# Crop Formation: Lawrenceville, New Jersey 1997

Laboratory Code: KS-04-38

Location: Lawrenceville, New Jersey

Material: Oats, Avena sativa and soil Formed: Around 7-3-97 Sampled: 7-2 &15-97

Sampled By: Mr. Bill Zola, New Jersey, and Ms. Linda Moulton Howe, Pennsylvania

Formation Characteristics: Circles, paths and half circles. (see Fig. 1)

#### Relevant Findings:

- 1) detailed analyses disclosed significant node length changes in the downed plants within the formation. Node expansion levels ranged from +98% to +27%, relative to normal, upright control plants. These expansion levels were well outside the range expected from gravitropic responses<sup>(1)</sup>. Control plants showed very little variation in node lengths (from +5% to -3%).
- 2) a number of standing, normal appearing plant sample groups taken 6 inches to one foot outside the formation also disclosed significant node expansions, the upright sample group with the maximum expansion level (+39%) was found near one of the small half circles.
- 3) the fact that very significant node expansions were observed in both downed and upright plants clearly demonstrates that plasma vortex energies were involved.
- 4) studies of redox responses in germinating seeds disclosed evidence of mitochondrial damage (altered respiration) in seeds taken from several formation sites.
- 5) -18 soil samples no magnetic material found.

### Results and Discussion:

The mean node length within each formation sample set (7 to 12 plants per set) was compared with the mean node length value from four control groups taken 200 ft. (N,E,S & W) from the formation. These values (expressed as percent node length change) are listed in Fig. 1, on a tracing of Mr. Zola's sampling diagram. The (D) indicates downed plants taken 6 in. to one ft. inside the designated formation and (U) indicates upright plants taken 6 in. to one ft. outside the formation. The deviation of the four control groups (taken 200 ft. N,E,S & W of the formation) are listed at the lower right.

Node expansion levels in both the downed and upright plants (16 out of 17 sample sets taken within the formation) clearly demonstrate that energetic plasma vortex energies were involved in this formation. From our 1997 control study<sup>(1)</sup> it is obvious that node expansion differences in the range of 30 to 100% cannot be explained by gravitropic effects. Node expansions in the upright plants at levels greater than around 15% indicate spill-over effects, probably in a very limited region outside the downed formations.

In Fig.2 are three sets of redox respiration data taken during the first six hours of seed germination. The heavy solid line (squares) and the heavy broken line (diamonds) are from control seeds and are typical of responses in normal, respiring oat seeds. The light dashed line (triangles) was obtained from a test on seeds from upright plants taken just outside Circle #1 at the North end of the complex. For the first 2.5 hrs. of imbibition the redox ratio cycles are similar in all three test samples; after this point the ratio becomes much higher in the Samp #1' (upright plant) seed and it does not display the large, normal fluctuations and subsequent return to a low level (below an Rr of 0.2), as observed in the control samples. This indicates an abnormal level of free radical release from the mitochondria, due to injury. Previous studies have shown that this abnormality can be simulated by pre-exposing the plant tissues to microwave energy. These redox tests are very time consuming; therefore, only six formation and two controls were examined. However, high ratios were also observed in a sample taken from site #6 (downed).

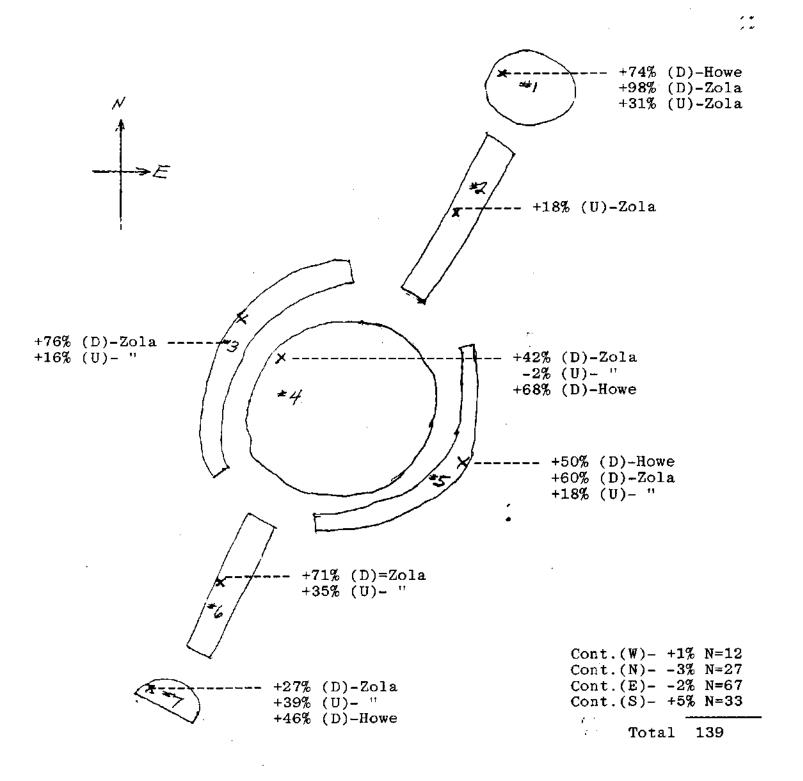
#### References:

- (1) Gravitropic Responses in Simulated Crop Formations, 1997., BLT Report No. 86, 10-14-97
- (2) A Study of Bovine excision Sites From 1993 to 1997, BLT report Red.-06; Issued Oct.8, 1997

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(D) = downed plants

(U) = upright plants

Samp.#1 ■ Cont.-N Cont.-E Evidence of Mitochondrial Damage in Oat Seeds Crop Formation; New Jersey 1997 (KS-04-38) Redox Ratio (Rr)

Initial Seed Imbibition (hrs.)

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## LAWRENCE, NEW JERSEY - JULY, 1997

Top: 34' diameter center circle in 15-acre oat field, showing clockwise, spiraling lay of crop. Bottom: one of the 39' x 4' "boxes" or pathways going away from center circle; note fluidity of crop lay here. Compass anomalies were noted by fieldworker Bill Zola. Photos: B. Zola, Mark Passio.

