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Analysis of Rowland Clark Site Corn

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Appendix 1 Analysis of Rowland Clark Site Corn

Leonard Blake

The carbonized corn from the Rowland Clark site, Red River County, Texas was received from Gregory Perino, then of the Museum of the Red River, in March 1982. The analysis of the corn is presented by feature, with remarks on the cobs as appropriate. Table 1 presents a summary by feature of the corn cob analysis, while Table 2 compares the corn from Rowland Clark with samples of corn cobs from other well-studied Caddoan sites.

Feature No. 9, Smudge Pit

<u>Cob No.</u>	<u>Row No.</u>	<u>Grain Thickness</u>	<u>Cupule Width</u>	<u>Remarks</u>
1	12	2.8 mm	5.4 mm	
2	12	3.0	4.7	
3	12	2.9	4.9	
4	16	2.8	4.0	
5	14	3.3	5.0	
6	12	3.2	6.2	
7	8	3.1	5.8	
8	12	2.9	5.0	Broken in handling.
9	10	3.0	5.2	Three segments.
10	8	2.9	6.0	
11	12	2.8	5.0	
12	10	3.4	5.0	
13	12	3.4	5.9	
14	12	3.2	4.5	
15	10	3.1	5.8	Four segments.
16	10	3.0	5.3 (average)	5.7, 5.7, 5.0, 5.0, and 5.0 mm.
17	12	3.2	5.6	
18	12	3.2	5.8	Tip.
19	14	3.2	5.0	Five segments broken in handling.
20	12	3.0	5.5	
21	10	3.3	5.0	
22	12	3.4	5.0	
23	10	3.4	5.7	
24	10	3.2	6.9	
25	12	3.7	6.3	
26	12	3.5	5.7 (average)	5.0, 5.0, 6.0, 6.0, 6.0, and 6.0 mm.
27	12	3.5	6.8	
28	12	3.5	6.1	
29	14	2.5	4.6	
30	14	2.3	5.0	
31	12	3.4	4.1	
32	10	3.5	4.9	
33	8	3.2	5.8 (average)	5.5, 5.5, 6.0, and 6.0 mm.
34	12	3.6	5.3	

Row No.	8	10	12	14	16	Total
No. of Cobs	3	8	18	4	1	34
% of Total	9	23	53	12	3	100

Mean Row No.= 11.5

Median Cupule Width= 5.3 mm

Feature No. 10, Smudge Pit

<u>Cob No.</u>	<u>Row No.</u>	<u>Grain Thickness</u>	<u>Cupule Width</u>	<u>Remarks</u>
1	16	3.8 mm	6.4 mm	
2	12	3.6	6.0	
3	10	3.4	6.6	Broken in handling.
4	10	3.0	7.0	
5	10	3.6	7.4	
6	14	3.4	4.6	Tip end.
7	10	3.9	5.5	Tip end.
8	12	3.5	4.9	Tip end.
9	10	3.2	6.0	
10	12	3.3	6.2	
11	12	3.7	6.5	
12	12	3.0	5.5	Broken in handling.
13	12	3.1	5.0	
14	10	3.9	8.0	
15	12	3.2	5.0	
16	12	2.9	5.0	
17	12	3.6	6.6	
18	12	3.8	5.0	
19	10	3.4	7.0	
20	12	3.2	6.5	

Row No.	8	10	12	14	16	Total
No. of Cobs	0	7	11	1	1	20
% of Total	0	35	55	5	5	100

Mean Row No.= 11.6

Median Cupule Width= 6.1 mm

Feature 14, Smudge Pit

<u>Cob No.</u>	<u>Row No.</u>	<u>Grain Thickness</u>	<u>Cupule Width</u>	<u>Remarks</u>
1	10	2.5 mm	6.5 mm	
2	8	3.2	8.8	
3	12	2.9	5.0	
4	12	3.1	4.8 (average)	four cupules 5.0 mm, two cupules 4.5 mm
5	12	3.2	6.0	
6	12	3.5	5.8	
7	12	3.4	5.8	
8	10	3.2	7.6	
9	12	3.6	5.1	

10	12	3.4	4.9 (average)	cupules 4.8 to 5.0 mm
11	10	3.5	6.7	
12	12	3.0	5.5	
13	10	3.8	6.8	
14	12	3.1	4.8	
15	10	3.1	6.2	
16	10	3.2	7.4	Three segments

