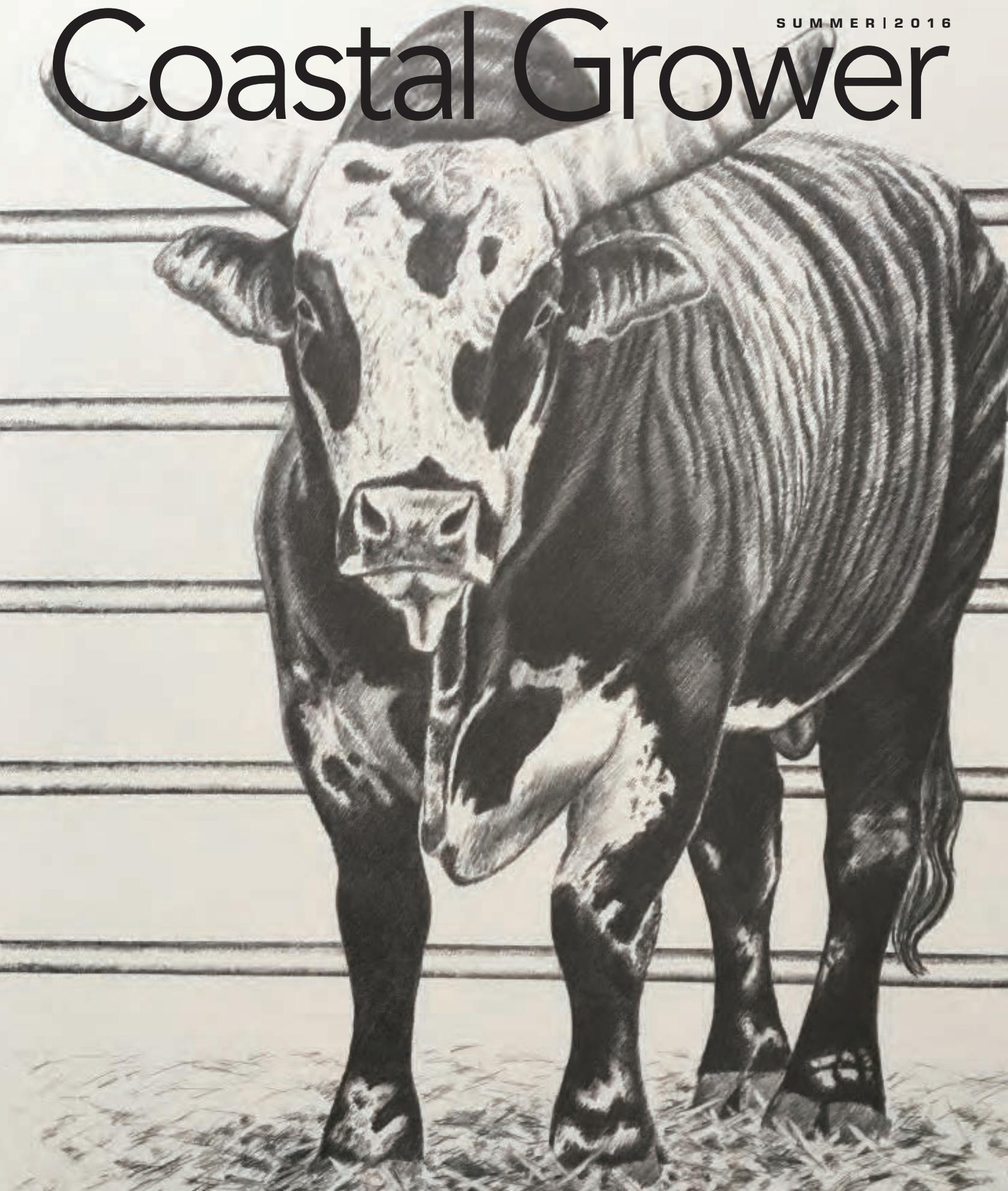


Coastal Grower

SUMMER | 2016





Proven Technology Needed More Than Ever in Agriculture

BY BRIAN MILNE

Salinas will again be the center of the ag technology world this summer, hosting the Forbes AgTech Summit in mid-July.

Having attended dozens of ag tech events over the past year, the most productive events – in my experience – have been those that bring technologists, investors and politicians from

The fact of the matter is that many consumers haven't stepped foot on a farm and don't fully grasp the real-life challenges facing today's growers.

metropolitan areas to rural regions like Salinas – where a majority of our lettuce is grown.

Hosting ag tech events in Las Vegas, Phoenix, or San Francisco, can make for a good time, but there's something to be said for putting your boots on and getting to work on the farm.

The fact of the matter is that many consumers haven't stepped foot on a farm and don't fully grasp the real-life challenges facing

today's growers: dwindling water and energy resources, rising operation costs, the ever-growing list of restrictions and food safety and labor regulations.

