Crop Formation: Arlington, Iowa, 1995

Laboratory Code: KS-03-33; (supplemental KS-03-76)

Material: Corn stems and seed ears, *(Zea mays)*

Formation: Circle around 55 ft. in dia., with a 5 ft. triangular region on the north east periphery (called "the peak"); formed Aug. 14, 1995, at Arlington, Iowa.

Sampled: Two separate sample collections were conducted, one (KS-03-33) on Aug. 15, 1995, by Mr. Patrick Howard, 36 Park Village Ave. SW, Ceder Rapids, Iowa 52504. The second, supplemental, sampling (KS-03-76) was conducted on Oct. 29, 1995, by the farm owners, Raymond and Elgene Kamper, along with Pat Howard.

Laboratory Results:

In Fig.1 is an aerial, color photograph submitted with the samples (Gazette? -exact source not provided) showing the formation around the Aug. 15 sampling date. The plants appear to be lying very flat on the ground and directed toward the center of the circle. At the epicenter is an unusual, circular area approximately 11 ft. in diameter, where the plants appear to have lost their chlorophyll (no green coloration).

I.) First sampling- Aug. 15, 1995 (KS-03-33)

In the apical region (approximately the upper 24 inches) of plants taken from the epicenter of the formation, the leaf color was noticeably different than in control plants. In addition to having a brown cast, the leaves disclosed a marked expression of the red-purple pigment anthocyanin, which is suggestive of a photomorphogenetic response within the anthocyanin phytochrome system. This coloration effect was most pronounced in the epicenter plants, a lesser degree in the periphery samples, and was not observed in the controls.

Two possible explanations come to mind when considering the causation of the purple leaf color: 1) the formation energies may have stimulated anthocyanin accumulation and suppressed chlorophyll; 2) The formation energies caused a cessation of development and a subsequent loss of chlorophyll (green color). This second explanation seems the most plausible for the following reasons. From the very beginning of this five-to six-year study, we have consistently found that in many crop formations the embryo (seed) development terminates at the time of the crop formation, whereas the somatic (non reproductive) tissue continues to develop normally. In this case however, the vortex energy was of sufficient magnitude to effect development in all the tissue on the upper segment of the plants in the circular epicenter region. Since the anthocyanin gene is expressed in many corn varieties, the dark purple coloration would become evident rather quickly after the chlorophyll degradation began.

The influence of the vortex energies on seed development from plants *sampled* throughout the formation was quite evident in the laboratory germination data. The routine paper-roll germination tests are summarized in Table I for the 7-day seedling growth stage. Each of the 20 seed samples gave 100% germination.

Table I

Seedling development in corn from the first sampling of the Arlington, Iowa, crop formation (KS-03-33; 7-day development).

Sample	ave.	s.d.	Growth Difference	Statistical Confidence
Periphery #1	12.30 cm	3.66	-8.5%	N.S.
Control #1	13.84	2.19	-------	------
Center #1	10.85	1.61	-19.3%	P<0.05
Control #2	13.04	4.31	-------	------
Periphery #2	8.01	1.78	-40.4%	P<0.05
Center #2	9.78	3.42	-27.2%	P<0.05

In every case the seedling growth was suppressed in the formation samples, and in three of these the growth reductions were statistically significant when compared with the controls. It also should be noted that both controls exhibit very similar seedling length values, as is characteristic of hybrid corn.

II. Second Sampling: Oct. 18, 1995 (KS-03-76 supp.)

The main purpose of this supplemental sampling was to determine if the growth anomalies were still observed in the seeds from ears harvested at the later stage of development. The data shown in Table II, clearly confirm the findings obtained from the material harvested in August. As was pointed out in report No. 45, it is very unusual to find growth differences greater than 5%, and even more unusual to find large differences in growth and at the same time low variance within the test population. Examples of these unusual data distributions are found in Table I (periphery #2) and Table II (samp. F). In Fig. 2 are frequency distribution analyses of the Table II controls (upper data) and sample F taken inside the formation at the south quadrant. The very narrow spread in the growth data in sample F is very apparent.

