Research Report From: Pinelandia Biophysical Laboratory
Grass Lake, Michigan, 49240

Crop Formation: Neilburg, Saskatchewan, Canada 1999
Report No. 126

Laboratory Code: KS-05- 21 **Date: August 4, 2001**
Location: Neilburg, Saskatchewan Canada
Material: Wheat *(Triticum aestivum)* seed heads and soil.
Formed: Between Aug. 30 - Sept. 2, 1999
Sampled: Sept. 9, 1999 by Ms. Beata Van Berkom and Marty Pratt
Formation Characteristics: A large, 45 ft. dia. circle with smaller circles outside.

Summary of Findings:

1) Node Length Analysis

An examination of 17 sets of formation samples and six sets of controls, containing about 10 plants each, (sampling diagram Fig.1 attached) revealed low level node length increases within the formation (max. +12%). When these node length changes were examined along the four radii, a non-linear, node length increase was noted with distance from the epicenter. This is opposite the situation generally found, that is, within many simple, circular formations the node expansion is generally at a maximum at the epicenter and decreases toward the edge. From the Neilburg data one might readily infer that the energy producing the node expansions (not the rotational vortex energy) originated from outside the Circle-A region.

If the node expansion energy is indeed being directed into Circle-A then its influence would be expected to follow the mathematical relationship derived from the Beer-Lambert model for the absorption of electromagnetic energy by matter (see ref.1). Based on this model the mean values of node expansion taken at the specific locations along the four radii are plotted in Fig.2 as a function of ln-distance from the epicenter. The high correlation ($R^2 = 0.985$) provides very strong evidence that the energy (microwave) causing node expansion, originated just outside Circle-A.

A clue as to the origin of energy external to Circle-A, was furnished by the diagram in Fig.3, prepared by Ms. Judy Arndt, showing the overall crop formation complex. The dashed lines in Fig.4 were added (by the author of this report) to suggest a possible relationship between the three groups of smaller circles and Circle-A. Each of the dashed lines in Fig.4 were drawn as precise asymptotic vectors passing through the appproximate center of each circle in the group. It is interesting to note that when these "center related vectors" are extended outward, they form very similar areas of intersection with Circle-A. This would suggest that these outer circle complexes are the source of the energy input. The pronounced influence of interacting vortices on crop formation patterns are discussed the 1999 Physiologia Plantarum paper (ref. 1).

2) Magnetic Drag Material

The influence of the surrounding vortex activity was also indicated by the distribution of magnetic material along the radii in Circle-A. Generally, it is found that the within simple circular formations the maximum level of magnetic material is near or at the epicenter and decreases linearly with distance. This type of pattern has been shown to agree with a mathematical model based on the physics of centripetal force acting on particles suspended in a rotating plasma vortex. As shown in Fig.4 the situation here is far more complex and suggests that the significant deposits of magnetic material (upper limit in normal soil is 0.4 mg/g-soil) are influenced by the smaller, but more energetic vortices outside the large circle.

If the particles thrown off by the smaller circles follow the asymptotic paths outlined in Fig. 3 they would most probably be deposited in Circle-A, within the segments formed by the dashed lines. The region of maximum deposit would very likely fall within the 3-5 m radial distance from the epicenter, which, as shown in Fig.4 agrees with the distribution of magnetic drag material.

Reference

1) W. C. Levengood & N. P. Talbott, *"Dispersion of energies in worldwide crop formations"*., Physiologia Plantarum 105, pp 615-624 (1999).

