



Tri-Block Copolymer: 15.25%  
 Glucoethers: 4.75%  
 Other ingredients: 80%  
 Total: 100%

# INTEGRATE™ 20

## SOIL SURFACTANT

Unique formulation for enhanced soil absorption and long lasting water retention.

## Play To Win

**Soil-Water Optimization.** Creating a healthy balance between water, soil and turf grass with a high-performing soil surfactant is the industry's critical solution for water-repellent soils.

**Integrate™ 20** is a premium performance non-ionic soil surfactant designed to prevent and control hydrophobic conditions while maintaining optimum soil-water management.

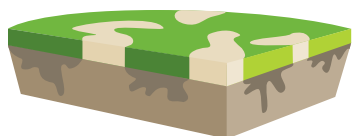
As a preventative tool, **Integrate 20** corrects water-repellent soils - allowing efficient water movement, hydration and drainage below the soil surface and into plant root zones.

Proven to reduce surface tension issues, **Integrate 20** aids in less water use, improved nutrient uptake, reduced insect and disease issues, greater heat tolerance and rapid plant regeneration.

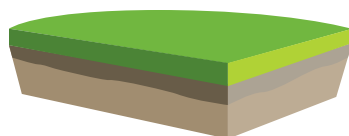
## Improving Your Distance

**Water Flow Efficiency.** With reduced surface tension and more uniform water movement into the ecological soil layers and root zone, **Integrate 20** creates a more a balanced soil profile for:

1. Enhanced metabolic plant development
2. Improved aerobic micro-organism activity
3. Increased levels of oxygen exchanged within soil profile layers



Water-repellent soils cause water to relocate to undesirable areas. Non-permeable pockets develop below the soil surface resulting in localized dry spots. This contributes to turf stress, non-uniform populations and issues with aesthetics and playability.



Integrate 20 amends water-repellent soils by promoting vertical and horizontal movement. Localized dry spots are eliminated as water penetrates below the surface where it is absorbed and retained by the turf. The result is healthy and highly playable turf.



## GROW IT LIKE A PRO

### Features & Benefits

- Enhances water management & efficiency
- Corrects hydrophobic soil conditions
- Improves soil hydration
- Reduces labor and maintenance costs
- Improves nutrient & pesticide effectiveness

### Liquid Formulation

- Easy to apply
- Safe to use
- No mixing or agitation required
- Non-phytotoxic

### Use Rate

- Initial application: 16-24 ounces per acre per week. Inject using 100-200 gallons of water or blend into the first load of liquid fertilizer
- Subsequent applications: 8-12 ounces per acre per week, injected or blended with liquid fertilizer
- Additional applications may be required under extremely dry conditions

### Application Methods

- Center pivot irrigation
- Overhead irrigation
- Broadcast spray application
- Fertigation system
- Drip, drench, hand syringe

### Tank Mix Capability

- Compatible with most liquid fertilizers
- Compatibility jar test recommended

### Packaging

- 2.5 gallon jugs per case (2)
- 30 gallon
- 270 gallon totes

## Performance-Based Technology

**Integrate 20** is a unique blend of tri-block copolymers and glucoethers. Non-polar sites within the molecular architecture of these chemical properties are relied upon to bond to water-repellent areas on soil particles within the soil profile. Once attached to the non-polar surfaces, negative sites on the surfactants' molecular structure serve as locations for water molecule adhesion. Upon attachment of the water molecule to the surfactants in **Integrate 20**, a systematic process will then occur which allows for vertical and lateral water movement into the soil profile.

## Field Trial Research

**Integrate 20** has been successfully tested in field trials by university researchers and independent consultants. Results consistently demonstrate advantages of using **Integrate 20** specific to:

**Increases in soil moisture • Improved efficiency of irrigation water use • Fast-acting lateral and vertical movement  
Improved nutrient uptake of plants • Improved plant uniformity**

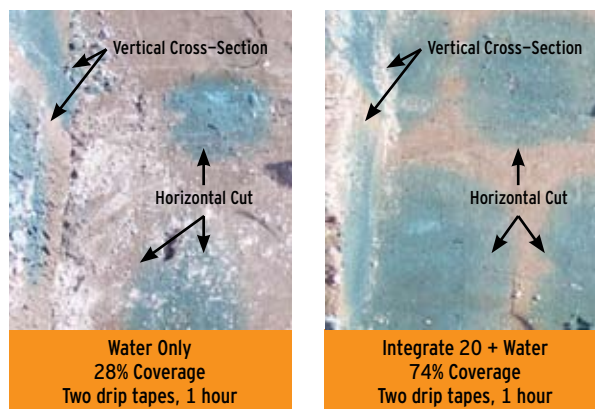
### Integrate 20 Water Movement Research Study

