

**Crop Formation: East Sussex, UK 1995**

Laboratory Code: KS-02-152

Material: Rape or Canola, *Brassica napus*.

Formation: May 8, 1995 at Southease, East Sussex, England

Sampled: by Barry Reynolds, et al., May 11 and July 14, 1995.

Comment: Tissue in excellent condition at arrival in lab.

SUMMARY OF RESEARCH FINDINGS:

a)- statistical study conducted to determine differences, if any, in seed pod size distributions.

b)- lengths determined in 100 pods located in the apical 25 cm of five randomly selected plants from each test series (over 1700 total measurements).

c)- in Fig. 1 attached are the inserted values of the pod size changes relative to the mean of the controls.

d)- greatest reduction in pod size found in small semi-circle (samp. #19)- again emphasizing importance of small outer formations.

e)- the petri dish, 6-day germination data from seeds sampled on July 14th, are presented in Fig. 2, again given as percent change relative to controls. Significant growth increases observed in seeds taken from both downed and upright rings.

f)- Fig. 3 and 4 show Frequency Distribution Analyses of seed pod sizes in a control group and Samp. #19 (see statistics at bottom of charts).

g)- these distribution charts were prepared for all pod size samplings.

h)- data are not presented for the "Special" man-made control sample, since the seeds were collected ten (10) days later and, unfortunately, with no controls.

CONCLUSIONS

The significant alterations in seed pod sizes and the growth increases in seeds taken at a later sampling clearly indicate somatic changes induced by an external energy source.

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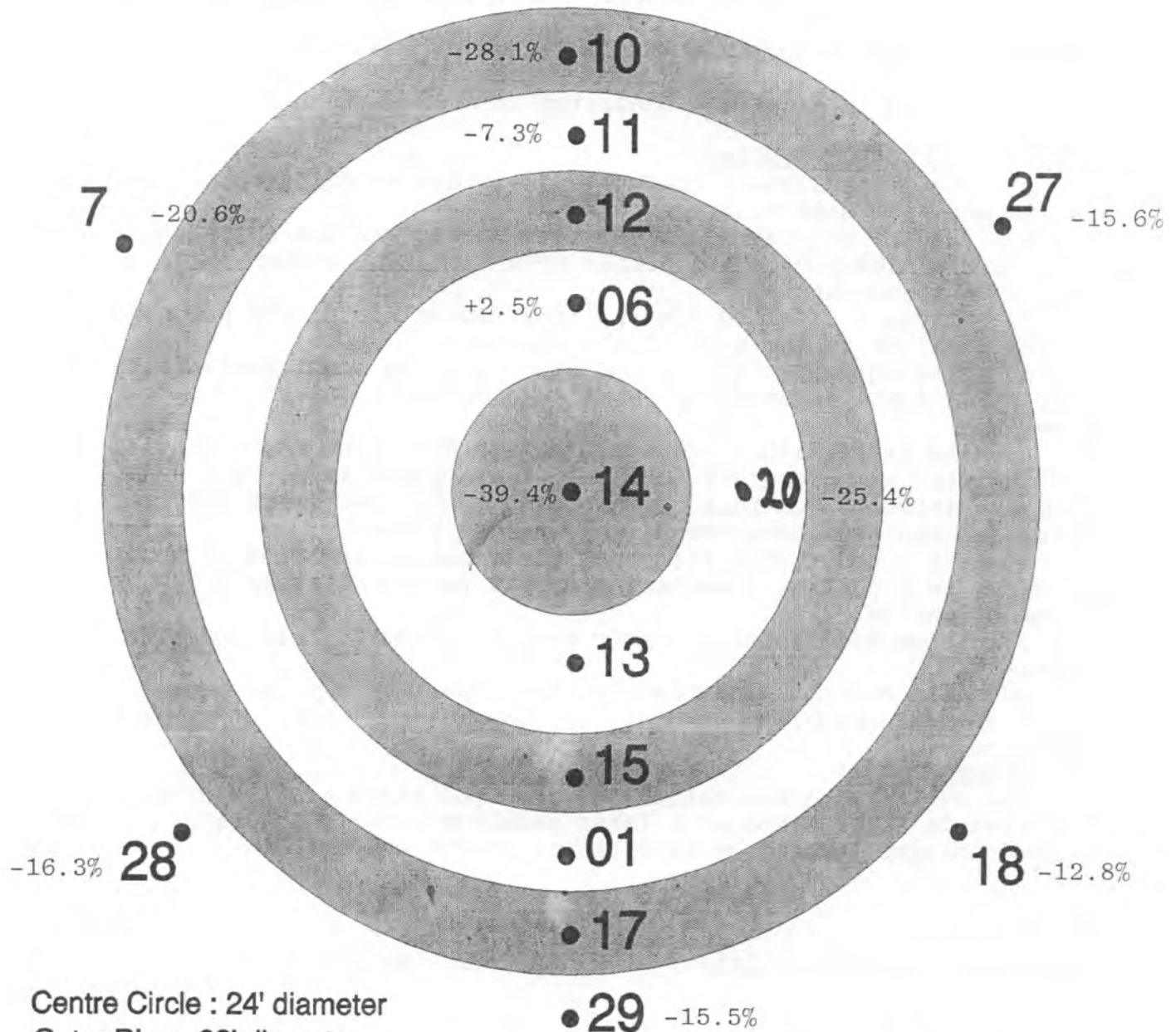
Controls

