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# AgRISTARS

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A Joint Program for  
Agriculture and  
Resources Inventory  
Surveys Through  
Aerospace  
Remote Sensing

April 1980

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AgRISTARS CROPPING PRACTICES AND CROP CHARACTERISTICS BASED ON 1979 ESCS  
OBSERVATIONS

(E80-10292) AGRISTARS CROPPING PRACTICES  
AND CROP CHARACTERISTICS BASED ON 1979 ESCS  
OBSERVATIONS (NASA) 448 p HC A19/MF A01

CSCL 02C

N80-30860

Unclass  
00292

G3/43



NASA



Lyndon B. Johnson Space Center  
Houston, Texas 77058

SR-JO-00438  
JSC-16353

AGRISTARS CROPPING PRACTICES AND  
CROP CHARACTERISTICS BASED ON  
1979 ESCS OBSERVATIONS

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*evict*  
SFB

EARTH OBSERVATIONS DIVISION

APRIL 1980

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Alabama (A-2)	
Corn	
Cotton	
Soybean	
Arkansas (A-9)	
Cotton	
Rice	
Soybean	
California (A-16)	
Cotton	
Rice	
Georgia (A-21)	
Corn	
Soybean	
Illinois (A-26)	
Corn	
Soybean	
Indiana (A-31)	
Corn	
Soybean	
Iowa (A-36)	
Corn	
Soybean	
Louisiana (A-41)	
Cotton	
Rice	
Soybean	
Minnesota (A-48)	
Barley	
Corn	
Soybean	
Spring Wheat	
Mississippi (A-57)	
Cotton	
Soybean	
Missouri (A-62)	
Corn	
Soybean	
Nebraska (A-67)	
Corn	
Sorghum	
Soybean	
North Carolina (A-74)	
Corn	
Soybean	
North Dakota (A-79)	
Barley	
Durum Wheat	
Spring Wheat	
Ohio (A-86)	
Corn	
Soybean	
Pennsylvania (A-91)	
Corn	
South Carolina (A-94)	
Corn	
Soybean	
Texas (A-99)	
Cotton	
Rice	
Sorghum	
Soybean	

B. Seeding Rate and Row Width Histograms

Alabama (B-2)	Minnesota (B-48)	Texas (B-99)
Corn	Barley	Cotton
Cotton	Corn	Rice
Soybean	Soybean	Sorghum
Arkansas (B-9)	Spring Wheat	Soybean
Cotton	Mississippi (B-57)	
Rice	Cotton	
Soybean	Soybean	
California (B-16)	Nebraska (B-67)	
Cotton	Corn	
Rice	Sorghum	
Georgia (B-21)	Soybean	
Corn	North Carolina (B-74)	
Soybean	Corn	
Illinois (B-26)	Soybean	
Corn	North Dakota (B-79)	
Soybean	Barley	
Indiana (B-31)	Durum Wheat	
Corn	Spring Wheat	
Soybean	Ohio (B-86)	
Iowa (B-36)	Corn	
Corn	Soybean	
Soybean	Pennsylvania (B-91)	
Louisiana (B-41)	Corn	
Cotton	South Carolina (B-94)	
Rice	Corn	
Soybean	Soybean	

### C. Plant Height Plots

Alabama (C-2)	Minnesota (C-29)	Texas (C-59)
Corn	Barley	Cotton
Cotton	Corn	Rice
Soybean	Soybean	Sorghum
Arkansas (C-6)	Spring Wheat	Soybean
Cotton	Mississippi (C-34)	
Rice	Corn	
Soybean	Soybean	
California (C-10)	Missouri (C-37)	
Cotton	Corn	
Rice	Soybean	
Georgia (C-13)	Nebraska (C-40)	
Corn	Corn	
Soybean	Sorghum	
Illinois (C-16)	Soybean	
Corn	North Carolina (C-44)	
Soybean	Barley	
Indiana (C-19)	Durum Wheat	
Corn	Spring Wheat	
Soybean	Ohio (C-51)	
Iowa (C-22)	Corn	
Corn	Soybean	
Soybean	Pennsylvania (C-54)	
Louisiana (C-25)	Corn	
Cotton	South Carolina (C-56)	
Rice	Corn	
Soybean	Soybean	

#### D. Percent Ground Cover Plots

Alabama (D-2)	Missouri (D-37)
Corn	Corn
Cotton	Soybean
Soybean	Nebraska (D-40)
Arkansas (D-6)	Corn
Cotton	Sorghum
Rice	Soybean
Soybean	North Carolina (D-44)
California (D-10)	Corn
Cotton	Soybean
Rice	North Dakota (D-47)
Georgia (D-13)	Barley
Corn	Durum Wheat
Soybean	Spring Wheat
Indiana (D-19)	Ohio (D-51)
Corn	Corn
Soybean	Soybean
Iowa (D-22)	Pennsylvania (D-54)
Corn	Corn
Soybean	South Carolina (D-56)
Louisiana (D-25)	Corn
Cotton	Soybean
Rice	Texas (D-59)
Minnesota (D-29)	Corn
Barley	Rice
Corn	Sorghum
Soybean	Soybean
Spring Wheat	
Mississippi (D-34)	
Cotton	
Soybean	

**E. Crop Growth Stage Plots**

**Alabama (E-2)**

Corn  
Cotton  
Soybean

**Arkansas (E-6)**

Cotton  
Rice  
Soybean

**California (E-10)**

Cotton  
Rice

**Georgia (E-13)**

Corn  
Soybean

**Illinois (E-16)**

Corn  
Soybean

**Indiana (E-19)**

Corn  
Soybean

**Iowa (E-22)**

Corn  
Soybean

**Louisiana (E-25)**

Cotton  
Rice  
Soybean

**Minnesota (E-29)**

Barley  
Corn  
Soybean  
Spring Wheat

**Mississippi (E-34)**

Cotton  
Soybean

**Nebraska (E-40)**

Corn  
Sorghum  
Soybean

**North Carolina (E-44)**

Corn  
Soybean

**North Dakota (E-47)**

Barley  
Durum Wheat  
Spring Wheat

**Ohio (E-51)**

Corn  
Soybean

**Pennsylvania (E-54)**

Corn

**South Carolina (E-56)**

Corn  
Soybean

**Texas (E-59)**

Cotton  
Rice  
Sorghum  
Soybean

**F. Program Listing**



## 1. INTRODUCTION

Analysis of research data, Bauer et al. (1979), collected at the Purdue Agronomy Farm and at the super sites have shown that crop reflectance (e.g. greenness) profile of crop canopies is significantly affected by the planting date, emergence date, biomass, percent soil cover, and maturity stage. An experiment at the Purdue Agronomy Farm using 81 soybean plots with three row spacings (15, 46, and 91 cm) showed that row width caused significant differences in both the red and near infrared reflectance until 100 percent ground cover was reached by the wider rows. In addition, it was also noted by Rice et al. (1980) that plant height affected the peak values of the reflectance greenness and that reflectance in the red and near infrared bands correlated with the percent ground cover.

Results of experiments performed by Bauer et al. (1978) on spring wheat at the Williston, North Dakota Agriculture Experiment Station during the summer of 1977 have shown that the planting date is the primary factor affecting spectral response from the early stages of plant development to the flowering stage of maturity. During the flowering to ripening stages, the soil moisture level becomes the primary factor influencing spectral response. Although planting date is the dominant influencing factor at the beginning of the growth cycle and soil moisture dominates at the end, small variations in spectral response during a particular growth stage can be attributed to percent soil cover, leaf area index, and biomass.

During the 1979 crop year, 160 segments had ground truth inventories and periodic observation data collected for the AgRISTARS project by ESCS<sup>1</sup>. These data were collected and recorded in four categories (cards): initial interview of the farm operator (A cards), periodic observations of the fields (B cards), final interview of the farm operator (C cards), and general comments (D cards). For this project, a subset of 143 segments in 18 states were examined to obtain an overview of farming practices and growth aspects of

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<sup>1</sup>Economics, Statistics and Cooperative Service, U.S. Department of Agriculture.  
<sup>2</sup>Enumerator's Manual, 1979 Ground Data Survey.

individual crops in specific states. Plots were made for planting date, emergence date, seeding rate, row width, plant height, ground cover, and growth stage. The main crops being studied were barley, corn, cotton, durum wheat, rice, sorghum, soybeans, and spring wheat. This information was compiled so that the AgRISTARS analyst can better understand different agronomic practices as a function of crop and state.

