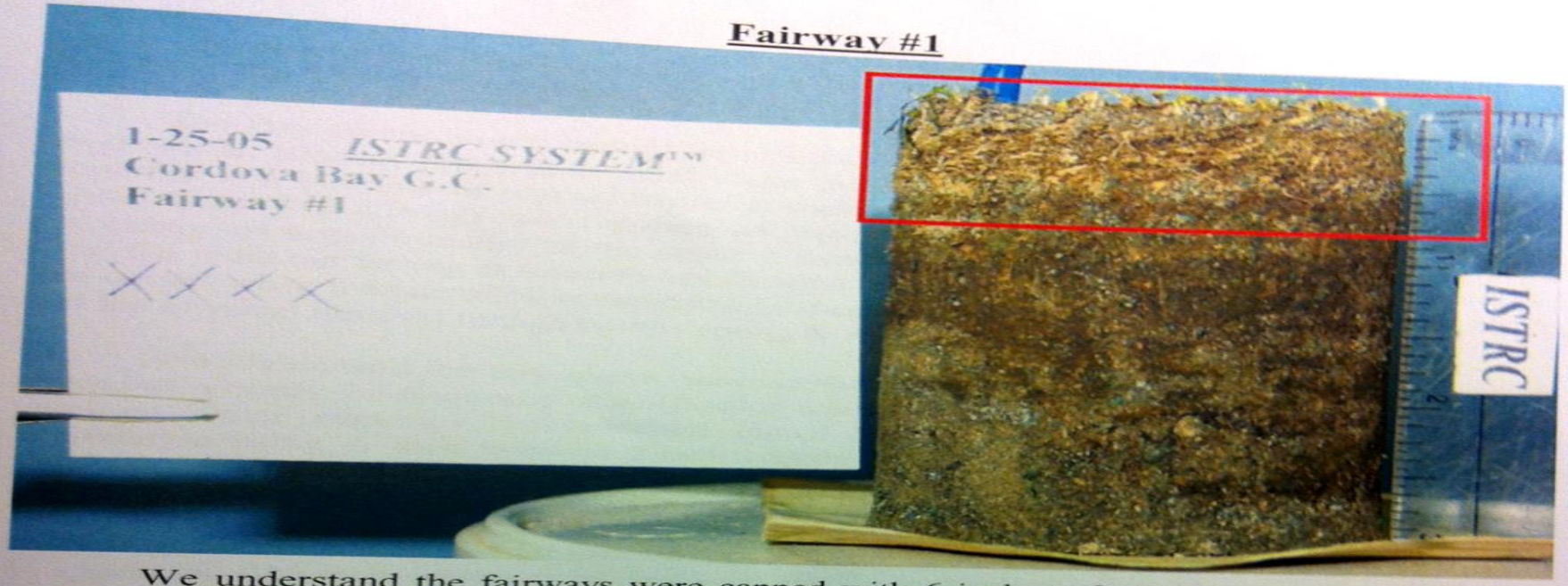

Cordova Bay Golf Course
Understanding Ecosystems

Fairway #1



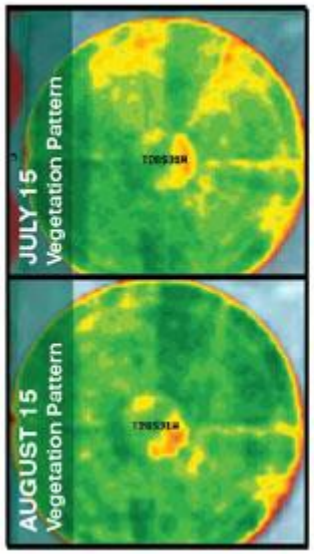
We understand the fairways were capped with 6 inches of sand. Based on the current Textural & Particle Size Analysis the sand at 3 to 4 inches, which is typically indicative of the original root zone material, is extremely coarse. The coarse sand should support accelerated drainage, however given the excessive organic matter & thatch in the upper 3 inches the fairways are essentially sealed off. As with the greens, our general recommendation would be to implement an aggressive cultural program with an emphasis on displacing the existing material with a good quality topdressing sand.

Table 3.

	Fairway #1	ISTRC Target Ranges Poorly Drained Fairways
Infiltration Rate [In/hr]	0.00 [sealed off – reflects a dense thatch layer and a high percentage of organic matter within the upper 3 inches]	At least 2
Subsurface Air Capacity [Non-Capillary Porosity]	8.86% [low]	At least 12%
Water Porosity [Capillary]	52.14% [extremely high – demonstrates the need for aggressive aerification, verti-cutting, and topdressing in the fairways]	Less than 30%
Bulk Density [g/cc]	0.99 [extremely low – the low bulk density coupled with a total porosity in excess of 60% is a classic indicator of a thatchy root zone that is soft with excess water retention]	1.35 to 1.45
Water Holding	52.55% [extremely high]	Less than 25%
Organic Content –¼ to 1"	5.11% [extremely high]	1.5% to 3.0%
Organic Content – 1 to 2"	3.39% [high]	1.0% to 2.0%
Organic Content – 2 to 3"	2.99% [high]	0.5% to 2.0%
Organic Content – 3 to 4"	0.77% [ok]	0.5% to 2.0%
Root Mass	½ in.	at least ½ in.
Feeder Roots	3 in. sparse	at least 3.5 in. –med. density

Satellite Imagery

DATA set 1



JULY 15 - AUG 15

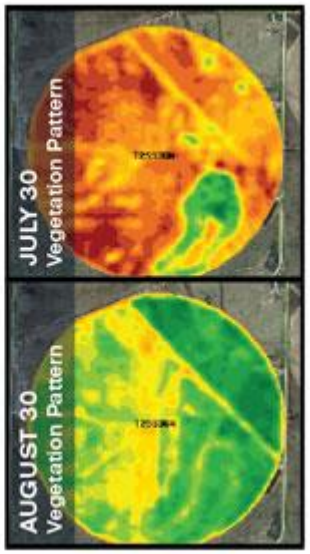
480 acres of corn in Western Kansas during drought. Fuller water penetration indicated by dark green hue. Note untreated inner circle area shows less overall vegetation.

(See aerial image next pg)

RESULT

10-30% more bushels

DATA set 2



JULY 30 - AUG 30

Cornfield in Lakin, Kansas. Poor water absorption indicated by red and orange hues, with improved soil penetration in 30 days as shown by yellows and greens.

RESULT

10-30% more bushels

NEW!

TURFBOLT™

1" Diameter TurfBolt™ System

MAGNATION NEXT GENERATION™

3/4" Diameter System

1" Diameter System

BIG BLUE™ WATER SYSTEMS

14" Diameter System

6" Diameter System

4" Diameter System