

Irrigation Alone Isn't Enough.

When you irrigate, do you know where your water really goes?

Many factors can affect the true efficiency of your irrigation system, including head size, head spacing and even wind. But perhaps the most overlooked factor is how water moves in the soil.

Water is the driving force behind maintaining metabolic functions and plant growth, and it's important to get

it into the soil uniformly for healthy, consistent turf performance. But water repellency, even at low levels, can prevent water from penetrating properly.

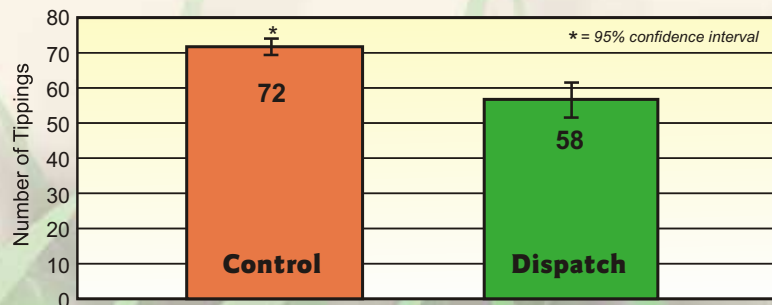
Water repellency can occur anywhere in your soils, but is most prevalent within the top inch or so. Decomposition of the thatch/mat layer, temperature fluctuations and wet/dry cycles all contribute to the creation of a difficult-to-penetrate layer across the entire turf area.

When penetration is disrupted, water has a greater tendency to evaporate instead of entering the soil. The problem can be further compounded by sloping areas such as mounds and hillsides, where water is more likely to run off.

Without sufficient moisture these higher areas will dry out faster and need additional irrigation, while the runoff collects in lower areas, creating wet spots that contribute to poor

Water Doesn't Always Go Where It Should Dispatch Reduces Runoff (Ohio State University, Wooster, 2004)

Dispatch gets water through the thatch/mat layer and into the soil, reducing the amount lost to runoff on sloped surfaces. In a replicated field study conducted at Ohio State University in 2004, a creeping bentgrass turf area was constructed at a 4% slope and maintained at average fairway height. Runoff was collected and measured at the downslope end of each plot. Dispatch reduced the amount of water lost to runoff by 19.2% when compared to the untreated control. By reducing the amount of water lost to runoff, you not only save water but also prevent other costly water soluble chemicals from running off as well.



Dispatch reduces water lost to runoff by nearly 20%.

Getting uniform turf coursewide just got easier.

playing conditions, promote soil compaction, and can encourage disease.

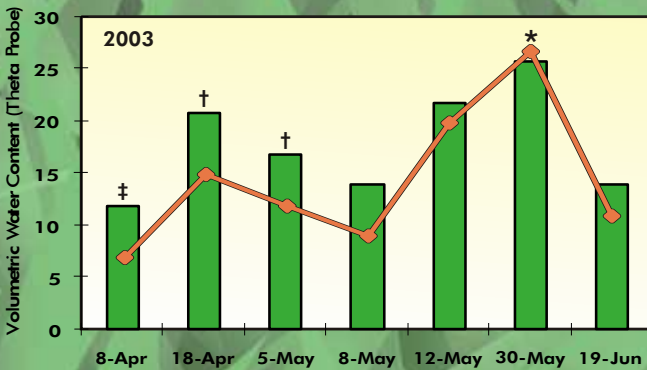
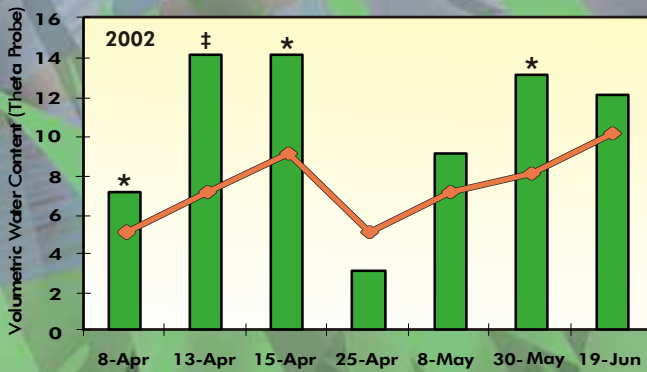
Dispatch bridges the gap between getting water to the soil and getting the water in the soil. It combats water repellency in the thatch/mat layer and the soil just below it, ensuring that applied water or rainfall penetrates quickly where it lands.