The planting date, emergence date, seeding rate, and row width information has been plotted in histograms and may be found in appendices A and B. Using these histograms it is possible for the analyst to develop a better understanding of the crop development cycles and their variability within a state. For example, soybean fields which have very narrow row widths (8 inches) will exhibit higher reflectance at the same cropstage than will more usual (32 inch) widths utilized in the corn belt (Figure A). The plant height, percent ground cover, and crop growth stage information are displayed as a function of the day of the year in the plots found in appendices C, D, and E. These plots may be used in the same manner as the histograms, and the crop growth stage plot may prove especially useful in conjunction with other information presented.

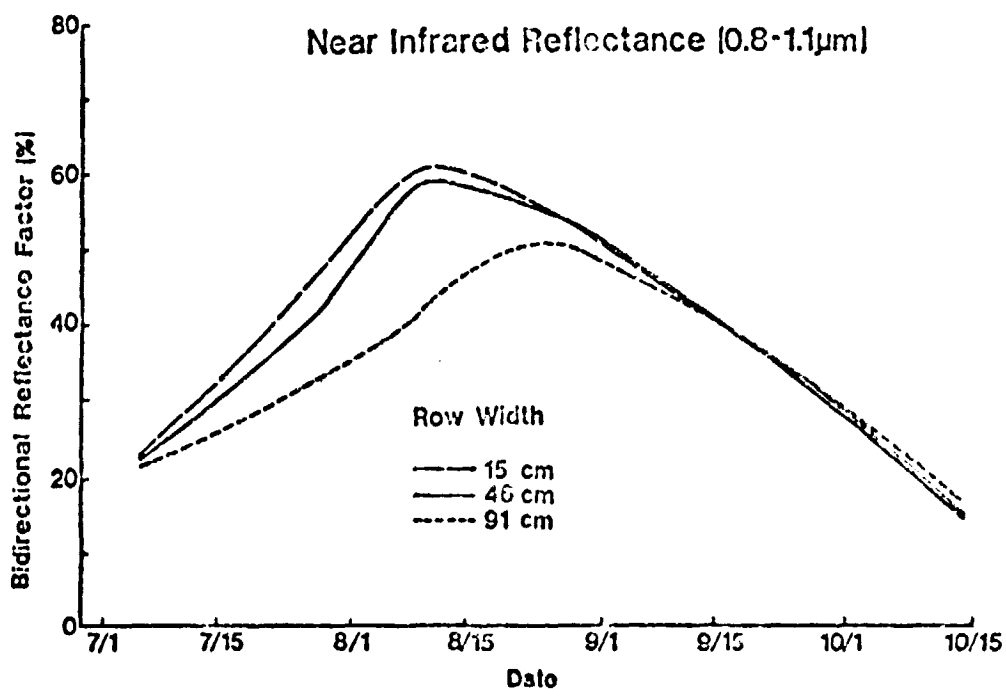


Figure A.- Effect of row width on soybean canopy reflectance as a function of measurement date.

## 2. RESULTS

Summary plots of planting date and row width for corn and soybeans were compiled for groups of states so that general cropping practices can easily be distinguished and detailed studies of their spectral implications can commence.

### 2.1 SOYBEANS

Planting date histograms for soybeans in Georgia, South Carolina, and North Carolina (figure 1) and for Iowa, Illinois, and Indiana (figure 2) appear somewhat normally distributed whereas the histograms for Mississippi, Louisiana, Texas, and Arkansas (figure 3) appears to be bimodal. The cause is not known at this time, but is suspected to be due to meteorological events. Further investigation will take place when the 1979 weather vector data base is prepared for these segments. The row width for the Southeast U.S. (figure 4) has a mode near 37 inches, whereas the corn belt (figure 5) has about an equal amount at 37 and 30 inches and about 5 percent drilled at 9 inches and a few broadcast. The gulf coast (figure 6) shows about 23 percent with 7 inch and more narrow rows. These differences will undoubtedly affect signature responses of individual soybean fields.

### 2.2 CORN

Corn in the Southeast U.S. (figure 7) has a wide distribution of planting dates (day 075 to 104) whereas the corn belt has a much more narrow distribution (figure 8). Row widths of 37 inches are predominant in the Southeast U.S. (figure 9) and are at 30 inches and 38 inches in the corn belt (figure 10). This will make the early spectral development different between these regional areas.

### 2.3 SMALL GRAINS

In the Northern Great Plains the planting date for barley appears to be bimodal (figure 11). The first mode is coincident with spring wheat at day 142 (figure 12) whereas the second mode is coincident with durum wheat at

day 158 (figure 13). This may cause some confusion between barley and the other two crops early in the season, but could allow some discrimination between spring wheat and durum wheat if this planting date sequence is normally followed by the farmers.

In table 1, the results of an ESCS study of row spacings for soybeans for 1977, 1978, and 1979 are presented, and the results of this study for the corresponding states for 1979 are presented in table 2. In general, the results from this study follow the trends of the ESCS results. This report includes soybean row width information for several important AgRISTARS regions (e.g. Georgia, North Carolina, and Louisiana) not included in the ESCS study. The ESCS field sampling included more fields and the fields were more independent whereas in this project a fewer number of fields had data collected and these fields were concentrated in a few segment areas thus causing more potential sample error. The ESCS data shows from 1977 to 1979 that the trend is toward narrower row widths, yet there is not a drastic change.

### 3. ACKNOWLEDGEMENTS

The authors wish to thank Dr. Gautum Bahwar for the assistance given in the use of the fortran plotting routines which he authored.

TABLE 1

MEASURED ROW SPACING OF SOYBEANS: PERCENTAGES DISTRIBUTION AND AVERAGE WIDTH FOR SELECTED STATES, 1977-79 1/

STATE AND YEAR	NUMBER OF SAMPLES	ROW WIDTH GROUPS (INCHES)					AVERAGE WIDTH 2/ (INCHES)	
		10.0 & LESS 2/	10.1-10.5	10.6-10.9	11.0-11.5	11.6 & GREATER		
PERCENT OF PLOTS								
ARK	1977	150	5.3	1.0	.3	23.3	70.1	35.5
	1978	143	4.3	.3	1.0	21.3	73.1	36.3
	1979	139	12.9	0	.7	23.7	62.7	36.1
ILL	1977	163	2.5	1.5	5.2	44.2	46.6	32.9
	1978	166	2.4	.6	4.5	44.9	47.6	33.5
	1979	164	5.2	1.2	5.5	48.5	39.6	31.7
IND	1977	109	1.9	3.7	6.9	46.3	41.2	32.2
	1978	112	5.4	2.2	5.8	42.0	44.6	32.4
	1979	105	3.3	.5	6.7	47.6	41.9	32.8
IOWA	1977	155	1.0	2.5	2.3	34.2	60.0	34.7
	1978	141	.7	1.1	7.8	41.1	49.3	32.5
	1979	145	.7	.7	4.2	42.6	51.8	34.1
MINN	1977	93	.5	2.7	3.8	42.5	50.5	33.4
	1978	66	4.1	2.3	6.4	47.1	40.1	32.5
	1979	89	7.9	1.7	7.9	47.1	35.4	31.3
MISS	1977	124	12.1	0	2.4	8.5	77.0	37.3
	1978	121	14.5	.6	0	11.2	73.5	37.1
	1979	124	10.1	2.0	4.0	19.8	63.3	35.4
MO	1977	139	2.9	.7	2.2	38.5	55.7	34.5
	1978	134	3.8	.7	3.0	45.1	47.4	33.8
	1979	138	5.1	1.8	3.6	43.1	46.4	32.5
OHIO	1977	103	22.3	10.2	7.8	35.8	20.9	26.6
	1978	104	22.6	7.7	8.7	41.3	19.7	26.1
	1979	114	28.1	14.0	1.8	37.7	18.4	23.6

1/ BASED ON ROW MEASUREMENTS IN PLOTS SELECTED FOR SELECTIVE YIELD SAMPLES. 1977 AND 1978 RESULTS ONLY.  
 2/ BROADCAST SOYBEANS INCLUDED AS 10.0 INCHES AND LESS BUT EXCLUDED IN COMPUTATION OF AVERAGE WIDTH.