Row No.	8	10	12	14	16	Total
No. of Cobs	1	6	9	0	0	16
% of Total	6	38	56	0	0	100

Mean Row No.= 11.0

Median Cupule Width= 5.9 mm

Feature No. 24, Smudge Pit

<u>Cob No.</u>	<u>Row No.</u>	<u>Grain Thickness</u>	<u>Cupule Width</u>	<u>Remarks</u>
1	12	3.2 mm	5.4 mm	
2	10	3.2	4.8	
3	12	3.2	5.1	
4	8	3.2	5.8	
5	10	3.3	5.3	Cob section only three cupules long.
6	10	3.0	4.8	
7	10	3.0	5.6	
8	10	3.3	6.7	
9	10	3.0	5.7 (average)	four cupules 6.0 mm, one 4.3 mm wide.
10	10	2.8	5.0	
11	12	3.0	5.0	Broken in measuring.
12	12	3.1	4.3 (average)	four cupules 4.9 mm, two aborted 3.2 mm
13	12	3.4	4.3 (average)	four cupules 4.9 mm, two aborted 3.0 mm
14	8	3.0	6.4	
15	10	3.0	4.7	
16	10	3.1	5.5	
17	10	3.4	7.0	
18	12	3.6	7.0	
19	12	2.9	4.9	
20	10	3.0	5.2	
21	12	3.6	5.4 (average)	four segments, 5.1, 5.1, 5.6, and 5.6 mm
22	10	2.9	5.1	Broken in handling.
23	12	3.6	5.5	

Row No.	8	10	12	14	16	Total
No. of Cobs	2	12	9	0	0	23
% of Total	9	52	39	0	0	100

Mean Row No.= 10.6

Median Cupule Width= 5.3 mm

Feature No. 25, Smudge Pit

<u>Cob No.</u>	<u>Row No.</u>	<u>Grain Thickness</u>	<u>Cupule Width</u>	<u>Remarks</u>
1	10	3.5 mm	5.5 mm	
2	10	3.2	5.6	
3	10	3.6	5.8	
4	12	3.0	6.0	Broken in measuring.
5	12	2.7	6.0	
6	10	2.9	5.6	
7	8	3.8	7.9 (average)	Two segments, 7.7 and 8.0 cupule width
8	12	5.0	7.8 (average)	7.0, 8.0, 8.0, and 8.0 mm
9	12	3.1	4.0	

<u>Row No.</u>	<u>8</u>	<u>10</u>	<u>12</u>	<u>14</u>	<u>16</u>	<u>Total</u>
No. of Cobs	1	4	4	0	0	9
% of Total	11	44	44	0	0	100

Mean Row No.= 10.6

Median Cupule Width= 5.5 mm

Feature No. 26, Smudge Pit

<u>Cob No.</u>	<u>Row No.</u>	<u>Grain Thickness</u>	<u>Cupule Width</u>	<u>Remarks</u>
1	8	3.5 mm	7.8 mm	
2	10	2.6	4.6	
3	10	2.6	5.4	
4	8	2.4	8.0	
5	10	2.4	6.0	
6	10	2.6	6.1	Three segments.
7	8	3.1	5.6	Tip end.
8	10	3.0	5.4	
9	12	2.8	4.1 (average)	3.5-4.8 in six measurements
10	8	3.0	5.0	Broken in measuring.

<u>Row No.</u>	<u>8</u>	<u>10</u>	<u>12</u>	<u>14</u>	<u>16</u>	<u>Total</u>
No. of Cobs	4	5	1	0	0	10
% of Total	40	50	10	0	0	100

Mean Row No.= 9.4

Median Cupule Width= 5.5 mm

Feature No. 61, Smudge Pit

<u>Cob No.</u>	<u>Row No.</u>	<u>Grain Thickness</u>	<u>Cupule Width</u>	<u>Remarks</u>
1	12	3.8 mm	6.3 mm	

Other cob fragments appear to be parts of the same measured cob. Charred plant materials sent from this feature consisted mostly of wood charcoal and pine cones. A similar smudge pit with pine cones has been examined by Fritz (1992) from 41RR236, a few miles upstream from Rowland Clark.

