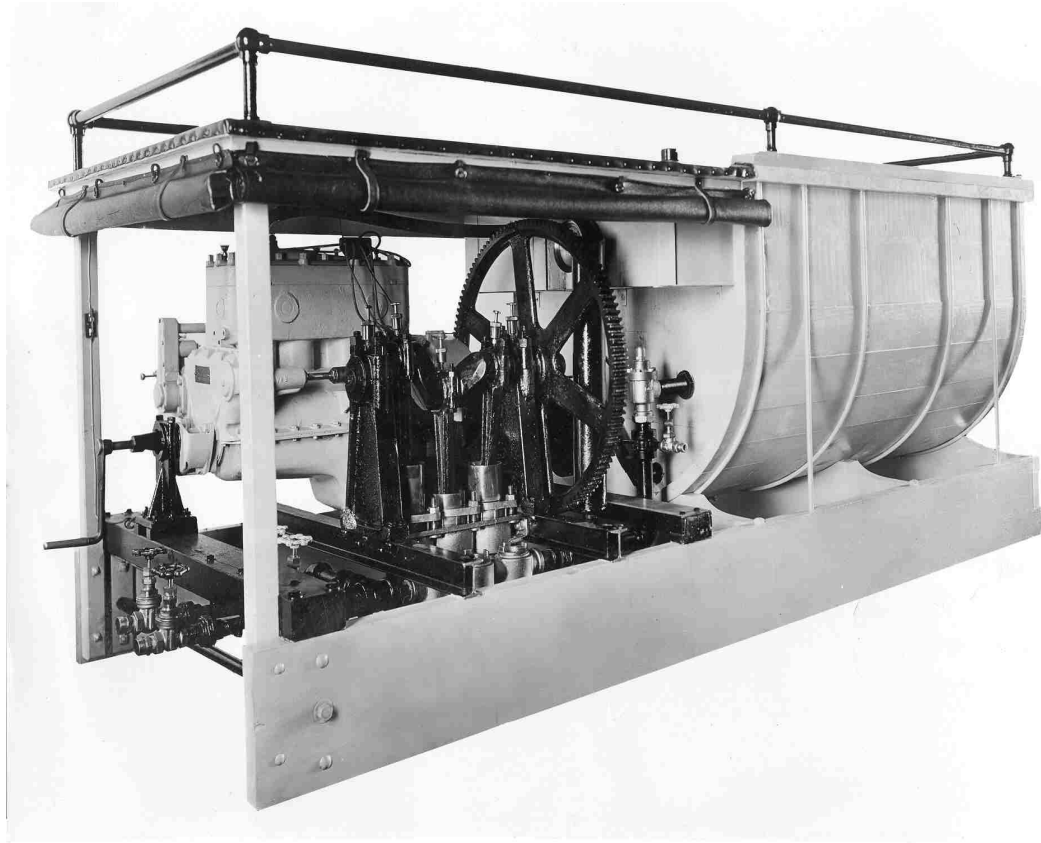


WW-1 aircraft converted to crop dusters

Mules pulling engine driven dust blower



Bean sprayer powered by gas engine Trailer mounted & tractor drawn



Modern Air-blast sprayer with cabbed tractor



Early harvest using poles to knock down nuts Modern tree shaker



Labor picking up nuts from the ground

Modern harvester picking up nuts



Loaded and headed to the cleaning plant

Primary cleaning done and on dryers



Going through the plant and bagged for shipment



Water situation in the Far West

The driest weather in 1200 years*

For years, scientists have been wearily watching the trend toward megadrought in the American West, and now new data has helped clarify the severity of the situation. In the Southwest, it's the worst drought since medieval times.

Despite heavy precipitation in some areas late last year, 2021 was brutally dry overall in the Western US and northwestern Mexico. It was so dry, in fact, that it capped a 22-year period between 2000-2021 that's unmatched over the past 12 centuries.

"It's extremely unlikely that this drought can be ended in one wet year," Park Williams, a climate hydrologist at UCLA, said in a statement.

Williams is lead author on a study published in Nature Climate Change earlier this week that laid out the new status quo. He says human-caused climate change gets a significant portion of the blame.

"Without climate change, the past 22 years would have probably still been the driest period in 300 years ... But it wouldn't be holding a candle to the megadroughts of the 1500s, 1200s or 1100s."

The study estimates that 42 percent of the current megadrought in the Southwest can be attributed to human-caused climate change, which largely comes from the burning of fossil fuels for energy.

*Eric Mack/CNET/NOAA/NIDIS *Park Williams, UCLA

A shrinking Commodity-Water



Low Snow-Pack in the Rockies which feed the Colorado, Rio Grande and Pecos Rivers