TABLE 2

STATE	NUMBER OF SAMPLES	SOYBEAN ROW WIDTH - 1979				
		ROW WIDTHS (INCHES)				
		10.0 & LESS	10.1-18.5	18.6-28.5	28.6-34.5	35.6 & GREATER
ARKANSAS	95	2.5	0.0	0.0	49.5	48.0
ILLINOIS	75	6.5	1.5	0.0	38.5	53.5
INDIANA	120	9.0	0.5	2.0	59.0	29.0
IOWA	150	4.0	3.0	40.0	0.0	55.0
MINNESOTA	15	0.0	33.0	0.0	60.0	7.0
MISSISSIPPI	71	8.0	1.0	1.0	56.0	33.0
OHIO	74	51.0	12.0	5.0	26.0	5.0

## DISCUSSION OF APPENDICES

At the beginning of each histogram the topic being displayed such as planting date is printed. The crop type is listed next (a definition of crop codes is located in table 2). A list of segments containing the crop of interest for the particular state follows. The rest of the information directly concerns the histograms. The step size is the range of data values which are combined into each of the ten groups. The centerpoint value is printed to the left of each of the ten bands, and the range extends one half of a step size on either side of it. The centerpoint values are displayed in exponential notation. For example, 1.293E+02 is  $1.293 \times 10^2$  or 129.3. Also, the number of observations listed is the total number of fields for which data are being histogrammed. Along the first and last lines of the histogram, the percentages are listed. The length of a bar can thus be read as a percentage of fields in the given range. Finally, the last two lines list the centerpoint of each group followed by the actual number of fields which are in that group. It should also be noted that the histograms are not cumulative.

The three plots in appendices C, D, and E show plant height, percent ground cover, and crop growth stage respectively as a function of the day of the year. The day of the year is plotted along the x-axis and is divided by one hundred. The plant height is given in inches, the ground cover in percentage, and crop growth stage is on a scale of 1 to 7 with 1 signifying that the crop has been planted and 7 meaning that it is harvested. The plots give the number of fields which are at a certain growth value on a given day of the year. These numbers must be single digit numerals. Therefore, alphabetic characters and symbols are assigned to numbers greater than 9 (see table 4). Also, there are exactly ten columns between each of the values along the x-axis, and the total number of points received for plotting is printed in the upper left-hand corner under MPOINT.

TABLE 3

CROP CODES

<u>CODE</u>	<u>CROP TYPE</u>
BR	BARLEY
CR	CORN
CT	COTTON
DW	DURUM WHEAT
RI	RICE
SR	SORGHUM
SO	SOYBEAN
SW	SPRING WHEAT



TABLE 4  
SYMBOL CODING FOR PLOTS

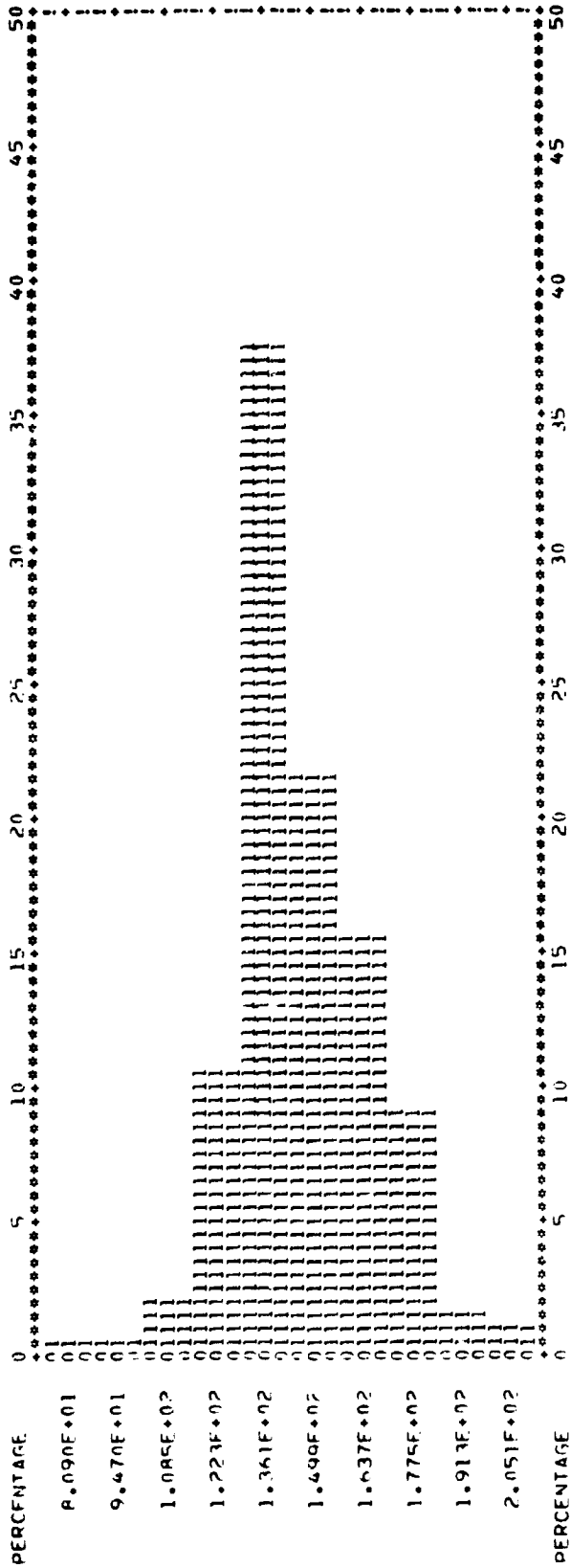
<u>SYMBOL</u>	<u>NUMERICAL VALUE</u>
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	10
A	11
B	12
C	13
D	14
E	15
F	16
G	17
H	18
I	19
J	20
K	21
L	22
M	23
N	24
O	25
P	26
Q	27
R	28
S	29
T	30
U	31
V	32
W	33
X	34
Y	35
Z	36
+	37 or greater

A. PLANTING DATE AND EMERGENCE DATA HISTOGRAMS

PLANTING DATE

CROP TYPE IS 50  
 SEGMENTS = 311 312 330 332 333 334 336 337 338 339 340 341 342 343 344

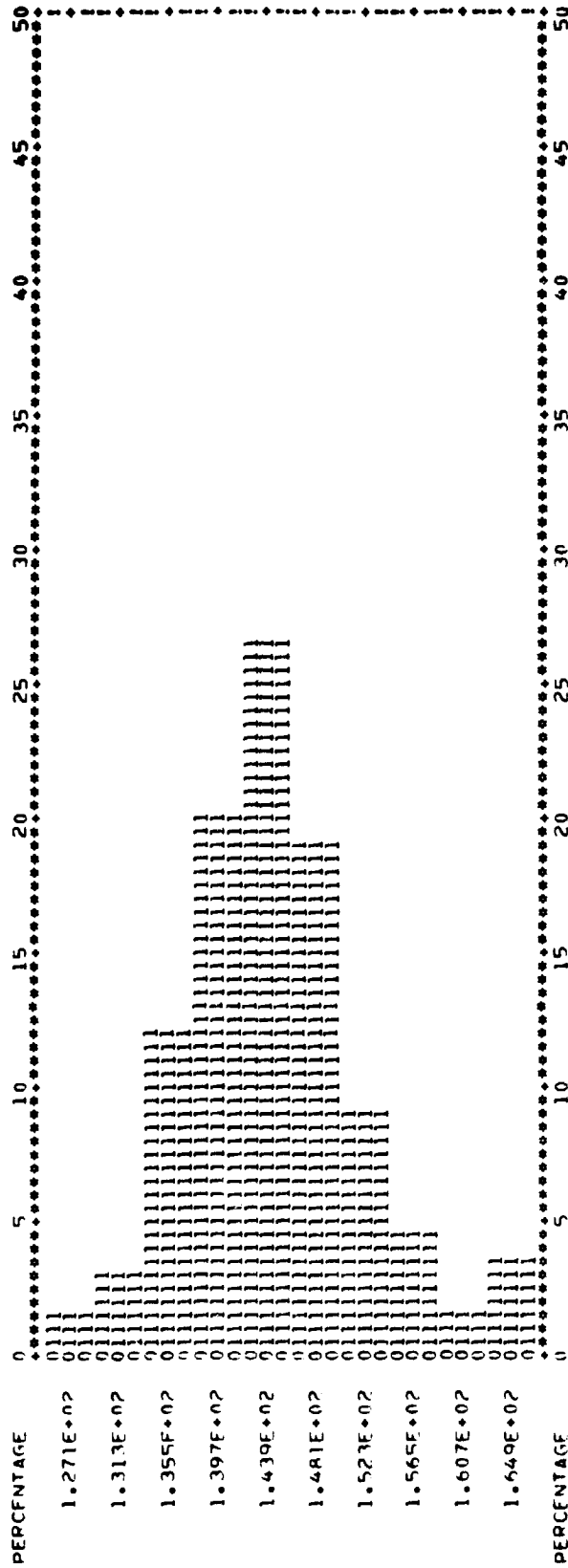
STFP = 13.4000011  
 CENTERPOINT OF INITIAL GROUP = 80.8999786  
 CENTERPOINT OF FINAL GROUP = 205.099991  
 NUMBER OF OBSERVATIONS = 199  
 NUMBER OF GROUPS = 10



