

# APSA 80®

## Non-Ionic Surfactant & All-Purpose Adjuvant

APSA-80 Adjuvant is an agricultural wetting agent. APSA-80 has three main uses: one as an irrigation aid to the soil, second as a soil compaction aid, and third as a spray adjuvant for use with herbicide and pesticide sprays. By lowering the surface tension of water, APSA-80 can increase the rate at which water soaks into soil, reduce water losses due to evaporation and runoff, and increase crop yields

### Benefits

Faster penetration of water into soil that improves infiltration rates up to 34%

Highly Concentrated non-ionic surfactant

Improves chemical effectiveness

Allows contact herbicide solutions to penetrate the waxy coating of weed leaves faster

More effective with coverage, penetration and retention of post-emergent herbicides

Works as a great agitator for clay based chemicals

Reduces surface tension of water

Reduces irrigation expense

Reduces erosion due to water run off and evaporation

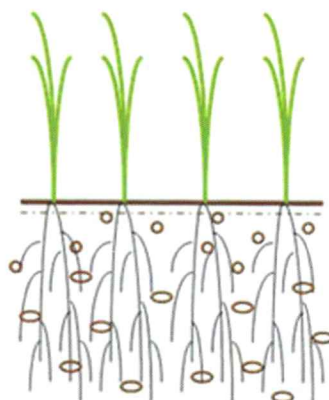
Improves weed and disease control

Helps keep pesticides in solution

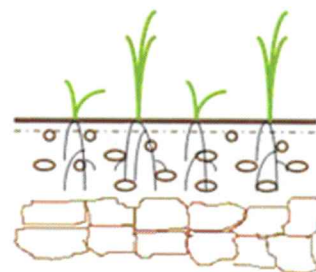
Low cost per acre

Non-corrosive/  
Bio-degradable

As the soil becomes saturated, the water will be able to move easier through the compacted layers, including any tillage pans that have developed. If water can get through these layers, since root systems follow water, it allows the plants to get better access to that important subsoil moisture for better plant production.



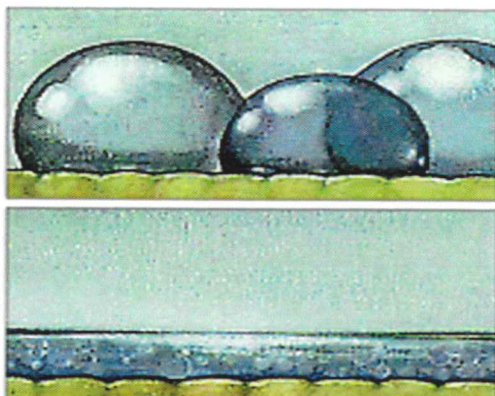
Well-structured soil



Compacted soil

### APSA 80® helps reduce surface tension of water on plants.

These figures show the difference between water droplets on the surface of a leaf, and the difference that APSA 80® makes on surface tension of water. APSA 80® helps to create a more even application of chemicals to all of your plants.