Dispatch makes sure water goes where you want it, giving you more consistent playing conditions and visual appearance from tee to green.

Where does your water really go?

Get More Water Where You Want It

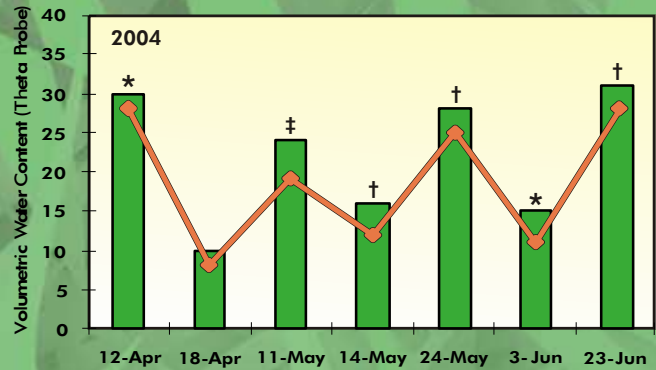
Dispatch Increases Volumetric Water Content (University of Florida, Ft. Lauderdale, 2002 - 2004)



Dispatch gets more water where you want it – through the thatch and into the rootzone. It helps move water into the soil quickly, leaving less on the surface that can be lost to evaporation or run-off. Studies conducted over a 3-year period show that Dispatch makes a significant improvement in rootzone volumetric water content, providing your turf with more water when it's needed most. This more efficient use of water can also help you reduce overall water usage and helps to conserve natural resources.

* = P>0.10
 † = P>0.05
 ‡ = P>0.01

Dispatch (Green Bar)
 Control (Orange Line)

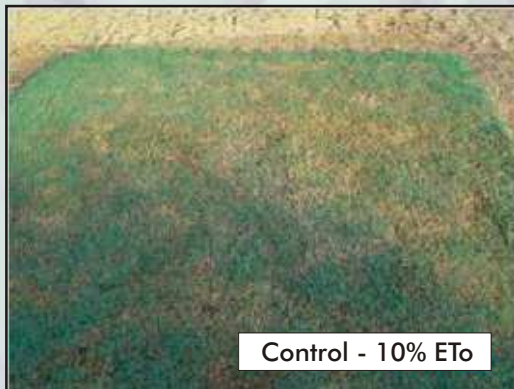
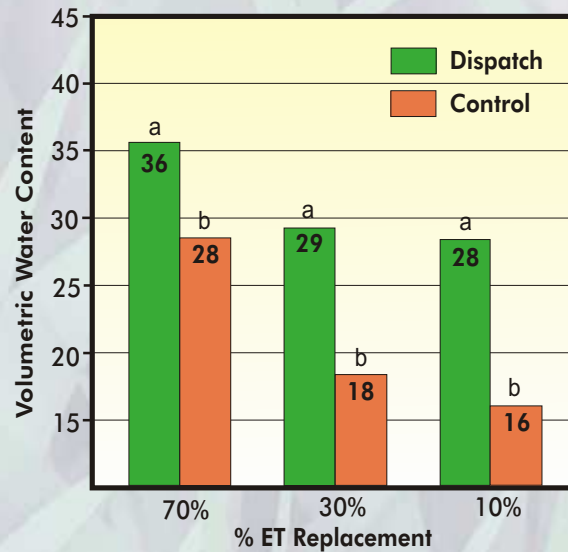


Make A Little Water Go A Long Way

Dispatch Maintains Turf at Reduced ET Replacement (CalPoly University, Pomona, 2003)

A replicated study conducted at the Center for Turf Irrigation and Landscape Technology (C-TILT) at California State Polytechnic University shows that Dispatch can maintain higher volumetric water content (VWC) in the soil even at significantly reduced ET replacement rates. Bermudagrass plots were constructed on a clay loam soil and maintained under fairway management conditions. Each plot was irrigated separately, and water meters were installed in-line. VWC was measured 10 inches below the soil surface throughout the study. Plots were irrigated at 100% ET for the first month, and reduced to 70%, 30% and 10% ET respectively each month following.