CONTENT  
 80.90 94.70 108.50 122.30 136.10 149.90 163.70 177.50 191.30 205.10  
 1.00 1.00 4.00 21.00 74.00 43.00 31.00 18.00 3.00 2.00

PLANTING DATE

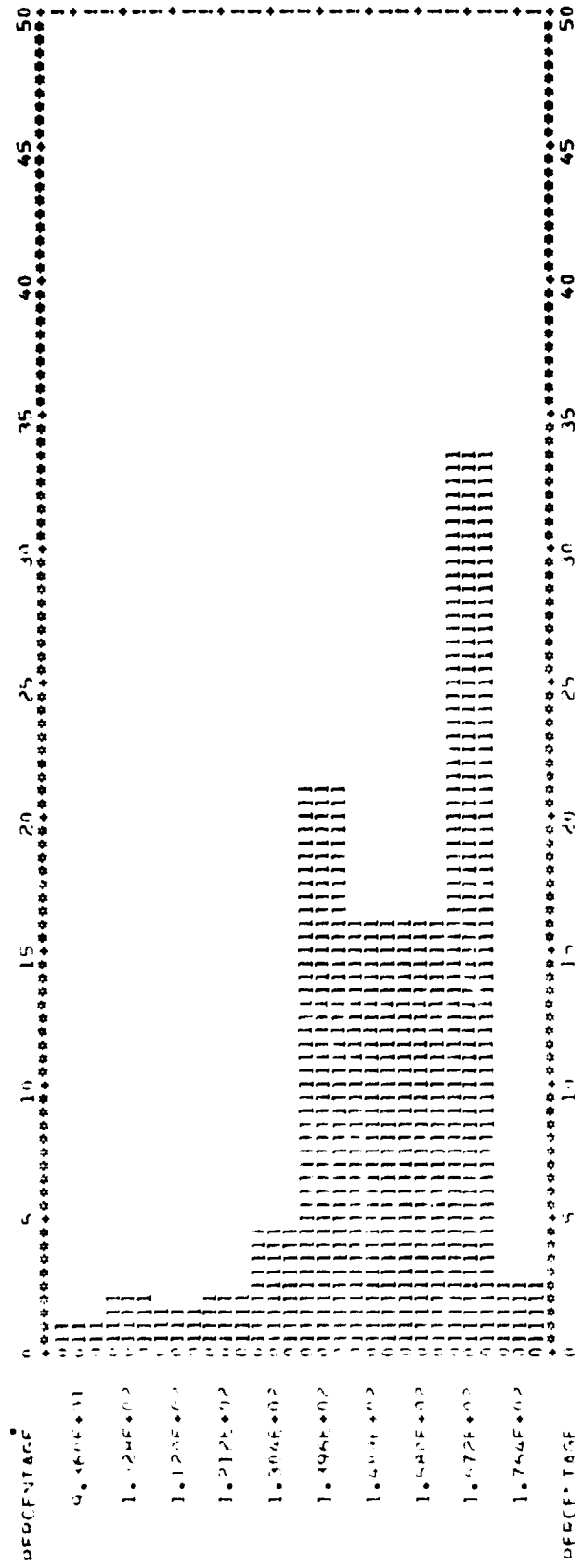
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 SEGMENTS = 107 114 123 127 133 135 144 145 801 804 805 824 828 833 837  
 843 851 856 883 886 892 893  
 STEP = 42  
 CENTERPOINT OF INITIAL GROUP = 127.099976  
 CENTERPOINT OF FINAL GROUP = 164.899994  
 NUMBER OF OBSERVATIONS = 273  
 NUMBER OF GROUPS = 10



HIN 127.10 131.30 135.50 139.70 143.90 148.10 152.30 156.50 160.70 164.90  
 CONTENT 4.00 8.00 12.00 16.00 20.00 24.00 28.00 32.00 36.00 40.00

PLANTING DATE

CROP TYPE IS 50  
 SEGMENTS = 102 103 104 174 177 194 195 196 198 200 266 267 268 269 270  
 271 273 275 297 298 299 301 302 303 304 305  
 STEP = 9.20000172 NUMBER OF OBSERVATIONS = 327  
 CENTERPOINT OF INITIAL GROUP = 93.5999756 NUMBER OF GROUPS = 10  
 CENTERPOINT OF FINAL GROUP = 176.399994



PERCENTAGE

CONT

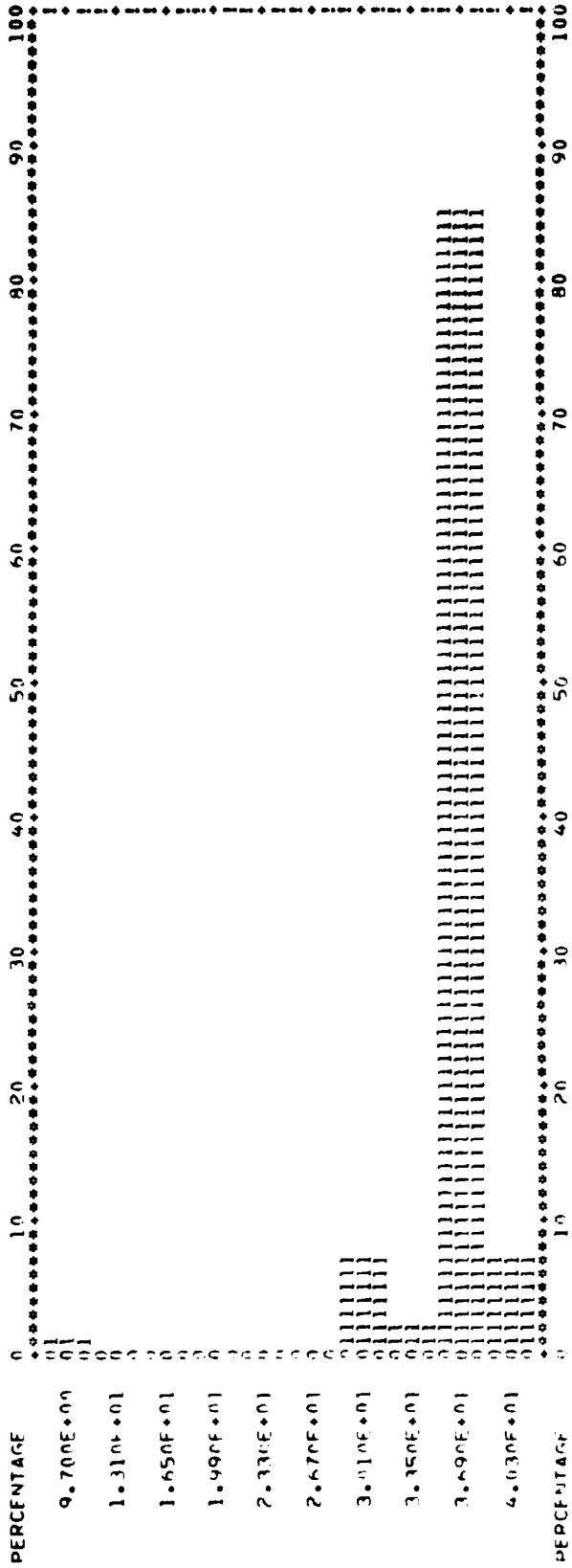
93.60	102.00	112.00	121.20	130.40	139.60	148.80	158.00	167.20	176.40
3.00	7.00	12.00	7.00	15.00	68.00	53.00	52.00	109.00	8.00

