

# Soysoap Benefited in 2010 When applied in 2009

Photo 1 2009: The figures that our "oats experiment" from last season (two applications of Soysoap on oats underseeded with alfalfa) is the only rationale for the fact that this 2010 spring, the alfalfa came on especially strong right to the line where we sprayed in 2009. I would have suspected just the opposite, as the oats were taken off the entire rest of the field for hay, and we kept the oats until July for harvest where I had sprayed. Between the yellow lines is the sprayed area. Another healthy area that I sprayed is along the south fence; that has good alfalfa too.

## 2009



# 2010

**Photo 2 2010: No Soysoap was added in 2010. This is the patch of alfalfa in 2010. Last year 2009 when John Abel seeded oats and alfalfa, I sprayed the oats as a test with Soysoap. Got a modest 8% increase in the oats. However, the interesting result is this year 2010. The thickest alfalfa in 2010 is along the north side, near University Avenue, where I sprayed SoySoap in 2009. It shows up clearest in the 40-ft. band which I sprayed twice. There's also another good band not pictured of alfalfa along the south fence, which I sprayed with Soysoap. What happened was the chelated fertilizers were released by the Soysoap electroconductivity process. The farmer was able to grow the 2010 Alfalfa with 2009 and before fertilizer!**



Here are some opinions of what might just happening!



1). Dr. 1 Yesterday I went over to see to discuss the apparent "fracturing" of certain micronutrients in soils when successively higher concentrations of the soap are added before a soil test. Bert says that somehow, the product must be releasing metal ions from their attachment sites.

Dr. 2 I showed him the four andrea soil analyses from SGS Europe. He immediately asked, "What's breaking the micros loose? Very, very interesting! Yup, and your calcium is going down. That has to happen if you free up these other elements. You gotta add calcium."

3). Dr. 3 One possible protocol for determining effect of Soysoap 1 on trace elements in water at near-normal field rates.

Hypothesis: SoySoap blended in a water solution with chelated trace elements increases availability of those traces to crops when foliar-applied on crops.

Experiment: Create a stock solution of a widely used trace element mix in ratio with water which would be close to a normal rate per acre when normally applied.

Proposed material: Metalosate Crop-up at the rate of 14 dry grams per acre.

Assuming 10 gal. of water per acre, the stock solution of 1 gallon (3,785 milliliters) would be blended with 40 grams of dry soluble Metalosate Crop-up. Analysis of this material is 1.5% Mg, 0.75 Cu, 0.75 Fe, 7.5% Mn, 3.75% Zn.

Using this base solution as a control, save three separate 1/4 gal. samples of the base solution and add WakeUP 1 in three separate, increasing concentrations

Test solution 1: Add 0.125 ounce (3.7 milliliters) to 1 quart of stock solution to create a 1:256 ratio, which would deliver 5 ounces per acre in field use.

Test solution 2: Add 0.250 ounce (7.4 milliliters) to 1 quart of stock solution to create a 1:128 ratio, which would deliver 10 ounces per acre in field use.

Test solution 3: Add 0.500 ounce (14.8 milliliters) to 1 quart of stock solution to create a 1:64 ratio, which would deliver 20 ounces per acre in field use.

Send 16-ounce samples of each solution to Midwest Labs for mineral analysis of liquid solution. International Ag Labs has a maximum detectable level of 10,000 ppm. Midwest Ag Labs uses an ICP test procedure on liquids which could handle higher levels.

CORRELATION OF TRACE ELEMENT AVAILABILITY WITH RISING LEVELS OF 'SOYSOAP 1' APPLIED TO SOIL SAMPLE																	
	PH	EC	NH4	K	Na	Ca	Mg	Si	NO3	Cl	SO4	HCO3	H2PO4	Fe	Mn	Zn	B
No Soysoap	6.6	0.3	-3.6	31	-6.9	16	7.3	8.4	99	-11	-19	18	13	78	11	13	104
0.05 SoySoap	6.8	0.2	-3.6	20	-6.9	-8	-4.9	8.4	-25	-11	19	24	14	296	27	150	82
0.3 SoySoap	6.7	0.3	-3.6	31	-6.9	8	-4.9	8.4	-25	-11	48	31	16	570	60	353	90
0.5 SoySoap	6.8	0.2	3.6	20	-6.9	-8	-4.9	5.6	-25	-11	-19	37	16	1190	93	510	78

**Experimental procedure:** Three dilutions of SoySoap were used to moisten samples of rich Andean soil. The samples were sent for analysis of major and minor elements. Results are summarized above. The soil extraction solution detected successively higher levels of available Iron, manganese and copper as the percentage of Soysoap in the water rose.

**Fe Increase with Soysoap Addition:** 0.05 = 379%, .3 = 644%, .5 = 1525%

**Mn Increase with Soysoap Addition:** 0.05 = 245%, .3 = 545%, .5 = 845%

**Zn Increase with Soysoap Addition:** 0.05 = 1153%, .3 = 2725%, .5 = 3923%