Crop Formation: West Stowell Quintuplet, UK, 1995

Laboratory Code: Dual Sampling KS-03-18 & KS-03-74

Material: wheat stems and heads, *(Triticum aestivum)*

Formation: Around June 26, 1995, consisting of 34 ft. dia. circle surrounded by four, roughly equally spaced circles about 12 ft. dia. and an outer ring around 100 ft. dia., located at West Stowell, UK

Sampled: #1-Sampling by Mr. Peter Stammers et al, on June 28,1995
#2-Sampling by Ms. Shelly Keel on June 27, 1995

Laboratory Results:

#1-Sampling (KS-03-18)

When received at the laboratory the sample groups were of variable moisture content with heavy mold, consequently the seed heads were discarded. After further drying, the sample sets consisting of 8-10 plants each, were examined for node length changes. These data are summarized in Fig.1, where the percent change is compared with the mean value from all of the control plants (N=37). The variations range from +38% to -36%, with no obvious pattern discernible within the sampling diagram.

#2-Sampling (KS-03-74)

In this case the sample sets had been dried before shipment and were in far better shape for examination. In this variety and at this early stage of growth the seed heads were still green (chlorophyll present), as a result the seed viability was severely reduced, thus preventing the possibility of germination testing. As in the first sample group, the node changes were designated on Ms. Keel's sampling diagram (Fig.2), and were based on a mean node length from N=71 control plants in eight control sets.

There were no node expulsion cavities, splits or blisters found on any of the (A) or (P) nodes from either of these two sample groups. When examining the data, it was quite apparent that there were large variations in the node lengths within the individual control groups. For example control C3 has a -12% change and control C6 a +21% change, or 33% overall. The controls show a larger variation than the formation samples, relative to the same control mean. One possible explanation for this may relate to the development stage at which the plants were collected. In the green stage slight maturity differences between plants may cause

different moisture levels. If, as was the case here, the plants are harvested in this immature state and artificially dried, the dry down rates and node shrinkage may end up having quite different values. If on the other hand the plants had been left in the field, under the control of the root system, the moisture level would have dropped more uniformly, thus leading to more uniform node lengths in the final dry down process. This influence of maturity on node length variations may be seen by comparing the above control data with results obtained from the East Meon formation sampled August 2 1995 and described in Report No.49. Here the overall variation in the six control groups was around 8% compared with the 33% in the West Stowell formation.

Comments:

There are four factors which make it extremely difficult to provide any statement concerning the authenticity of this formation.

1) the large variability in the node lengths within control sets.
2) not having seeds to germinate for parallel testing.
3) the lack of expulsion cavities and splits, characteristic of many formations produced by high energy vortices.
4) no consistent patterns in the node length data within either of the dual sets (i.e. downed vs. upright).

One positive outcome from this test was the discovery that in UK formations occurring early in the year (particularly those still in the green stage) the sampling should be postponed until a later stage, that is, after the plants have matured and lost their chlorophyll. One might wonder why we have not previously ran into this problem; one reason for this may be the fact that very few wheat formations occurring in June, have been submitted from England. Those June samples coming from locations in the U.S.A. have not been a problem because they arrive at the laboratory in the fresh non-dehydrated state. For example, the June 20, 1995 formation at Inmann, Kansas (Report No.44), gave only an 11% variation in control samples taken at opposite sides of the field.