ROW WIDTH - INCHES

CROP TYPE IS 50  
SEGMENTS = 311

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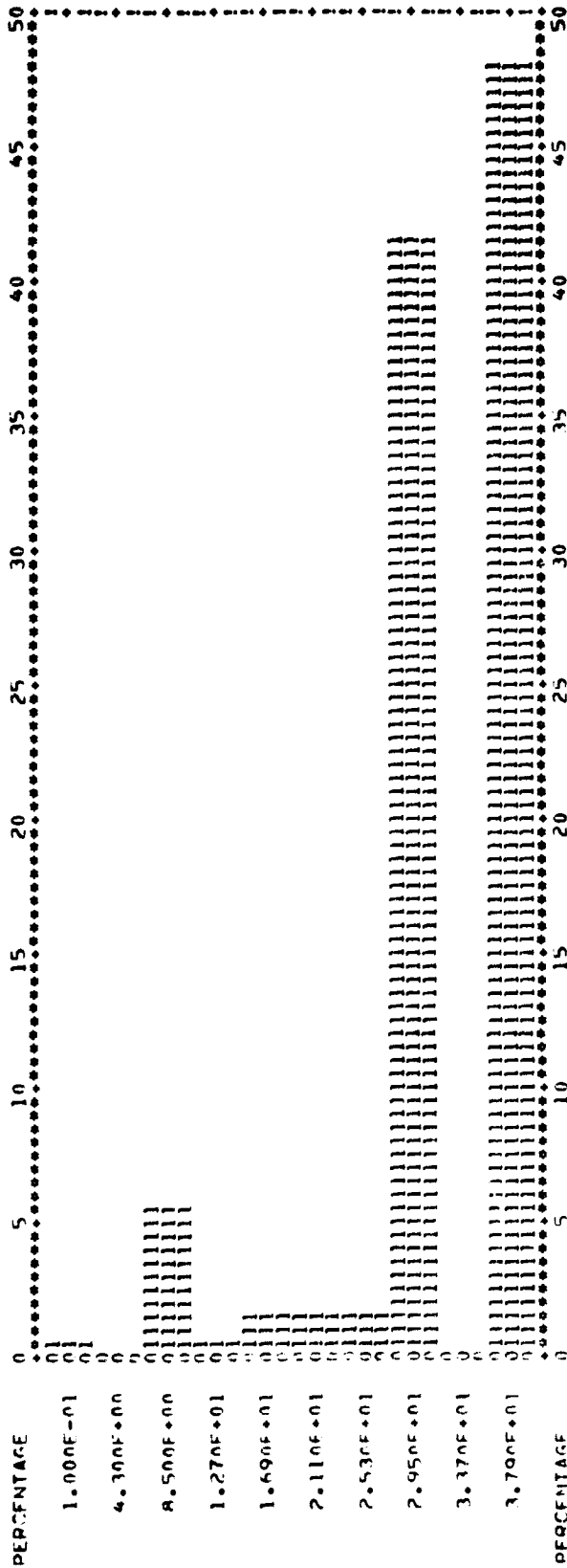
STEP = 3.39999676  
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CENTERPOINT OF FINAL GROUP = 40.29999874 NUMBER OF GROUPS = 10



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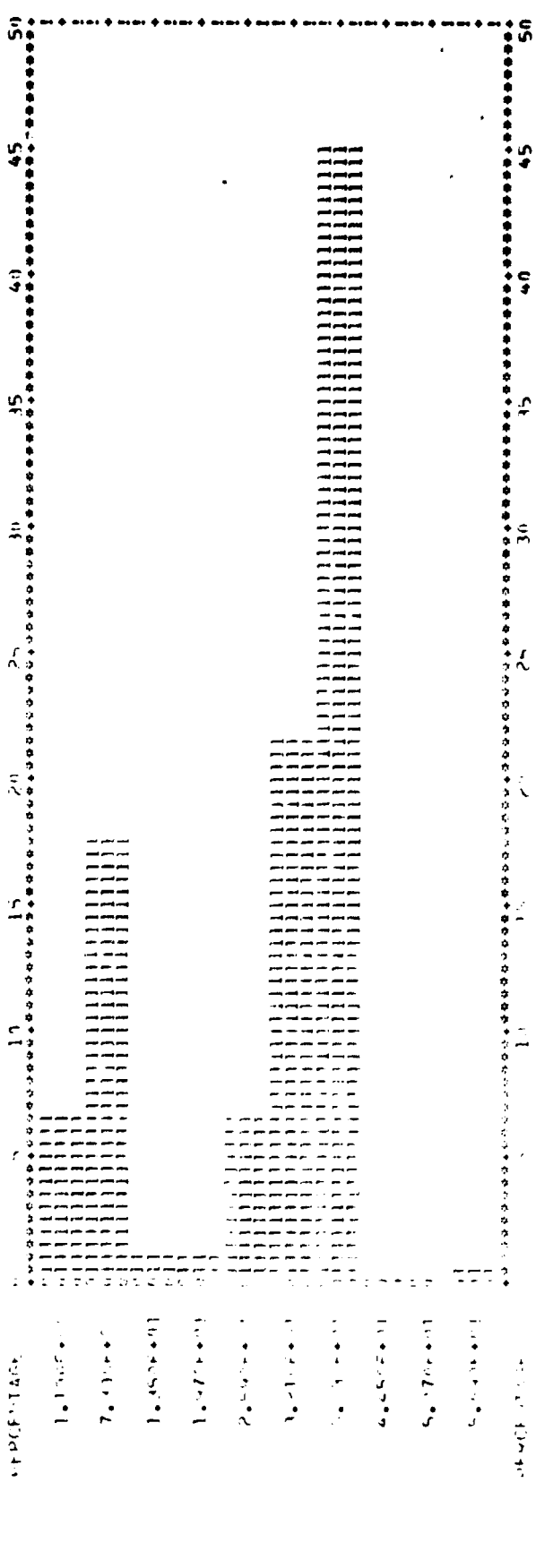
ROW WIDTH - INCHES

CROP TYPE IS 50  
 SEGMENTS = 107 114 123 127 133 135 144 145 801 804 805 824 828 833 837  
 #43 851 856 893 896 892 893  
 STEP = 4.19999790  
 CENTERPOINT OF INITIAL GROUP = 0.99999841  
 CENTERPOINT OF FINAL GROUP = 37.9999939  
 NUMBER OF OBSERVATIONS = 273  
 NUMBER OF GROUPS = 10



NO. 10104 - PAGES

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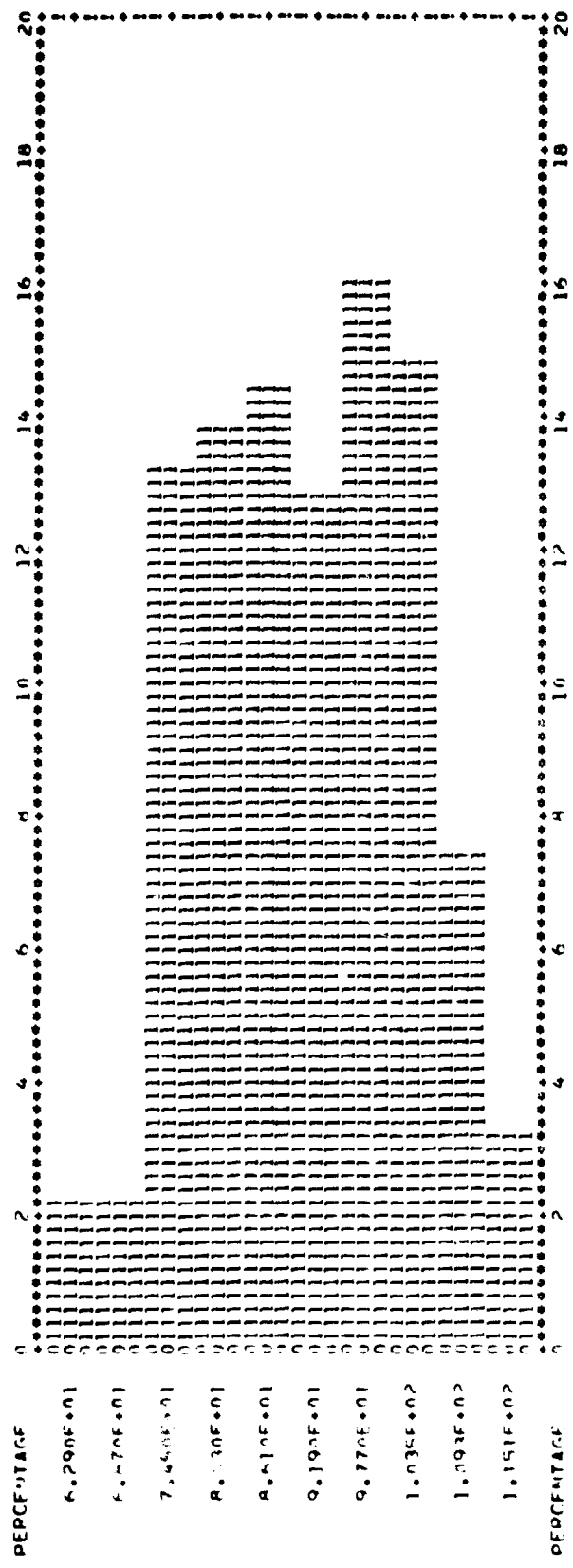