At all ET replacement levels tested during the study, Dispatch maintained higher soil moisture content than the untreated control. The effects of Dispatch were even more significant under higher moisture stress conditions, with turf being maintained with *only 10%* of ET demand.



Photos courtesy Dr. S. Mitra

Maximizing Water's Leading Role

Whether your course is under constant water use restrictions or you have plenty of water available, the real challenge is getting water to go where you need it. The amount of water you apply doesn't matter if your turf can't access it.

Dispatch increases the penetration and infiltration of irrigation or rainfall, making it more readily available for plant uptake. Because Dispatch delivers water more efficiently into the soil, photosynthesis and other turf metabolic

functions can be maintained with less water. The result is increased turf performance even under heat and moisture stress, and more dependable plant growth and playability course-wide.

It's All About Quality, Not Quantity

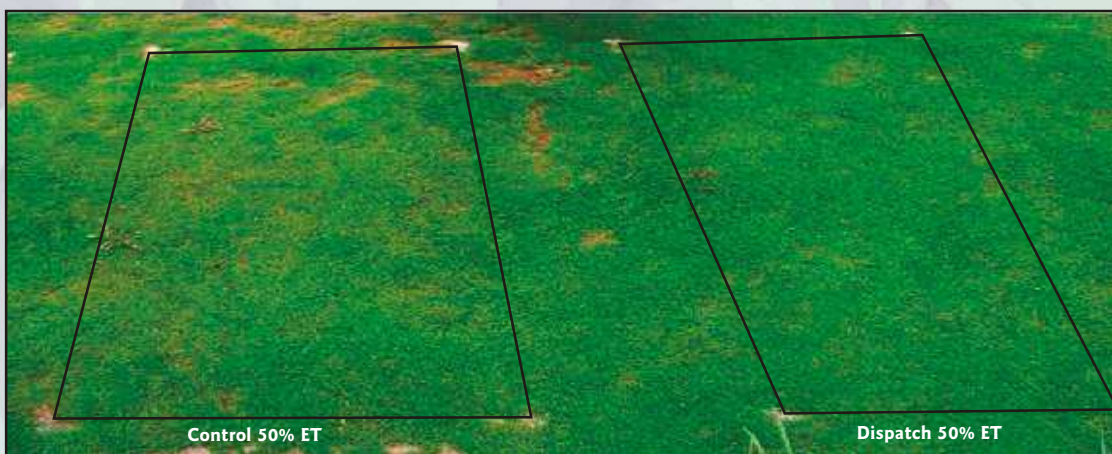
Reduce ET Replacement Without Sacrificing Quality (New Jersey, 2004)

Another study conducted in New Jersey in September 2004 explored the impact of Dispatch on turf at reduced ET levels. Bentgrass growing in a loam soil was evaluated both with and without initial treatments of Dispatch under a watering regime of 50% ET replacement.

The turf treated with Dispatch retained higher quality ratings and exhibited much less LDS than the untreated control.

| Treatment | Quality | LDS |
|-----------------|---------|---------|
| Control 50% ET | 5 b | 23.75 a |
| Dispatch 50% ET | 7.25 a | 3.75 b |

p=0.05 *p=0.05*



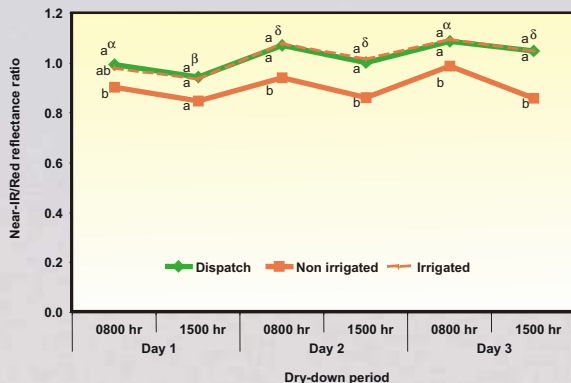
**Better
Photosynthesis =
Better Turf Growth**

**Dispatch Helps Maintain
Consistent Photosynthesis in Turf
(University of Florida, Ft. Lauderdale, 2004)**

Dispatch was tested at the University of Florida on a sand based Tifdwarf Bermuda-grass in 2004 to assess the impact of Dispatch on photosynthesis. The test was conducted between April and May during a period of high ET demand and low precipitation.