*Dye Test Evaluation of Irrigation Efficiency. (Plasticulture)  
Dr. Bielinski M. Santos, Gulf Coast Research and Education Center, University of Florida*

Integrate 20 was tested at two quarts per acre under a double-drip irrigation system. In side-by-side comparison with a water-only control strip, Integrate 20 showed a 164 percent improvement in horizontal moisture coverage. Lateral movement increased from 28 percent to 74 percent over the course of one hour.

1. Study completed on virgin crop beds.
2. Comparison of Integrate 20 + water versus water only.
3. Results measured after one hour.

Photos: Dr. Santos, University of Florida Horticultural Sciences, Balm, Fla



### Integrate 20 Lateral Movement Research Study

*Nutsedge Control with Metam Potassium on Fumigated Beds. (Vegetable Production)  
Dr. Bielinski M. Santos, Gulf Coast Research and Education Center, University of Florida*

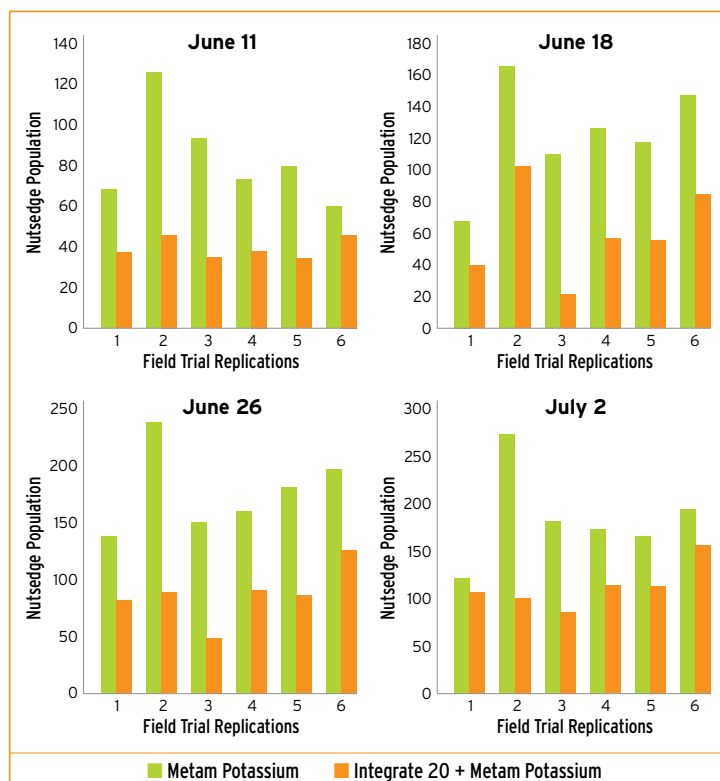
Integrate 20 was tested on fumigated crop beds used in combination with metam potassium to measure the impact of water movement specific to herbicide efficacy. Single drip tapes were positioned at the far right side of the beds to gauge lateral movement and increased moisture levels. Nutsedge control was used as the indicator to determine how far the fumigant was able to move laterally.

In four evaluations, Integrate 20 + metam potassium (orange bars) increased moisture levels in the bed for more consistent lateral movement of irrigation water for improved weed control versus metam potassium alone (green bars). With increased moisture in the beds, the metam potassium (with Integrate 20) moved laterally all the way to the far shoulders of the beds.

In comparison to metam potassium alone, gravity driven water flow hindered lateral moisture movement, reducing the effectiveness of the fumigant. Additional trials are ongoing to refine protocols that ensure maximum efficacy of the fumigant in combination with Integrate 20.

1. Values recorded four times in seven day increments (June 11, 18, 26, July 2.). Nutsedge populations were documented by number of plants per 68 foot beds (30-foot long plots).
2. No actual crop planted in the six replicated trials.

Charts: Dr. Santos, University of Florida Horticultural Sciences, Balm, Fla



## Leading the Field

**Engage Agro USA: A Performance Partner.** Engage Agro USA specializes in crop protection and nutritional products for agricultural, turf, industrial, and niche crop markets in the United States. We select innovative products to include in our portfolio for both our agriculture and commercial customers. **Trust Engage Agro USA to be your preferred performance partner.**