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PLANTING DATE

CROP TYPE IS CR  
 SEGMENTS = 311 312 330 332 333 334 336 337 338 339 341 342 343 344  
 STEP = 5  
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 CENTERPOINT OF FINAL GROUP = 115.999991 NUMBER OF GROUPS = 10

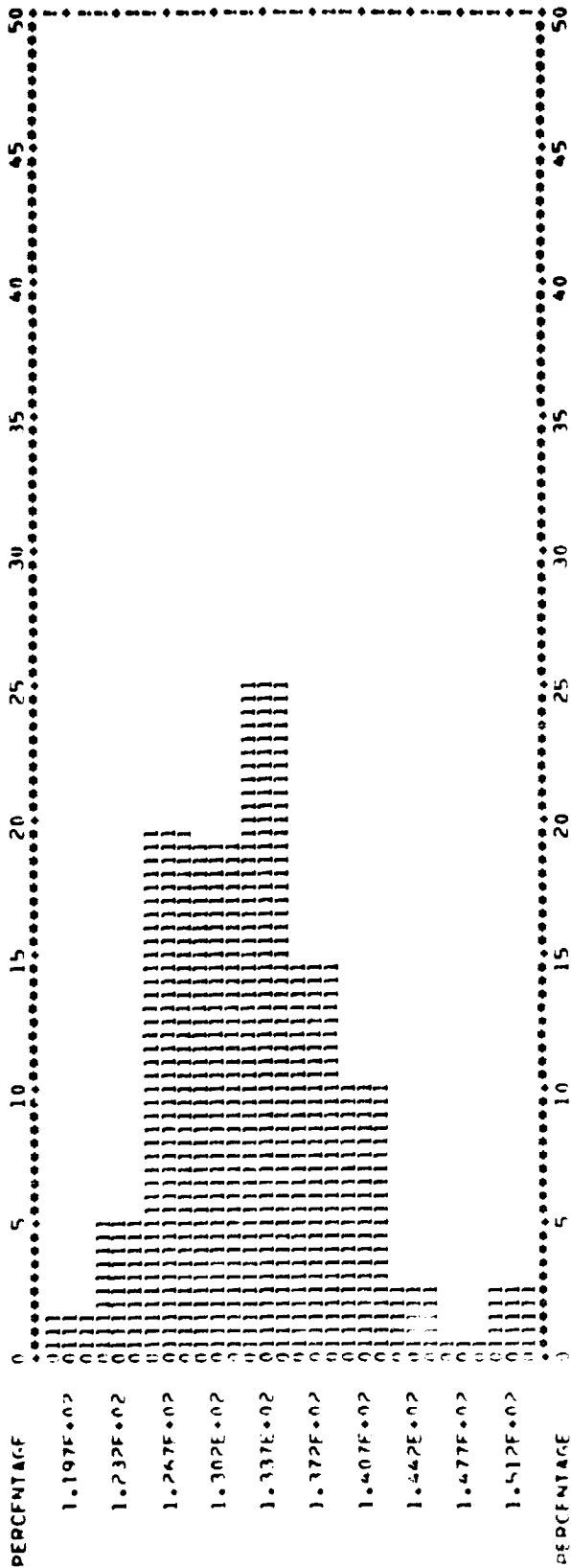


CONTENT 62.50 64.50 66.50 68.50 70.50 72.50 74.50 76.50 78.50 80.50 82.50 84.50 86.50 88.50 90.50 92.50 94.50 96.50 98.50 100.50 102.50 104.50 106.50 108.50 110.50 112.50 114.50 116.50

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PLANTING DATE

CROP TYPE IS CR  
 SEGMENT = 107 114 123 127 133 135 144 145 146 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000



INITIAL GROUP = 119.74985  
 FINAL GROUP = 151.25000  
 NUMBER OF OBSERVATIONS = 265  
 NUMBER OF GROUPS = 10

ROW WIDTH - INCHES

GROUP TYPE IS CO

SEGMENTS = 311

STEP = 120000172

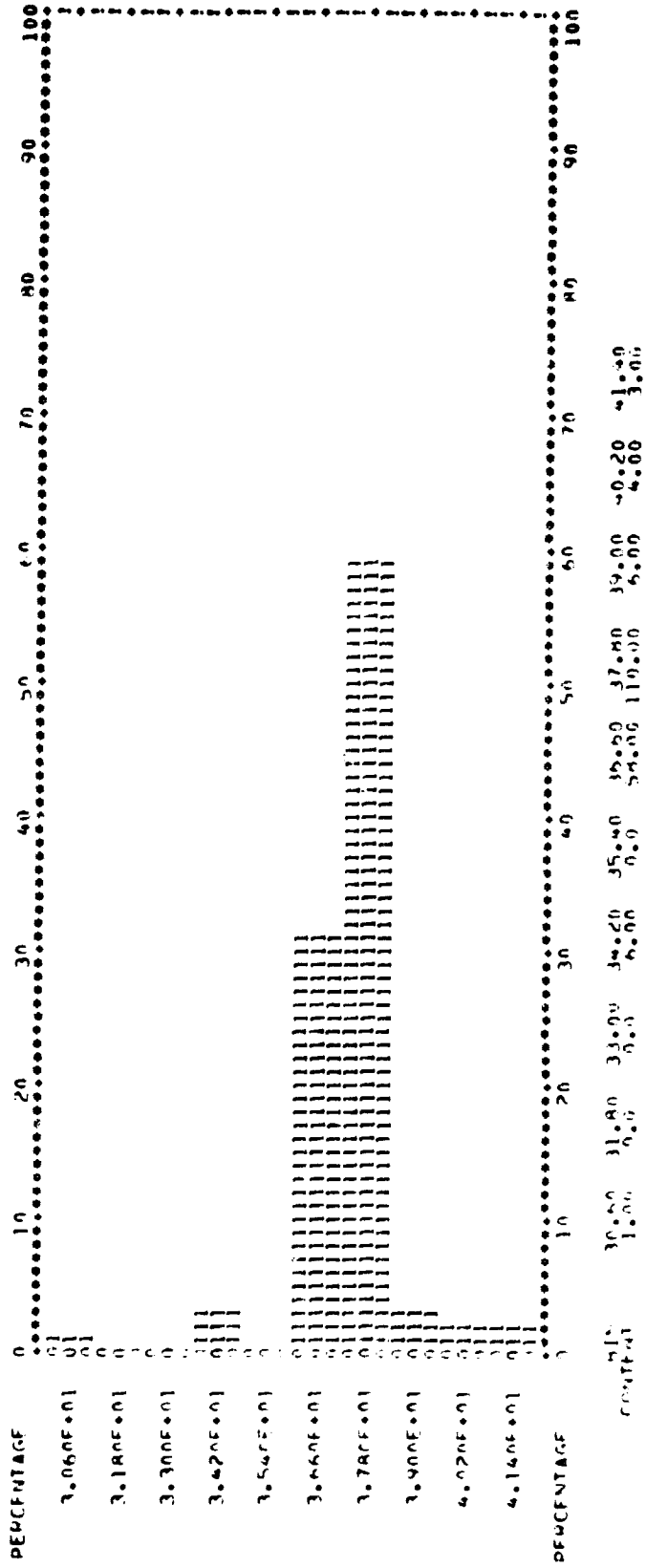
CENTERPOINT OF INITIAL GROUP = 30.5949756

