

# Summary of *HydroFLOW* and Stimulated Water Circle Irrigation Corn Experiment

Report composed by Dr. Stuart O'Byrne on December 31, 2013  
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## History

Previous experiments with corn using drip irrigation and magnetically stimulated water yielded very positive results with increased yields of up to 30% and as much as 50% decreased water and fertilizer. Other observed findings also included larger and healthier plants with a more developed root systems. The current experiment used a new Zimatic 9000 circle with lake water irrigation. All delivery equipment was new; pipes, filters, and pump system with the latest Fieldnet computer control system.

## Testing Procedure

The crop circle was divided into four plots.

1. Control with plain lake water.
2. *HydroFLOW* stimulated lake water.
3. *HydroFLOW* and Magnetically stimulated lake water.
4. Magnetically stimulated lake water.

All four plots were matched; water and fertilizer was equally applied to all test areas. There were no significant soil differences. There were minor elevation differences. All were planted with the same Pioneer 36V51 corn on the same day and at the same density. The corn was a 102 day variety planted in April and harvested during the 3rd week of December with 17.4% moisture content.

## Results

Plot	Color	Average Plant Height	Roots (visual inspection)	Yield
Control	Green	108.5"	Normal+	5.97 tons/acre
HF	Lush green	120.0"	Normal+++	6.35 tons/acre
HF & Mag	Lush green	132.9"	Normal++	6.16 tons/acre
Mag	Lush green	121.4"	Normal+	5.94 tons/acre

## Discussion

1. Both plots with *HydroFLOW* obtained better yield than the control plot, and in addition, the *HydroFLOW* plots had better color and roots.
2. The magnetically stimulated plot had slightly less yield than the control plot but still showed good growth, color and slightly better root system than the control.
3. The corn was given water and fertilizer by a trained farm manager but I feel both were introduced in excess. The optimum amount was probably greater than required which may have had adverse effects.
4. It is interesting to note that a similar nearby field of Pioneer 36V51 corn that was fertilized in the same manner but used siphon tube water delivery, yielded only 5 tons/acre or 20% less than our four experimental plots.

## Future experiments

1. In the past, I conducted drip irrigation experiments which allowed for more continuous water and fertilizer utilization while using lessened amounts of both. Historically, these experiments yielded better results.
2. It is clear that *HydroFLOW* had a positive effect on the corn which merits further testing that may include the combination of drip irrigation and a more sophisticated monitoring and control system.

Pictures



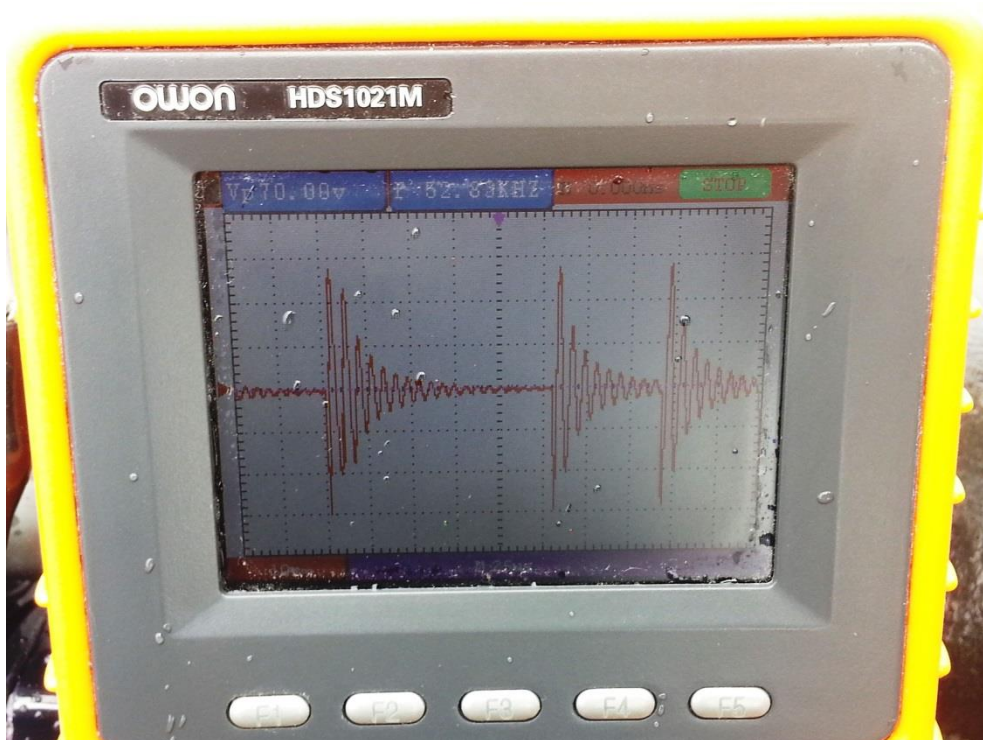
Aerial view of crop circle [picture taken several years ago]



Center pivot [one month after corn was planted]



Installed *HydroFLOW* water conditioner



Oscilloscope reading of Hydropath signal



Control crop irrigated with plain lake water (2 weeks after irrigation ceased)



Crop irrigated with *HydroFLOW* stimulated lake water (2 weeks after irrigation ceased)