# Dryland Corn

Irrigation Research Foundation 2007  
Growing Season Rainfall = 10.33 Inches



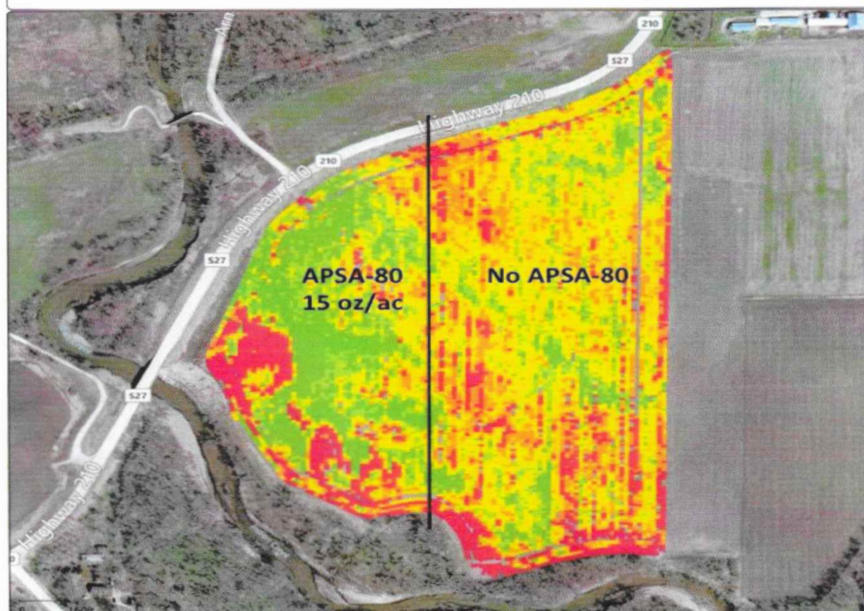
Control  
78.4 bu/Acre

APSA-80 15 oz/Acre  
92.8 bu/Acre

APSA-80 30 oz/Acre  
108.5 bu/Acre



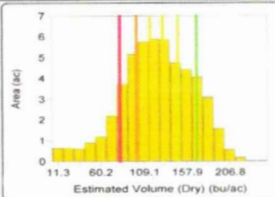
## Grain Harvest 2012 - Home(CORN)



Grower : Plunkett Farms  
Farm : Eatwell  
Field : Home  
Year : 2012  
Operation : Grain Harvest  
Crop / Product : CORN  
Op. Instance : Harvest - 1  
Area : 51.25 ac  
Avg. Yield : 124.19 bu/ac  
Avg. Moisture : 18.46 %

Estimated Volume (Dry)  
(bu/ac)

|        |   |        |            |
|--------|---|--------|------------|
| 169.32 | - | 395.12 | (7.586 ac) |
| 148.68 | - | 169.32 | (7.524 ac) |
| 131.50 | - | 148.68 | (7.352 ac) |
| 116.64 | - | 131.50 | (7.288 ac) |
| 101.03 | - | 116.64 | (7.202 ac) |
| 82.25  | - | 101.03 | (7.140 ac) |
| 5.20   | - | 82.25  | (7.161 ac) |



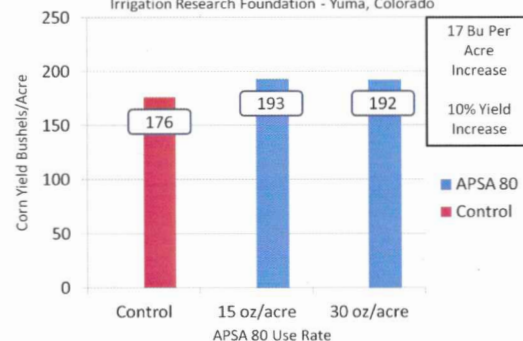
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## Effect of APSA 80 on Corn Yield

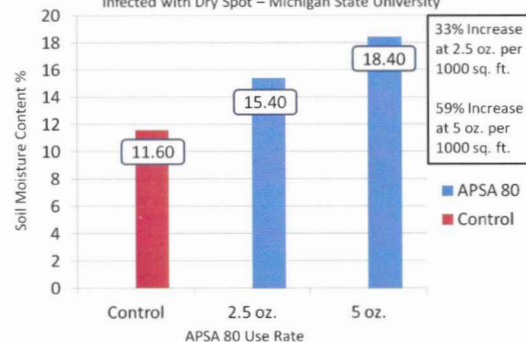
Compacted Soil - Nine Year Average  
Irrigation Research Foundation - Yuma, Colorado



\$93.50 increase per acre based on \$5.50 per bushel Corn

## Effect of APSA 80 on Turf

Sandy Bluegrass Fairway Soil Moisture Content  
Infected with Dry Spot - Michigan State University



33% Increase  
at 2.5 oz. per  
1000 sq. ft.  
59% Increase  
at 5 oz. per  
1000 sq. ft.



## APSA-80® Recommended Application Rates

**Soil Compaction Aid:** 16-32 oz. per acre in 10 gal. of water

**Herbicides:** 2.5-5 oz. per acre in 10 gal. of water

**Insecticides/Fungicides:** 2.5-5 oz. per acre in 100 gal. of water

**Irrigation Aid:** 2.5-5 oz. per acre in 10 gal. of water

**Turf Dry Spot Control:** 2.5-5 oz. per 1000 ft<sup>3</sup> in 3.5 gal. or more of water

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