Lake Mead- Az

162,560 surface acres
58,000,000 ac/ft



Lake Powell- AZ, UT

162,000 surface acres
57,000,000 ac/ft

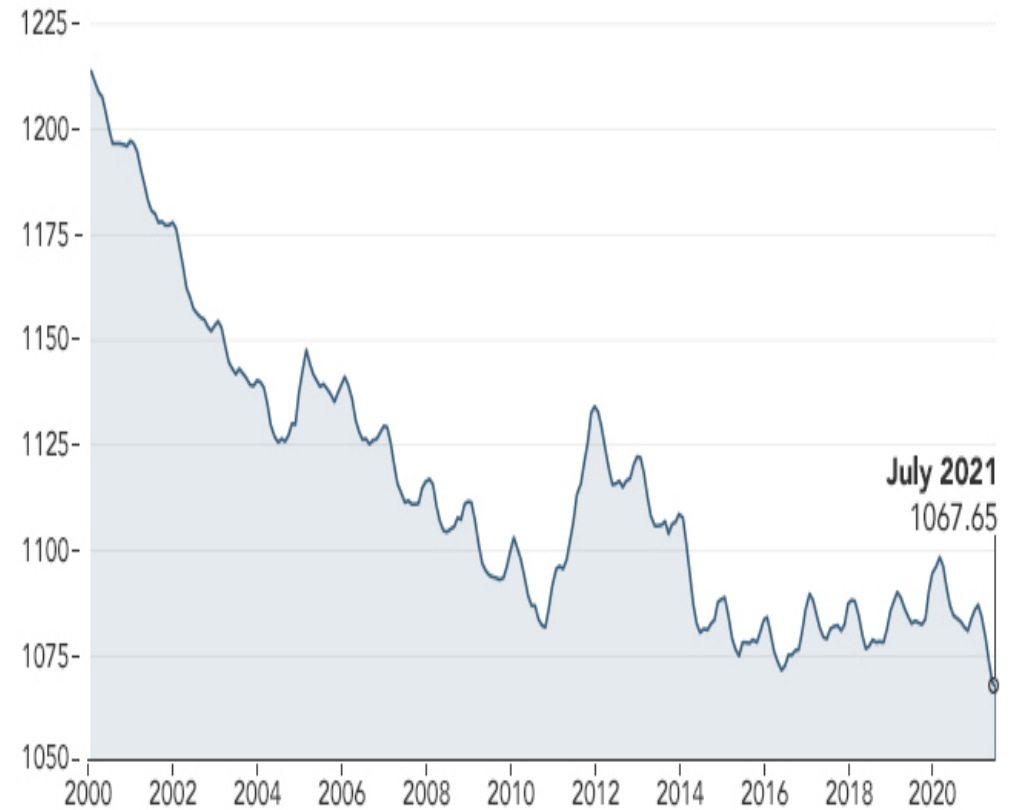


Lake Mead Water Levels 2000-2021

158' Drop to less than 50% of capacity



Lake Mead Monthly Elevation at Hoover Dam (ft)



Impact of less water in the Colorado River, Pecos River and Rio Grande River

- 1; Thousands of acres of farm-land in Southern California and Arizona are being fallowed this coming summer due to water restrictions.
- 2; If Lake Mead and Powell drop to projected levels in the summer of 2023, electric power generation will be halted.
- 3; Las Cruces, Fabens and Roswell could see less water available.
- 4; Chihuahua, Mx. is in much the same situation on water supplies and water quality.

Labor and Wages in the Future

- 1; New York, Washington and California are moving to a \$15.00 min. wage and a 40-hour work week with overtime over 40 hours for farms.
- 2; Arizona is \$12.80 an hour with an annual adjustment based on consumer price index.
- 3; More states are considering a move in this direction.
- 4; Federal minimum wage will not remain at its' present level.

Marketing your Crop; Cash or Consignment

- 1; The old and current way is to deliver your crop to a buyer for a specified price with time of payment negotiated, now or in the future.
- 2; Other nuts such as Pistachio, Almond and Walnuts generally deliver to a selected processor who processes and markets the crop with a contracted payment schedule based on the market over time. You are not sure of final price received for several months. The grower is financing the processor and taking the market risk.
- 3; Regardless of which way you choose get references and a purchase contract stating the terms and dates of payment.

Your Farm-Big or Small, Corp. or Owner-Operated, which is best?

- 1; The answer is: All of the above. Each has its own advantages and disadvantages. Much of it depends on you and your desires for your future.
- 2; Corporate: Structured, rules, HR policies, **focus on the numbers.** Controlled wages, bonus, time off, etc. May or may not fit your lifestyle. On the plus side there is access to capital, your personal finances not impacted, promotions and more responsibility available if that is your desire.
- 3; Owner-operator: **More control of your family life** and schedules. More efficient with you on site a high amount of the time. Crops will affect time off and annual income, but if you are the guy that likes to be in charge, this is the way for you. You can be as big or small as suits you.
- **4; Is it better to grow 1,000 #/ac on 200 acres or 2,000 #/ac on 100 acres?**

Research and Promotion

- 1; Too many organizations and associations chasing too few dollars.
- 2; Not enough focus on farm R&D. A fixed allocation needs to be earmarked out of the assessments collected.
- 3; Research support for new varieties, farming practices, more efficient irrigation and harvesting/cleaning equipment is needed. We need to do more with less labor.
- 4; Declining production anywhere in the U.S./Mexico will result in less pounds available for assessment.

Where are we headed?

- 1; Increasing farm input costs for materials and labor.
- 2; Less available experienced farm labor.
- 3; **Less water availability** in the **west** and **northern Mexico**, reducing pecan availability for sale and assessments.
- 4; The water situation in the west will not correct itself for many hundreds of years and will face more demand from urbanization for what is available. 10,000 people a month are moving into the Phoenix and Tucson areas. Housing developments stretch to the horizon.
- Phoenix = 5MM, Tucson = 1 MM, El Paso = 1 MM. Who will get the water first?? Not a hard question to answer.

SOME PREDICTIONS

- 1; Water will become the most valuable commodity in the west. It will be sold, rented, allocated and strictly controlled.
- 2; Indian reservations and the urban population will be first in line for available water with industry and mining coming next. Agriculture will be at the bottom of the list even after recreational use.
- 3; Environmental restrictions and opinion will preclude the building of new dams to capture surface water.
- 4; High density plantings coupled with hedging will become SOP in the Southeast.
- 5; The future of much of U.S. Agriculture lies east of the Mississippi River. All crops that can be grown in this area will leave the west and move east over time, and the Southeast will become the heart of the pecan industry once more, so invest in your orchard, plant more, farm better, and put you and your family in a position to take advantage of this shift that is coming over time.