

TORO**Count on it.**

Grower Solutions

Drip Irrigation Helps Vegetable Growers Overcome Challenges

Mike and Brian Naumann, Naumann Ranch, Oxnard, CA

Benefits of drip on celery:

- Increased crop yields
- Increased crop uniformity
- Increased water application uniformity
- Reduced water use
- Reduced labor costs
- Reduced runoff and wind drift
- Elimination of sprinkler costs
- Ability to irrigate immediately after transplanting
- Reduced risk of food safety issues from puddles or runoff that harbor E.Coli



Mike Naumann
Naumann Ranch
Oxnard, CA

Mike and Brian Naumann are young farmers with a daunting legacy to fulfill: the family has been growing vegetables in Ventura County since 1898. But the Naumann brothers are not ones to buckle under pressure, and have adopted a can-do attitude to successfully farm 800 acres of mixed vegetables in a volatile, ever changing market. The secret to their success? “We innovate where we can, and try to keep things simple,” says Mike Naumann as he inspects a newly planted celery field. “We’re also lucky to have role models who are industry leaders and always a step ahead.”

"We haven't used flood or sprinklers for years, and given the current pressures regarding food safety, we don't feel we could even farm if it weren't for drip."

Food safety is one of the more difficult challenges vegetable growers face. The Naumanns believe their drip irrigation and harvest practices help safeguard them from the potential disasters that other growers have experienced in recent months and years. “We haven’t used flood or sprinklers for years, and given the current pressures regarding food safety, we don’t feel we could even farm if it weren’t for drip.”

The Naumanns use premium Aqua-Traxx drip tape from Toro Micro-Irrigation due to its durability and uniformity. “Even though we use a 5 mil wall thickness, it just doesn’t break when we install it.” In addition, the Naumanns find that the precision molded emitter resists clogging while delivering great



uniformity at the same time. This results in even water distribution throughout the field and avoids puddles or runoff that harbor E-Coli.

System maintenance is routine. During the irrigation season, the lines are treated with chlorine to kill organic growth and keep everything running smoothly. Recently, the Naumanns figured out a way to reduce chlorine expenses by formulating their own calcium hypochlorite solution. “We are always on the lookout for things we can do ourselves to save money.”



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The Naumanns have further innovated by developing a simple valve and layflat system that allows immediate irrigation of new transplants. "After each pass of the transplant machine, we open up additional drip lines from the layflat by changing positions of an improvised marine valve - this way, newly transplanted rows receive water immediately after planting. This is in contrast to waiting for an entire block to be completed, and the result is reduced mortality and stronger plant growth. It also eliminates the expense of bringing in traditional sprinklers to "set" transplants, and the unwanted side effect of runoff." Rollers help to properly secure the transplants in the soil such that the entire bed is quickly "blackened" with moisture soon after the drip lines are pressurized.



"If we were using sprinklers, the plants would have to wait until the block is completely planted, and would likely stress before receiving water." The logistics of above ground pipelines would be difficult to work around as well, and windy conditions often ruin sprinkler uniformity and drift water into unwanted fields or roadways. "In addition, we save on irrigation labor which reduces our costs."

The Naumanns believe drip has improved both yields and quality while at the same time has reduced water use. "We're using half as much water with drip as we did with other irrigation methods we used in the past, and experience increased yields and uniformity at the same time. Drip creates a uniform crop, whether it's celery or beans, and that helps a lot when it comes time to harvest." Irrigation is scheduled by watching the crop and sampling the soil by hand. The Naumanns have tried using ET data in the past, but have found it is highly variable, and would rather depend on their eyes and hands. "It sounds simple, but it has worked for us." Judging by their success, the Naumann family legacy is safe well into the 21st century.



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The Toro Company
Micro-Irrigation Business
1588 N. Marshall Avenue, El Cajon, CA 92020-1523, USA
Tel: +1 (800) 333-8125 or +1 (619) 562-2950
Fax: +1 (800) 892-1822 or +1 (619) 258-9973

www.toromicroirrigation.com

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