CENTERPOINT OF FINAL GROUP = 41.3449939

312 330 332 333 374 336 337 334 339 341 342 343 344

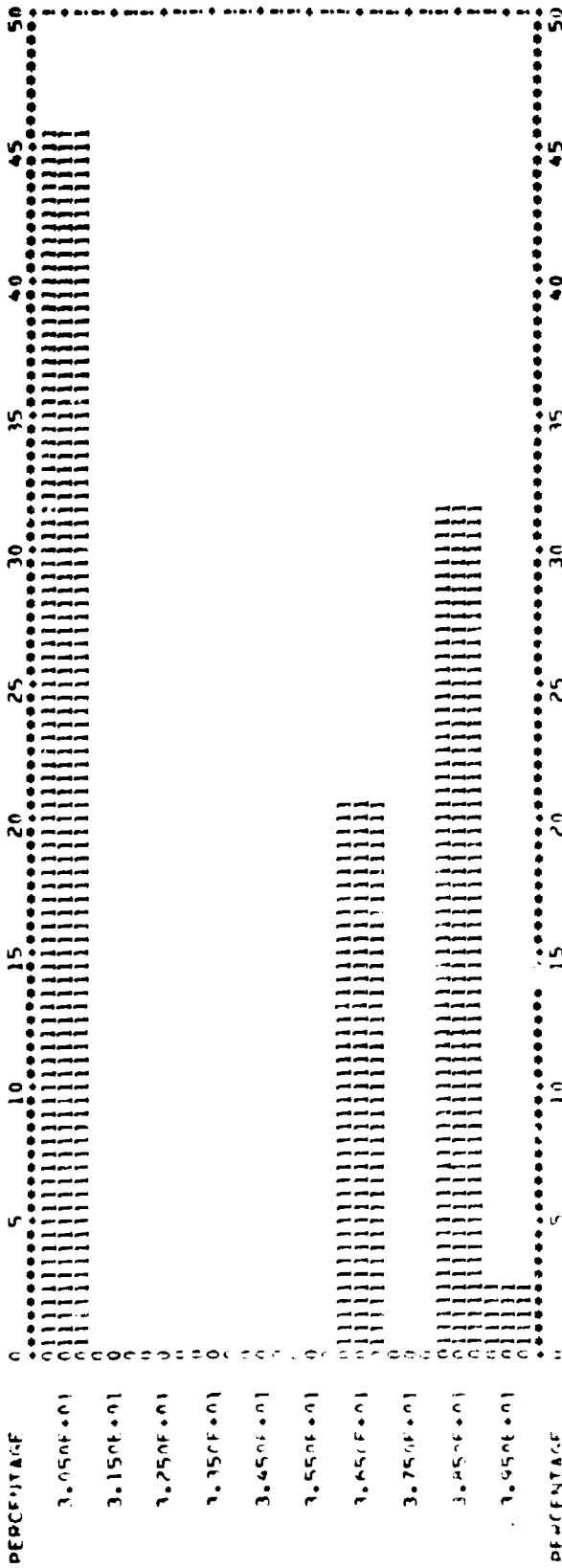
NUMBER OF OBSERVATIONS = 189

NUMBER OF GROUPS = 10



ROW WIDTH - INCHES

CROP TYPE IS CP  
 SEGMENTS = 107 114 123 127 133 135 144 145 601 804 A24 628 833 837 843  
 MS1 A56 A43 A43 A43 A43  
 STEP = 1.00000095  
 CENTERPOINT OF INITIAL GROUP = 30.4999847  
 CENTERPOINT OF FINAL GROUP = 39.5000000  
 NUMBER OF OBSERVATIONS = 265  
 NUMBER OF GROUPS = 10



31.05E+01  
 3.15E+01  
 3.25E+01  
 3.35E+01  
 3.45E+01  
 3.55E+01  
 3.65E+01  
 3.75E+01  
 3.85E+01  
 3.95E+01

30.50 31.50 32.50 33.50 34.50 35.50 36.50 37.50 38.50 39.50  
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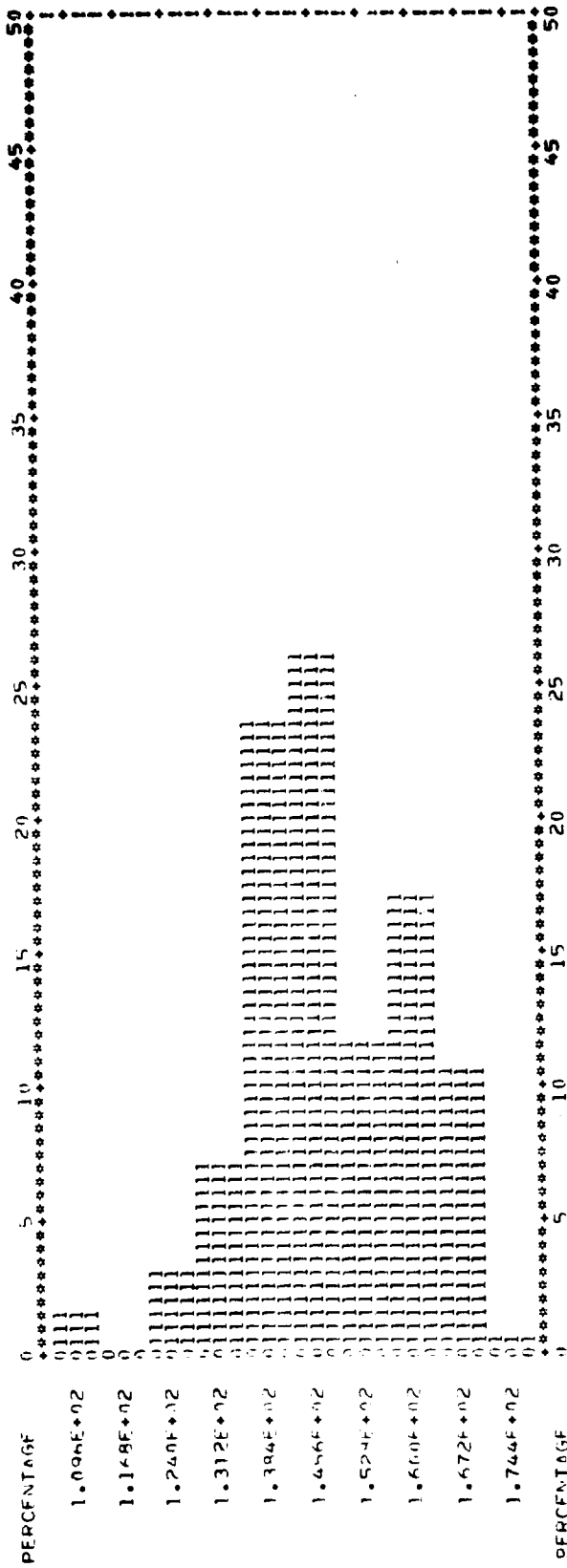
121.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

PRINTING DATE

COPY TYPE IS 40  
 SEGMENTS =  
 1402 1411 1910 1917 1919  
 1425

1347 1302 1394 1399 1457 1401 1487 1472 1514 1515 1566 1571 1544  
 1630 1636 1645  
 1924 1974  
 72000172  
 STEP = INITIAL GROUP = 104.599976 NUMBER OF OBSERVATIONS = 222  
 CENTERPOINT OF FINAL GROUP = 174.399994 NUMBER OF GROUPS = 10

Fig. 1

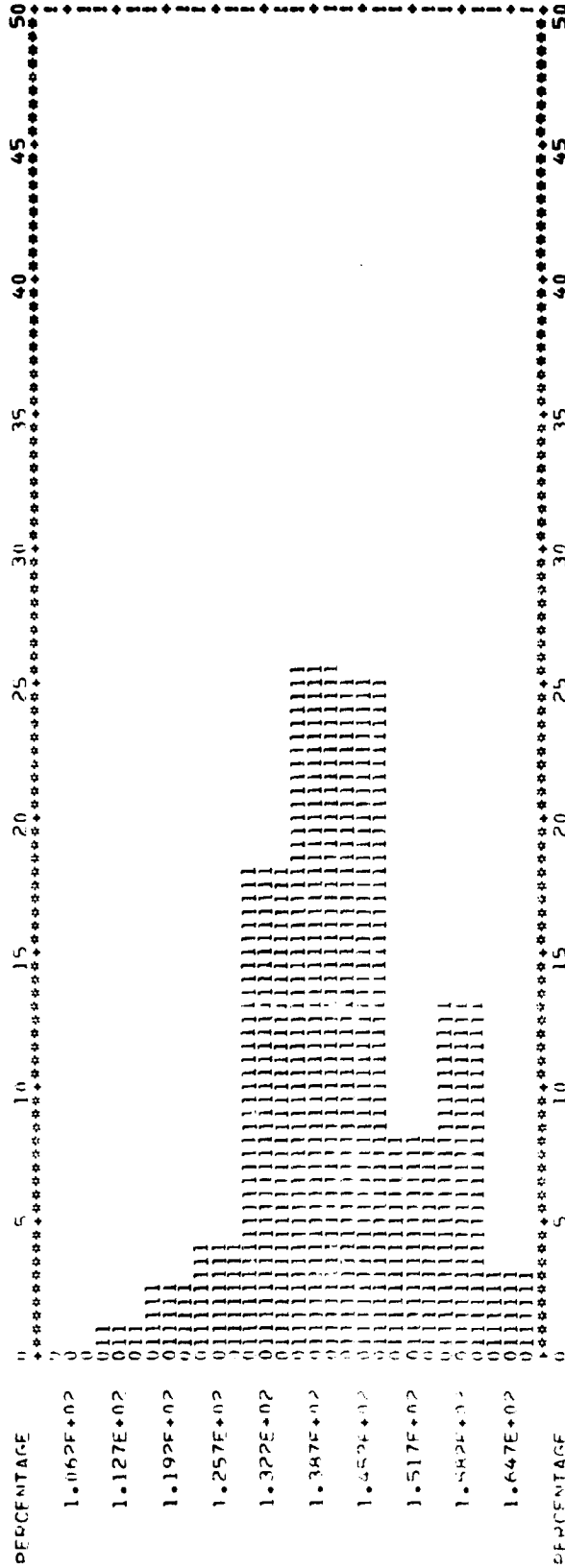


MIN 109.60 116.80 124.00 131.20 138.40 145.60 152.80 160.00 167.20 174.40  
 COMMENT 3.00 0.00 7.00 15.00 52.00 58.00 25.00 38.00 23.00 1.00