- 25 @ 250' -11.1%
- 24 @ 250' +4.2%
- 59 @ 300' +6.9%

- 45.8% • 19
- 2.6% • 26
- +7.8% • 21
- 6.2% • 08

Fig.1 Pod size variations relative to mean of controls - data from frequency distribution analyses (100 randomly selected pods per sample group)

KS-02-152



Centre Circle : 24' diameter  
Outer Ring : 92' diameter

Formed 8th May 1995  
Sampled 11th May 1995



Southease, East Sussex

Not to Scale

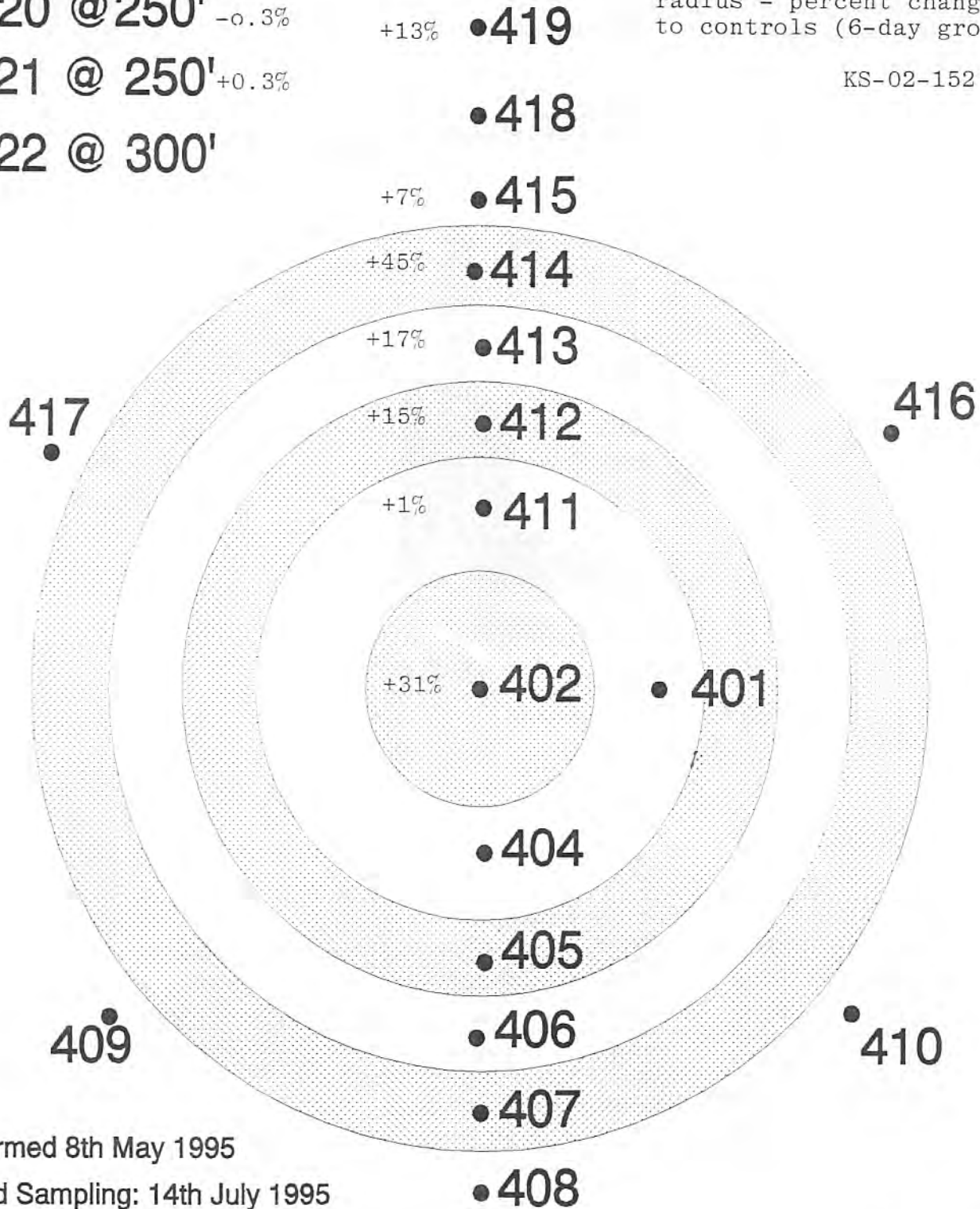
Controls

- 420 @ 250' -0.3%
- 421 @ 250' +0.3%
- 422 @ 300'