Feature No. 64

<u>Cob No.</u>	<u>Row No.</u>	<u>Grain Thickness</u>	<u>Cupule Width</u>	<u>Remarks</u>
1	10	3.2 mm	6.2 mm	
2	10	3.2	6.4	
3	12	3.0	5.1	
4	12	3.2	4.7	
5	12	3.2	5.0	
6	12	3.0	6.3	
7	12	2.9	5.1	
8	12	2.8	4.9	
9	10	2.8	4.8	10-rowed changing to 8-rowed
10	14	3.0	3.9	
11	10	3.0	5.5	
12	12	3.3	5.1	
13	12	2.5	5.3	four rows are aborted
14	14	3.2	4.0 (average)	Tip end; cupule widths from 3.5-5.0 mm
15	10	3.0	5.7	Broken in handling
16	10	3.1	4.9 (average)	cupule widths from 4.0-5.5 mm
17	10	3.2	5.6	
18	8	3.0	6.0	
19	12	2.8	4.2	
20	12	3.7	5.6	
21	8	2.9	6.0	
22	10	3.2	5.8	
23	10	3.1	6.2 (average)	Three segments: 6.0, 6.0, and 6.6 mm
24	12	3.2	4.9 (average)	Three segments: 4.7, 4.7, and 5.3 mm
25	10	3.0	5.0	
26	12	3.2	6.1	
27	12	2.4	4.7	
28	10	3.3	5.8 (average)	cupule widths from 5.0-6.6 mm
29	14	2.8	4.0	
30	14	3.8	5.0	
31	12	3.0	4.4	
32	14	3.2	4.3	
33	10	2.7	5.0	
34	10	3.2	6.0	
35	10	2.8	5.7 (average)	cupule widths from 5.0-6.1 mm
36	12	3.4	6.5	
37	12	3.0	5.5	
38	14	3.6	4.8	
39	12	3.1	5.2	
40	12	3.0	5.0	Tip end
41	10	3.2	5.1 (average)	cupule widths from 5.0-5.3 mm
42	10	3.1	4.0	
43	12	3.5	6.6	
44	10	3.5	6.9	

45	8	3.4	7.5	
46	14	3.6	5.3	Tip end
47	12	3.2	5.5	
48	12	3.6	5.0	
49	14	3.2	4.6	Tip end
50	8	3.1	7.8	
51	12	2.8	4.0	
52	10	3.8	7.0	
53	12	2.6	5.4	Tip end
54	14	3.0	3.9	14-rowed changing to 12-rowed
55	10	3.8	7.4	
56	12	3.4	6.0	
57	10	3.1	6.3	
58	12	3.8	6.7	Two segments
59	12	3.2	5.3	Three segments

Row No.	8	10	12	14	16	Total
No. of Cobs	4	20	26	9	0	59
% of Total	7	34	44	15	0	100

Mean Row No.= 11.4

Median Cupule Width= 5.3 mm

Besides the corn cobs, there were also six pine cones and three pieces of pine cones in Feature 64.

Table 1. Summary of Corn Cob Analysis.

Feature No.	Mean Row No.	Median Cupule Width	No. of Cobs	Row Numbers % of Total Cobs				
				8	10	12	14	16
9	11.5	5.3 mm	34	9	23	53	12	3
10	11.6	6.1	20	0	35	55	5	5
14	11.0	5.9	16	6	38	56	0	0
24	10.6	5.3	23	9	52	39	0	0
25	10.6	5.5	9	11	44	44	0	0
26	9.4	5.5	10	40	50	10	0	0
61	12.0	6.3	1	0	0	100	0	0
64	11.4	5.3	59	7	34	44	15	0
Summary	11.1	5.5	172	9	36	46	8	1

**Table 2. Comparison with Corn from
other Caddoan Sites.**

Sites and Age	Mean Row No.	Median Cupule Width	No. of Cobs	Row Numbers % of Total Cobs				
				8	10	12	14	16
Rowland Clark	11.1	5.5 mm	172	9	36	46	8	1
Adair (3GA1) Late Caddo	11.0	6.0	77	12	39	39	10	0
Hedges (3HS60) Late Caddo	12.2	5.9	26	15	27	50	8	0
Standridge (3MN53) A.D. 1300-1450	11.1	6.0	33	12	43	30	9	6

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 1992 Archeobotanical Remains from Five Sites on the Red River in Northeast Texas. MS
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