Consumers aren't the only ones who could benefit from some time on the farm. Our friends from Silicon Valley and Sacramento can always use some extra facetime with our farmers (and we're not talking Facetime from iPads in high-rise city buildings).

At a recent ag tech conference in San Francisco, I couldn't help but laugh when one of the presenters, a founder of an ag tech startup, admitted to investors on stage that his biggest takeaway from the pitch session was that, "I need to get out and visit a farm."

Unfortunately, that lack of first-hand agricultural experience isn't uncommon in the technology sector. Every day, a new startup pops up, founded by a group of developers in a San Francisco warehouse or a Stanford dorm room.

While many of these technologies are brilliant, and will blow your mind when you finally see them demonstrated in a conference

setting, many have struggled to take hold since the last summit, and many more will struggle to gain traction this coming year.

Over past couple of years, ag technology has evolved at a rapid pace in incubators and startup labs, but adoption in the field hasn't taken off as some startups and investors had hoped.

Why?

In California, mired in the worst drought of our lifetime, now is not the time to be experimenting or turning over large-scale farming operations to fledgling technologies – particularly on the coast, where we get most of our water from reservoirs rather than snowpack.

Growers have enough challenges as it is in this business, and they're hesitant to overhaul agricultural practices unless they are presented with proven technologies that create efficiencies and cut back costs – water, energy, fertilizer and chemical applications – and keep their crops producing at an optimal level.

Established technologies that have been adopted on a larger scale, because of immediate needs on the farm, include:

- Real-time soil tension and weather data monitoring, to anticipate crop stress and water needs in-season
- Automated irrigation systems, to deliver water when and where a crop needs it
- Variable rate irrigation and pumps, customizing water application based on soil data and other factors
- GPS-guided tractors and improvements in onboard technology, for laser leveling, improved chemical application efficiency, and overall uniformity of soil conditions and crops

Drones and robotics are all getting off the ground, but have seen a slower adoption curve because the data is often reactionary and slow to come in (weekly or monthly snapshots).

For many growers, ag technology needs to deliver today – in real time.

In California, mired in the worst drought of our lifetime, now is not the time to be experimenting or turning over large-scale farming operations to fledgling technologies.

Take drip irrigation technology, for example. According to the Monterey County Farm Bureau, drip irrigated farmland in the county expanded from 26,080 to 113,617 acres from 1993 to 2013. At the same time, the MCFB notes groundwater extraction from the Salinas River Groundwater Basin was reduced from 563,438 acre feet in 1996 to 495,968 acre feet in 2012. That's a 12 percent reduction of groundwater extraction, a step in the right direction considering the water issues we're confronted with today.

For emerging technologies to succeed, technology needs to solve a pressing need now (like the efficient distribution of water). Same goes with technology in any industry.

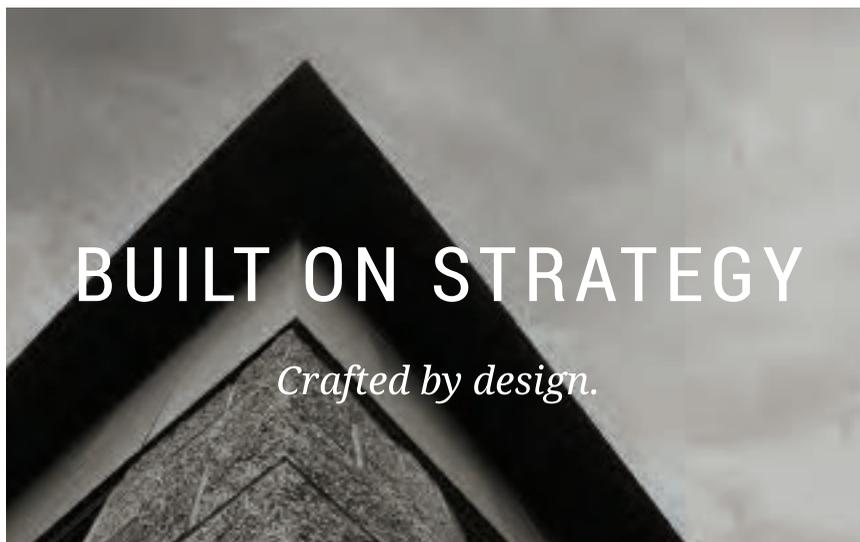
For example:

- Equipment technology needs to bring about efficiencies.
- Software technology needs to make daily decisions easier.
- Sensor technology needs to help anticipate, rather than just react, when damage has been done to field conditions, crop stress points and critical weather events.

With the heat of summer upon us, the pressures will continue to mount on agriculture. Rather than point a finger, it's time to get out on the farm and help provide proven solutions to agriculture's challenges.

But to do that, we're going to have to get our boots dirty.

Learn more about precision irrigation management at Hortau.com. **ce**



We are vested in the future of our clients and we will continue to provide designs that are inspired, intelligent and purposeful.



831.424.4620 BELLIA.COM
235 MONTEREY STREET, SUITE B, SALINAS, CA 93901