W.C. Levengood

Fig. 1

Diagram of Circle 'A' from Neilburg Saskatchewan, Canada
Date Occurred: Aug. 30th – Sept. 2 '99 ?
Date Found: Sept. 3 '99
Wheat and Soils sampled: Sept. 9 '99
Collected by: Beata Van Berkom &
Marty Pratt
1117 Ave. B North, Saskatoon, Sk. S7L 1G2
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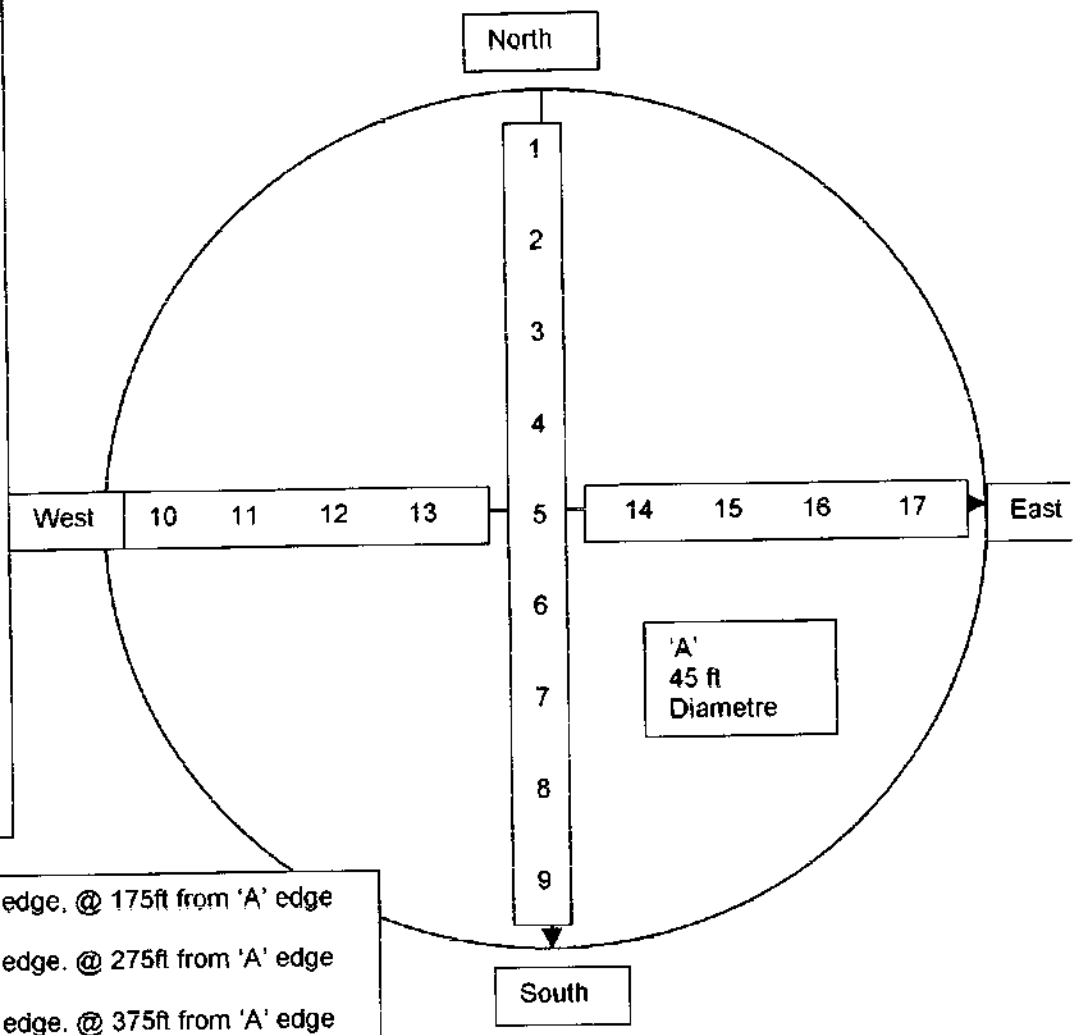
Sample 1 = 2.5ft from North edge
Sample 2 = 7.5ft from North edge
Sample 3 = 12.5 ft from North edge
Sample 4 = 17.5 ft from North edge
Sample 5 = 22.5ft centre
Sample 6 = 17.5 ft from South edge
Sample 7 = 12.5 ft from South edge
Sample 8 = 7.5 ft from South edge
Sample 9 = 2.5 ft from South edge
Sample 10 = 2.5ft from West edge
Sample 11 = 7.5ft from West edge
Sample 12 = 12.5 ft from West edge
Sample 13 = 17.5 ft from West edge
Sample 14 = 17.5ft from East edge
Sample 15 = 12.5ft from East edge
Sample 16 = 7.5ft from East edge
Sample 17 = 2.5ft from East edge



Control 1 = 100ft SW of formation edge. @ 175ft from 'A' edge
Control 2 = 200ft SW of formation edge. @ 275ft from 'A' edge
Control 3 = 300ft SW of formation edge. @ 375ft from 'A' edge
Control 4 = 400ft SW of formation edge. @ 475ft from 'A' edge
Control 5 = 550ft SW of formation edge. @ 625ft from 'A' edge
Control 6 = 650ft SW of formation edge. @ 725ft from 'A' edge

