

Farm

DID YOU KNOW

Through the use of technology, each farmer is able to feed 155 people today, compared to 1940, when one farmer could feed only 19 people. — <http://animalsmart.org>

QUESTIONS? Contact Staff Writer Antoine Abou-Diwan at 760-337-3454 or aabou-diwan@ivpressonline.com

FOOD & FARM NEWS

BY CALIFORNIA FARM BUREAU

Proposed regulations cause concern

Federal agencies want to expand their ability to regulate land use that could affect waterways, but farmers and ranchers think the agencies are overreaching. A group of California farmers and ranchers took their concerns directly to the U.S. Environmental Protection Agency during a meeting with agency Administrator Gina McCarthy. The farmers stressed their desire to protect water quality but said the new rules would add cumbersome paperwork requirements.

New conservation initiative begins

Stressing partnerships to enhance conservation, the U.S. Department of Agriculture has announced a new program to invest in local projects that benefit soil and water. A portion of the money in the Regional Conservation Partnership Program will be set aside for projects in eight specific areas, including the Central Valley. The California Rice Commission says that will benefit farmland conservation and bird habitat practices underway on California farms.

Budget-friendly tips help shoppers

To help budget-conscious shoppers make healthy food choices, the U.S. Department of Agriculture has launched an online resource called "Healthy Eating on a Budget" as part of its ChooseMyPlate.gov website. The new section focuses on how to plan, purchase and prepare healthy meals, as well as tips on how to save money at the grocery store. The budget suggestions include recipes, grocery and pantry lists to help households organize their purchases.

Studies tie diet to happiness

A well-balanced diet that includes fruits and vegetables contributes to greater emotional well-being, according to a number of studies. One British study showed that subjects experienced more positive emotions on days they consumed more fruits and vegetables. Another showed that the more fruits and vegetables consumed, the higher the level of emotional well-being — with seven daily servings of produce found to be optimal.

WATER SAVING DEVICE

Ag apps make for 'smart' farming



BY ANTOINE ABOU-DIWAN
Staff Writer

Like seemingly everyone else who owns a smartphone, Brawley farmer Carson Kalin uses his phone and iPad to keep track of all kinds of information.

And, during the growing season, he uses it to make crucial irrigation decisions.

"It has completely changed how we irrigate row crops," he said.

Smartphones have profoundly transformed the way people communicate and access information, and now are revolutionizing the way farmers run their operations.

About three years ago, Carson and his brother, Al Kalin, installed Hortau's Irrolissystem in their fields. The system combines tensiometers with cellular modems to allow farmers to review soil water tension levels through their smartphones and tablet computers in real time.

Soil water tension assesses how hard a plant has to work to absorb water through its roots. If the value is too low, the crop needs more water. Too high, and farmers need to irrigate less. Unlike simple moisture level sensors, tensiometers account for soil salinity levels, which can vary.

The Kalins first used the system on onions, crops that have a short growing season and use a relatively high amount of water. They used to germinate the crop by irrigating the field for 48 hours and again about a week later.

Nowadays, they irrigate the crop more frequently while using half as much water.

"It's a water saving device, and more importantly, because the plant gets water at the correct time, it increases yields," Al said.

Dave Layton, farm operations manager for Al Dahra Farms USA, uses several iPhone applications to help him manage his company's operations, which cover about 2,500 acres in the Brawley area.

He uses DuPont's TankMix iPhone application to calculate the amount of chemicals to mix for a specific field, be they pesticides or fertilizers. Farmers simply enter a few variables, like the size of the tank and the desired quantity of chemicals per acre, and in the process eliminate the time and effort of manually calculating the chemical mix.

"It's a very simple app but it's invaluable to me," he said.

After pesticides are applied, Layton uses Agrian Mobile to calculate how long his workers

need to stay out the fields.

And, Trimble Navigation Limited's Connected Farm Scout app helps Layton map his fields and pin the locations of potential problem spots.

It allows farmers to take a picture of the problem, enter information about the crop's growth stage, and mark the location using the phone's GPS capabilities.

In the old days you'd have to carry flags with you and put them in the ground," Layton said.

If a field worker pulled the flag out, finding that problem spot again could be difficult.

Layton stressed that there are more apps available than he has time to review them. And, not all deliver what they promise. One app in particular did not allow him to pin locations and measure distances, as advertised.

"It wasn't worth a damn," Layton said.