Three sets of replicated turf plots were exposed to three 3-day dry down periods. All plots were irrigated before initiation of each dry down period; "Dispatch" plots were treated via injection at this time. "Irrigated" plots continued to receive irrigation to replace daily potential ET; "Dispatch" and "Non-irrigated" plots received no additional irrigation during the dry down periods. Photosynthesis was monitored on all plots using an experimental active infrared/red reflective sensor.

When the non-irrigated plots were compared, those treated with Dispatch performed much better than the control. In fact, plots treated with Dispatch showed the same level of turf performance as the plots irrigated to full daily ET replacement, but achieved that level of performance using significantly less water – up to 70% less.



Dispatch-treated plots showed less influence from water stress over the dry-down period, similar to that of the daily irrigated plots.



Control

The infrared/red reflectance sensor measures differences in turf stress by measuring the amount of infrared and red light reflected from the turf.

The control (above) and treated with Dispatch (below), both unirrigated. Note the dramatic difference in turf color and quality, and uniformity of stand coverage.



Dispatch

Photos courtesy Dr. J. Cisar

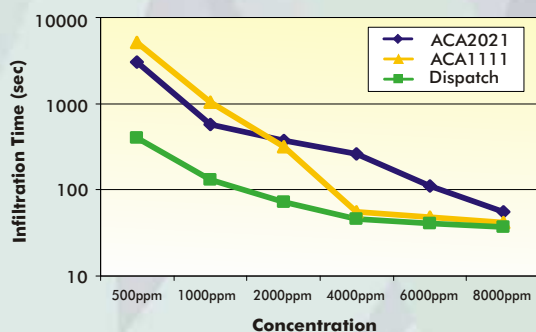
Dispatch gets water where you want it. It moves water into the soil and improves its distribution in the rootzone, achieving the moisture levels needed to maintain consistent photosynthesis, transpiration, and other turf functions. Even during periods of heat and water stress, Dispatch provides predictable improvement of soil rootzone moisture and maintains stable turf growth and playability coursewide without breaking your budget.

Synergy: More Than Just The Sum of Its Parts

Dispatch is specifically engineered to enhance water penetration "wall to wall." This patented, synergistic blend of block copolymer and alkyl polyglycoside surfactants gives you better water penetration, improving irrigation efficiency course-

Dispatch: Synergistically Formulated to Get the Job Done

wide without great expense or major capital inputs. Traditional spray applications on large turf areas can be costly and time consuming, so we designed Dispatch with injection in mind. It lets you harness the power of your irrigation system to treat your entire course quickly and efficiently from one centralized location.



When used alone, the individual components of Dispatch show moderate performance levels. But when these two chemistries are combined together, the synergistic performance level of the blended compound shows dramatic improvement over that of the individual components.

Dispatch: it's more than just the sum of its parts.

See What Dispatch Can Do For You!

Want more consistently performing turf wall to wall? Let your irrigation system do the work for you by injecting Dispatch. Just 12 ounces per acre weekly (.9L per hectare) can increase overall turf quality while decreasing the amount of money and effort needed to get it.

Dispatch minimizes water lost to evaporation and runoff, so that you can maintain turf color and quality while using significantly less water. Its unique mode of action also promotes more even penetration and distribution of applied nutrients and soil targeted turf chemicals for more effective use of these inputs.

- Reduces water lost to runoff and evaporation
- Improves irrigation efficiency 30-50%
- Increases soil volumetric water content by up to 40%
- Reduces water usage by 25-50% without sacrificing turf quality
- Helps maintain turf's physiological efficiency for better turf performance and playability