Controls taken in an SW angle

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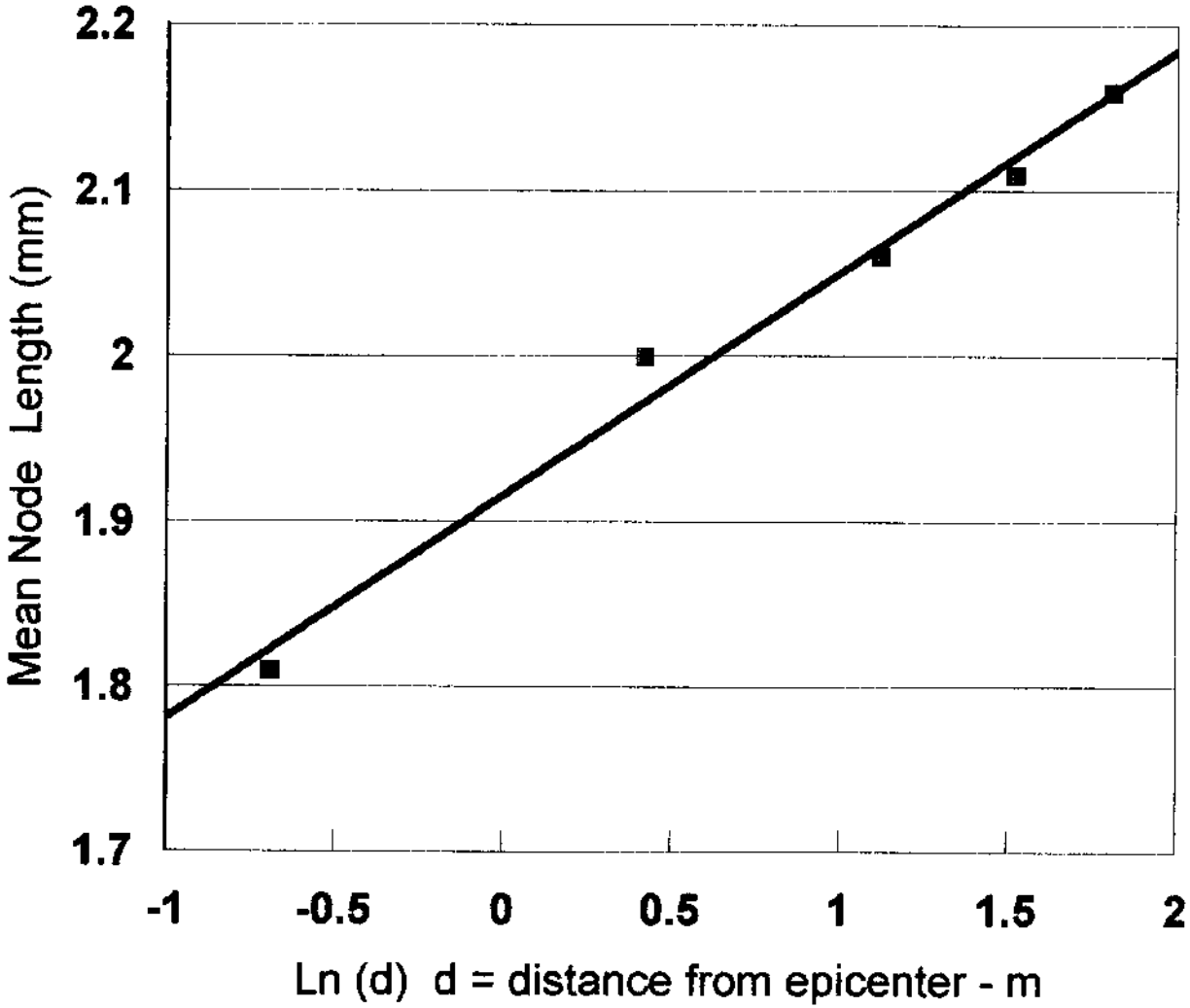
Fig. 2 Node length data from the Neilburg Circle-A examined with the Beer-Lambert model (Aug. 2001, lab. ref. KS-05-21)