Hortau's Irrolissystem is presently accessible through a mobile website. An iPhone and Android app should be out "in the next week or two," and it will be easier and faster to use, said Jeremy Otto, business development manager. **Staff Writer Antoine Abou-Diwan can be reached at 760-337-3454.**

Carson Kalin inspects one of his onion fields using an iPad on Wednesday near Westmorland.

SERGIO BASTIDAS PHOTO

ELECTION IS JUNE 3

Get out and vote Tuesday

BY LINSEY DALE
Special to this Newspaper



Dale

If your mailbox is anything like mine, it's stuffed full with campaign advertisements on a daily basis. On every corner, political signs decorate the landscape. Yep, it's

election season.

By next week, we'll know who the winners are, who was defeated and who has to pull up their boot straps to gear up for another cycle in November.

The June 3 Primary is the second California election cycle where the top-two candidates who receive the most votes, regardless of party affiliation, advance to the general election in November.

Proposition 14, a measure passed by voters in 2010, replaced the traditional ballot that listed candidates according to party with a new system that places every candidate on the primary ballot, regardless of party affiliation. As a result, the list of candidates to choose from, especially in the statewide races, can be long.

The open primary system may result in two Democrats or two Republicans facing off in the general election.

Under normal circumstances, I would tell you to embrace the open primary system. Unfortunately, in matters of our region's Congressional, state Senator and Assembly, there are only two candidates to choose from in each race to begin with.

Needless to say, aside from the local races, this election cycle has been a bit boring.

However, regardless of your political views or party affiliation, the right to vote is one of the most fundamental freedoms we have. Men and women have died defending our freedom and the right to vote. For this reason, no matter if you're bored or not with the races, voting is the most important duty you have as an American.

If you don't vote, you can't complain about the job politicians are doing later. I'll see you at the polls next Tuesday.

Linsey Dale is executive director of the Imperial County Farm Bureau. She can be reached at linsey@icfb.net

IN OUR FIELD

The dirt on Imperial Valley's soil

BY SAM WANG
Special to his Newspaper



Wang

In agriculture fields, soil is the upper layer on earth in which crops grow. We know that soils differ from location to location. The types of soils in each location are determined by many fac-

tors, such as soil parent materials, biotic and abiotic environment, and the amount of time it's been there.

In the Imperial Valley,

soils are alluvial deposits from the Colorado River flood plain. The Colorado River not only brings life-supporting water to the Valley, its overflow in the past also brought us fertile soil to farm.

Soil has three major components: sand, silt, and clay. Sand is the soil particle between 0.05 to 2 millimeters in diameter. Particles that are larger than 2 mm are called gravel and stones. Silt is the middle soil particle with 0.002 to .05 mm in diameter. The particles that are smaller than 0.002 mm are called clay. The relative combination of these three components determines soil texture.

Why is it so important to know the soil texture? There is simple physics behind this. We all know that there is more empty space among the larger sand particles, allowing water to drain right through. Just think how fast water goes through the sand in beaches, which are extreme samples of sandy soils.

On the other hand, clay's small particles have a very high water and nutrient holding capacity. Clay particles also carry

negative charges, which makes them perfect to hold soil nutrients with positive charges. We call these positive charged soil nutrients, cations. They include calcium, magnesium, potassium, sodium, ammonium, etc. However, when the percentage of clay is very high in the soil, it takes a long time for water to infiltrate into deeper soil profiles, creating irrigation and tillage issues.

It is obvious that the right mixture of soil particles forms a soil texture that allows water to infiltrate into deeper soil but can hold water and nutrients in the soil at the same time. Therefore, soil texture is important to water-holding capacity, water movement, the amount and movement of soil air, irrigation, tillage, and other field operations.

In addition to silt, clay and sand, soil also includes other important life-supporting materials such as minerals, organic matter and living organisms. These components are important to how soil particles aggregate and forms soil structure. Gas and water can fill the pores of soils, providing

other essential components to support plants and other lives in the soil.

It is important to remember that soils are active and dynamic, natural systems not a dead medium to grow plants. For example, an acre of soil typically contains between 10 and 100 million billion bacteria! These micro-organisms have an important role in breaking down dead plant materials and recycling nutrients for the next crop. Without them, the earth's surface would be covered by dead plants and nutrients in these plants would not be available for the next crop.

Without proper management, soil could deteriorate to the extent that it is no longer farmable, which is happening in many locations across the world. To conserve soil and to maintain the ability of the next generation to grow their food is one of the greatest challenges we are facing in this century.

Guangyao "Sam" Wang is a vegetable crop specialist and center director at University of California's Desert Research and Extension Center near Holtville.



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