Fig.2 Seedling development in samples taken along the West radius - percent change relative to controls (6-day growth)

KS-02-152



Formed 8th May 1995  
2nd Sampling: 14th July 1995

"Special" formed 18th May 1995  
• 403

Rape Samples

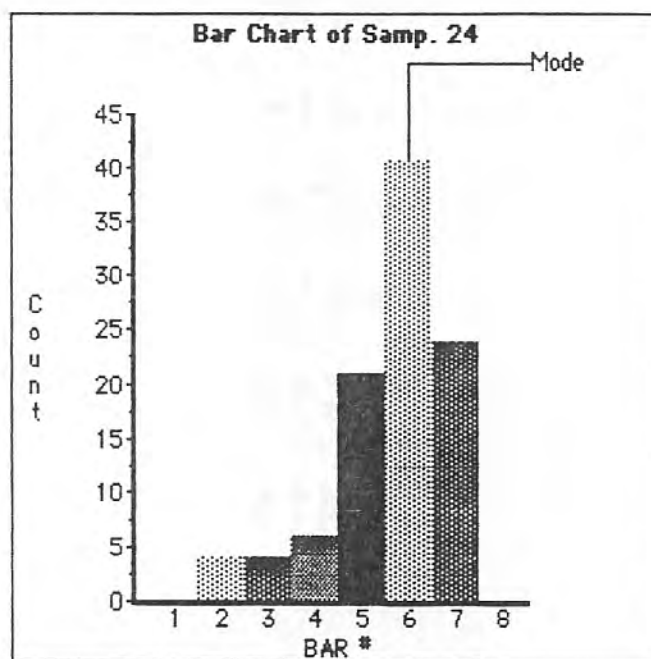
Southeast, East Sussex

Not to Scale



NOTE: The small semi-circle at the western-most edge of this formation was, apparently, not sampled on July 14th & so there is no seedling growth data reported here.

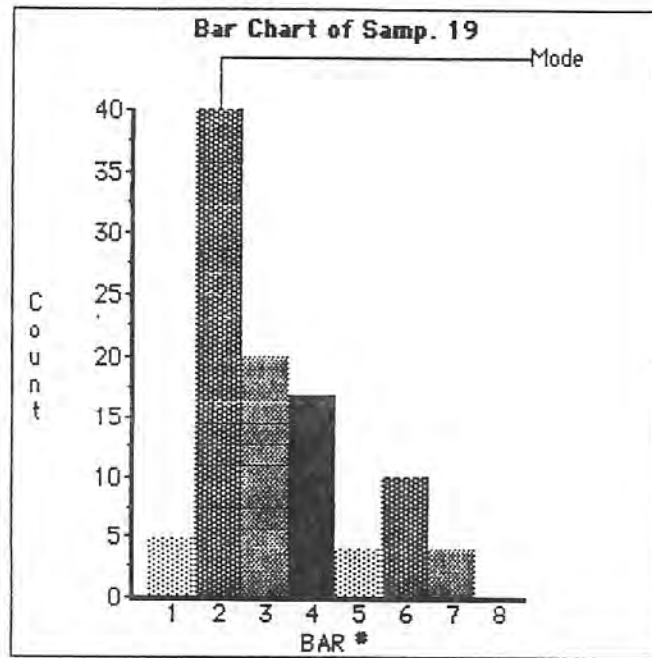
Fig.3 Typical frequency distribution of pod size in control sample.  
 100 pods examined (KS-02-152)



Bar# = 1 cm interval in pod size

Samp. 24					
Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
5.085	1.242	.124	1.543	24.426	100
Minimum:	Maximum:	Range:	Sum:	Sum Squared:	# Missing:
1	6.8	5.8	508.5	2738.45	0
Kurtosis:	Skewness:				
1.634	-1.248				

Fig.4 Pod size distribution in plants from small semi-circle, 100 pods examined (KS-02-152)



Bar# = 1 cm interval in pod size

Samp. 19					
Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
2.644	1.525	.153	2.327	57.689	100
Minimum:	Maximum:	Range:	Sum:	Sum Squared:	* Missing:
.2	6.4	6.2	264.4	929.4	0
Kurtosis:	Skewness:				
-.258	.876				