R-square = 0.985 # pts = 5
y = 1.92 + 0.135x

Fig. 3

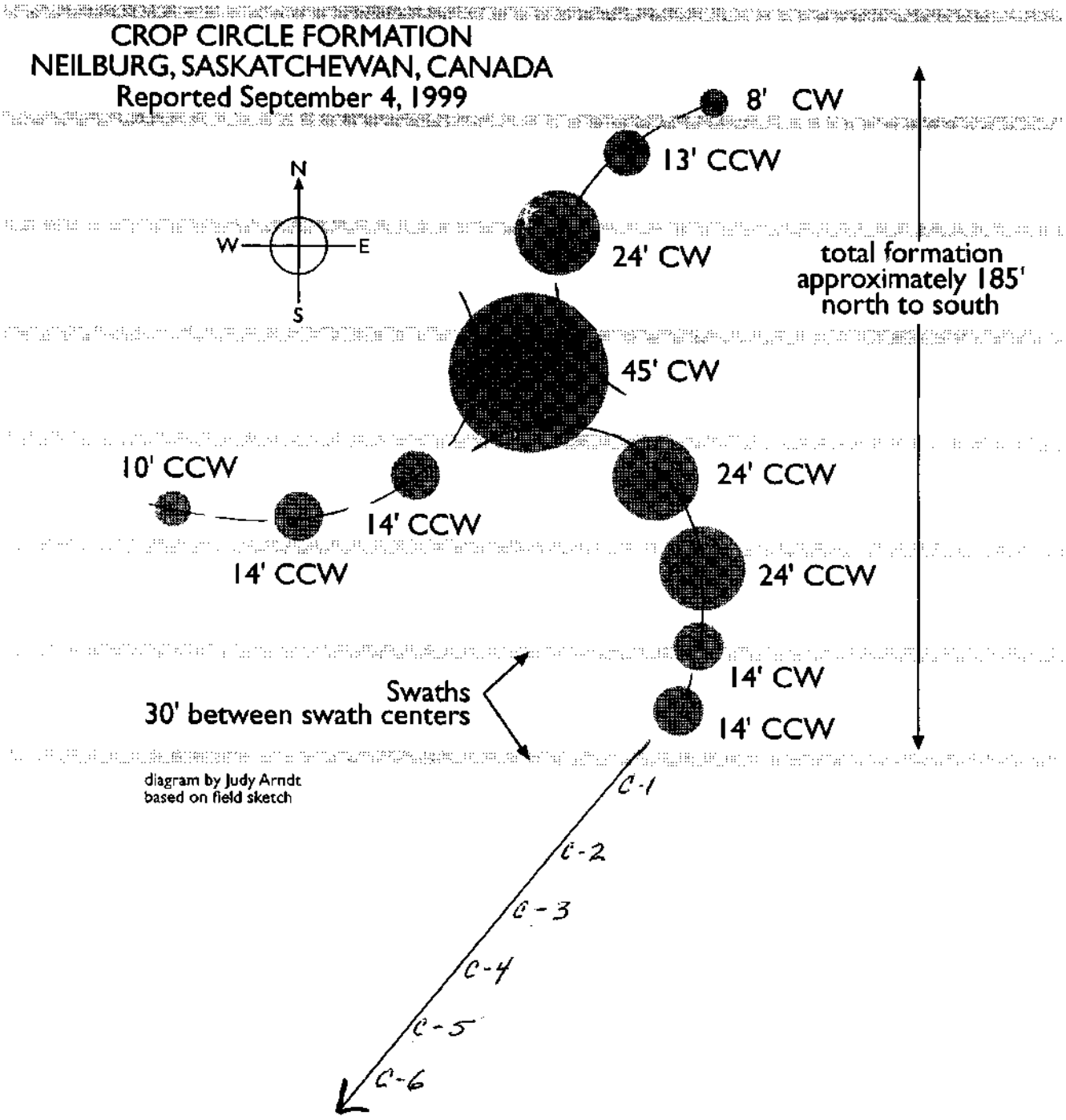

CROP CIRCLE FORMATION
NEILBURG, SASKATCHEWAN, CANADA
Reported September 4, 1999
N
W
E
S
8' CW
13' CCW
24' CW
45' CW
10' CCW
14' CCW
14' CCW
24' CCW
24' CCW
14' CW
14' CCW
total formation
approximately 185'
north to south
Swaths
30' between swath centers
diagram by Judy Arndt
based on field sketch
C-1
C-2
C-3
C-4
C-5
C-6

Fig. 4 Distribution of magnetic drag material along radii in Neilburg Crop Formation (Aug. 2001, lab. ref. KS-05-21)