Table II

Seedling development from the second, supplemental sampling of the Arlington, Iowa, crop formation.

Sample Location	Seedling ht. cm ave.	s.d.	N-seedlings	Percent Change
C1-control (120 ft. out)	14.62	3.19	20	------------
A-outside 70 ft. (S-side)	13.68	3.98	19	-7% N.S.
B-inside ("large point")	14.05	3.29	20	-4% N.S.
C2-control (150 ft. out)	14.71	3.58	20	------------
C-inside (epicenter)	7.67	3.84	20	-48% (P<0.05)
D-inside ("small point")	8.37	5.35	19	-43% (P<0.05)
E-outside 30 ft. (W-side)	14.32	2.22	20	-2% N.S.
F-inside (S-side)	11.25	1.61	20	-23% (P<0.05)
G-inside (N-side)	11.54	2.97	20	-21% (P<0.05)

In addition to the plant material, soil was submitted with each of the sample groups. Examination for magnetic particles disclosed nothing unusual.

Comments:

Several of the findings reported here are not only uniquely different in terms of what we have previously found in corn formations (*Zea mays*), but are also quite distinctive when compared with crop formations in other species of plants. However, we must point out that one other 1995 formation shares some (but not all) of the unique features with this formation: In fact, the Iowa formation and the one discussed in report No.45, located at Bad Axe, Michigan, could be considered as crop formations having features produced by very similar energy input effects.

From these observations and the fact that very unusual growth effects were induced in the developing seeds (Tables I & II, Fig.2) it would appear that very intense and turbulent conditions existed within the organized energy vortex system. As pointed out in Report No. 45, internal compacted vortices have been shown to possess sufficient energy to produce melting in iron meteorite material and deposit it on plants. [see reference: W.C. Levengood and J.A. Burke, Semi-Molten Meteoric Iron Associated with a Crop Formation, *Journal of Scientific Exploration*, **9**, pp.191-199, (1995)]. In the photograph at the bottom of Fig.1, the corn plants at the epicenter region are observed to be interwoven and twisted together. This is characteristic of a compact, rotating energy vortex, within which the air pressure could be considerably reduced. Further evidence of a partial vacuum within the vortex is indicated by the fact that the stalks are clearly directed toward the epicenter. With a decreasing pressure gradient from the outside inward, the plants would be "forced" into the pattern shown here.

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Note: In Table II (previous page), under the heading "Sample Location," you will note an alteration in our customary labeling of "samples" and "controls." Due to the fact that the plant material in this case is corn (rather than wheat, barley, or oats), and the additional fact that, so far, we have had many fewer opportunities to examine formations in corn, our knowledge of any "spillover" effect of the formation energies into crop surrounding the actual visible shape in the field is still being pieced together. Therefore, sample locations C1 (at 120 ft. out from the formation) and C2 (at 150 ft. out from the formation)--being the most distant samples obtained--are here labeled as "controls." [You will note that neither of these samples showed any change whatsoever.]

However, Samples A (70 ft. outside) and E (30 ft. outside)--which were both also taken from outside the formation--are here simply labeled "outside," due to the fact that we are not yet completely confident of where any "spillover" effects in formations in corn might end. [You will note that samples A and E both revealed changes that were so minute as to be not significant, in this case.]

Sample B, taken from inside the formation at a location called "large point," also revealed very minute, insignificant, changes (one could expect to see this degree of variation across any normal sampling); this finding is of interest, and not yet understood. NT, 1/2/96.

Fig.1 Aerial photograph (Arlington Gazette?) and detail of circle formation at Arlington, Iowa (Report No.46)
(photo taken approx. Aug. 15, 1995)

Photo by Bobby Ratliff, KCRG-TV

Photo taken Oct. 19, 1995 by Mr. and Mrs. Kemper "from top of combine - facing east"

Fig.2 Frequency distribution analyses of controls (top) and sample No.-F (bottom), from Arlington, Iowa, crop formation, 1995.(Report No.46) each Bar# represents a plant height interval of 1-cm. Note unusually narrow distribution in sample-F chart. Count equals the number of plants in each specific bar.