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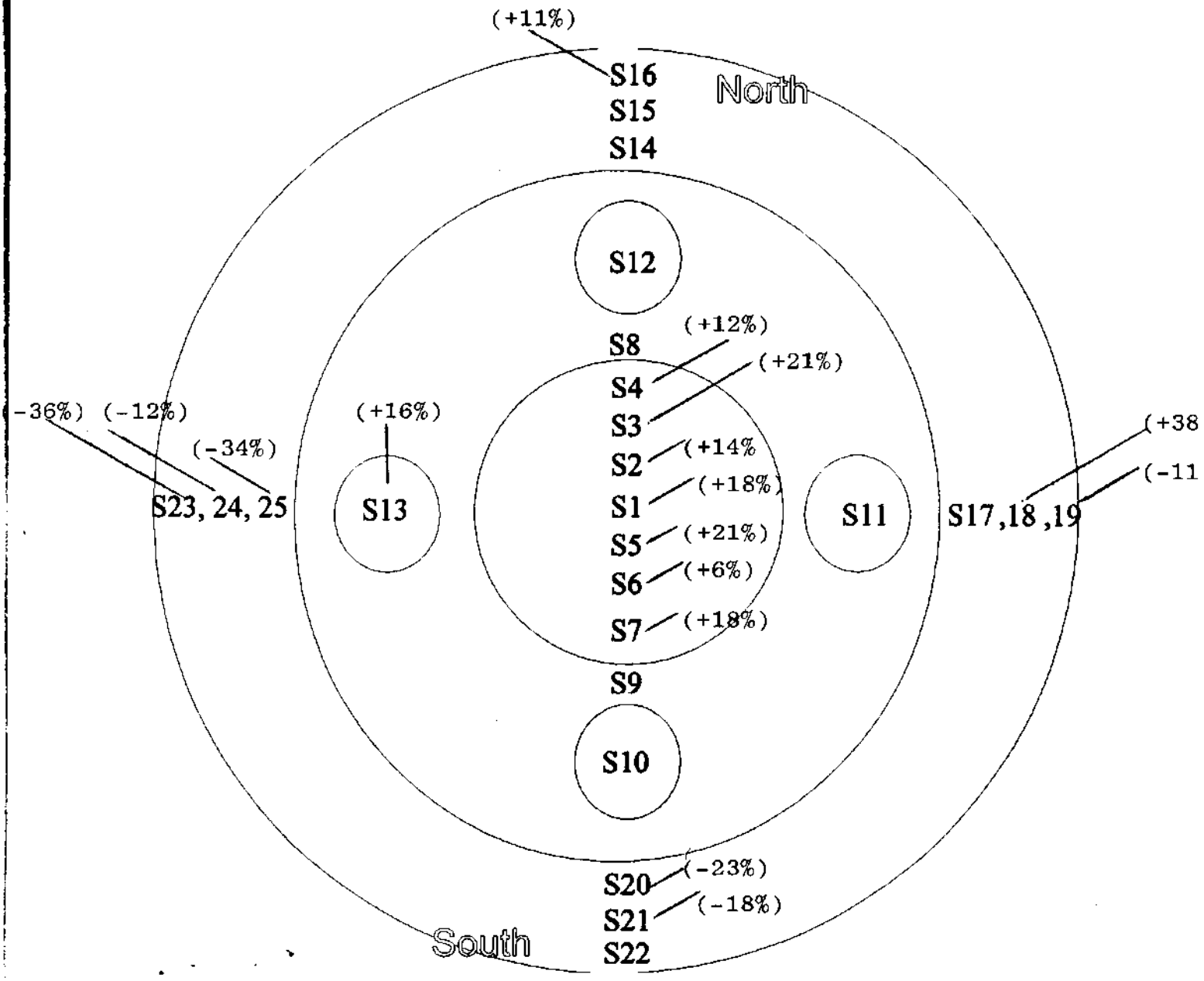
Fig.1 Node length changes in a crop formation sample at varying stages of moisture (KS-03-18)

Samples taken 28th June 1995

Stowell Quintuplet



Control samples were taken on the South axis at 60' (C1), 15' (C2) and 2' (C3) from the outer ring and going North at 2' (C4), 15' (C5) and 60' (C6).

S1 to S9 = Standing crop
S10 to S25 = flattened crop

Fig.2 Second sampling of West Stowel crop formation KS-03-74
Node length changes relative to mean of total controls (N=71)

Formation Location: WEST STOWEL. WILTS. U.K.

Date Sampled: 24 June 1995

Your Name: SHELLY KEEL

N
(-3%)---- C7
(+21%)---- C6
(+16%)---- C5
(-10%)- C1

Taken N: 150', 100', 50'

(+14%)--S10

S9--(+10%)

S8 --(+22%)

S7---(+5%)

(+26%) (+28%)

S6 ----(+30%)

(+15%) S19 (+5%) S16 (+4%) S14 (+4

W CH (%)

S18 S17 S15 S13 S12 S11

(+8%)

S5----(+12%) (+4%) (+21%)

S4---(+10%)

S3--(+2%)

S2---(+27%)

S1 --(+21%)

(-12%) C3

S

(-8%)--- C8
(-3%)--- C9
(-2%)--- C10

Taken S: 50', 100', 150'

NOTE: DO NOT FORGET COMPASS BEARING

C1
C2
C3
C4

Taken 2' outside of event.

P.T.O. FOR MEASUREMENTS