PLANTING DATE

CROP TYPE IS SW  
 SFGMENTS = 1380 1387 1392 1394 1399 1457 1461 1472 1473 1514 1516 1566 1571  
 1584 1602 1611 1612 1619 1627 1633 1636 1645 1650 1653 1655 1658 1661  
 1664 1825 1842 1919 1918 1924 1934 1974

NUMBER OF OBSERVATIONS = 433  
 NUMBER OF GROUPS = 10  
 CENTRE POINT OF INITIAL GROUP = 100.750000  
 CENTRE POINT OF FINAL GROUP = 164.750000



CONTENT 106.25 112.75 119.25 125.75 132.25 139.75 145.25 151.75 158.25 164.75  
 1.00 4.00 10.00 18.00 27.00 35.00 42.00 48.00 53.00 57.00

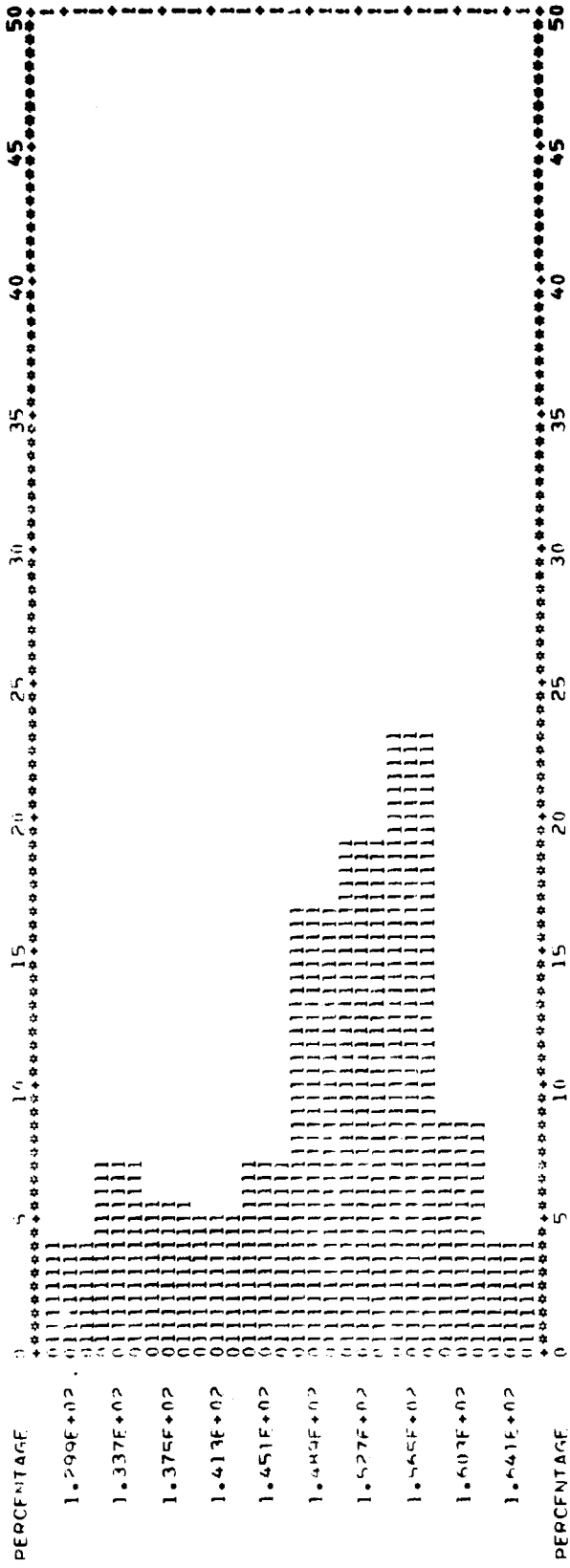
F.3

PLANTING DATE

CROP TYPE IS DM  
SFGMFC =  
1602 1611

1347 1392 1394 1457 1461 1467 1472 1054  
1417 1417 1427 1424 1474  
STP = 340000114  
CENTERPOINT OF INITIAL GROUP = 129.899979  
CENTERPOINT OF FINAL GROUP = 164.899941

NUMBER OF OBSERVATIONS = 126  
NUMBER OF GROUPS = 10



CONTENT 129.90 133.70 137.50 141.30 145.10 148.90 152.70 156.50 160.30 164.10  
5.00 9.00 7.00 6.00 9.00 21.00 24.00 29.00 11.00 5.00

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OF POOR QUALITY

APPENDIX A

PLANTING DATE AND EMERGENCE DATE HISTOGRAMS

~~A-1~~  
24



ALABAMA

~~A-2~~  
25

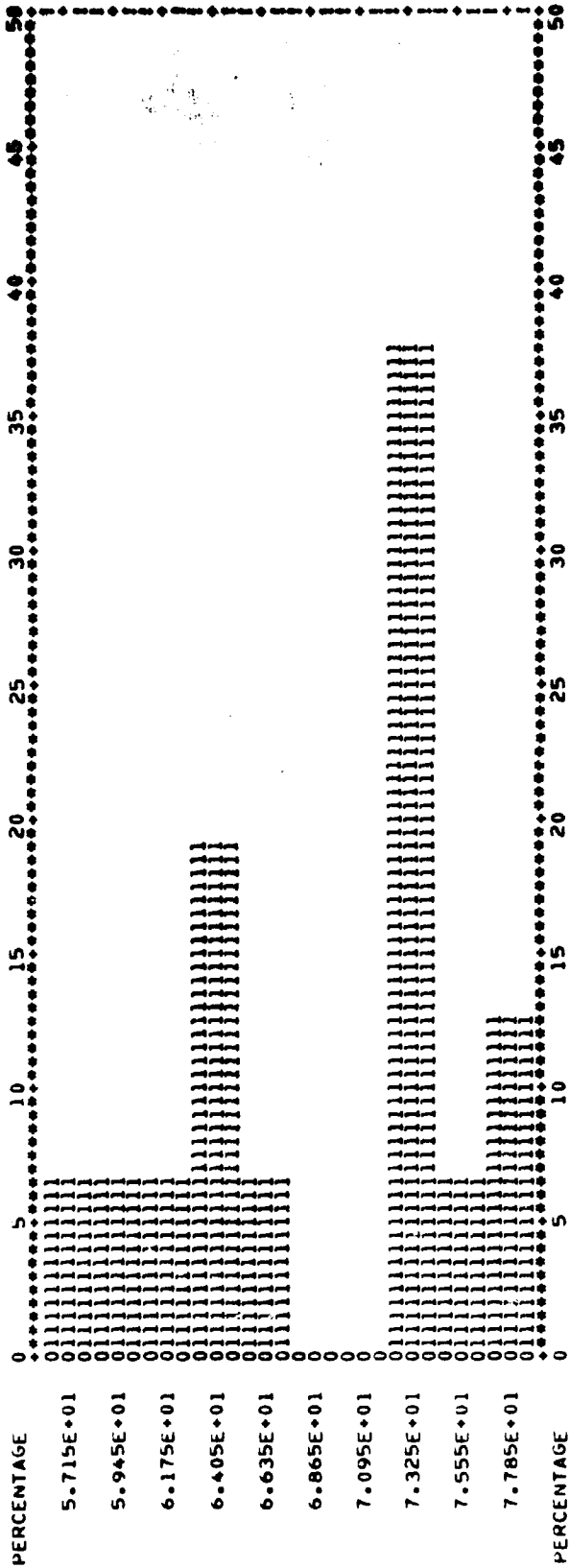
PLANTING DATE

CROP TYPE IS CR  
SEGMENTS = 288

308

STEP = 2.30000114  
CENTREPOINT OF INITIAL GROUP = 57.1499786  
CENTREPOINT OF FINAL GROUP = 77.8499908

NUMBER OF OBSERVATIONS = 16  
NUMBER OF GROUPS = 10

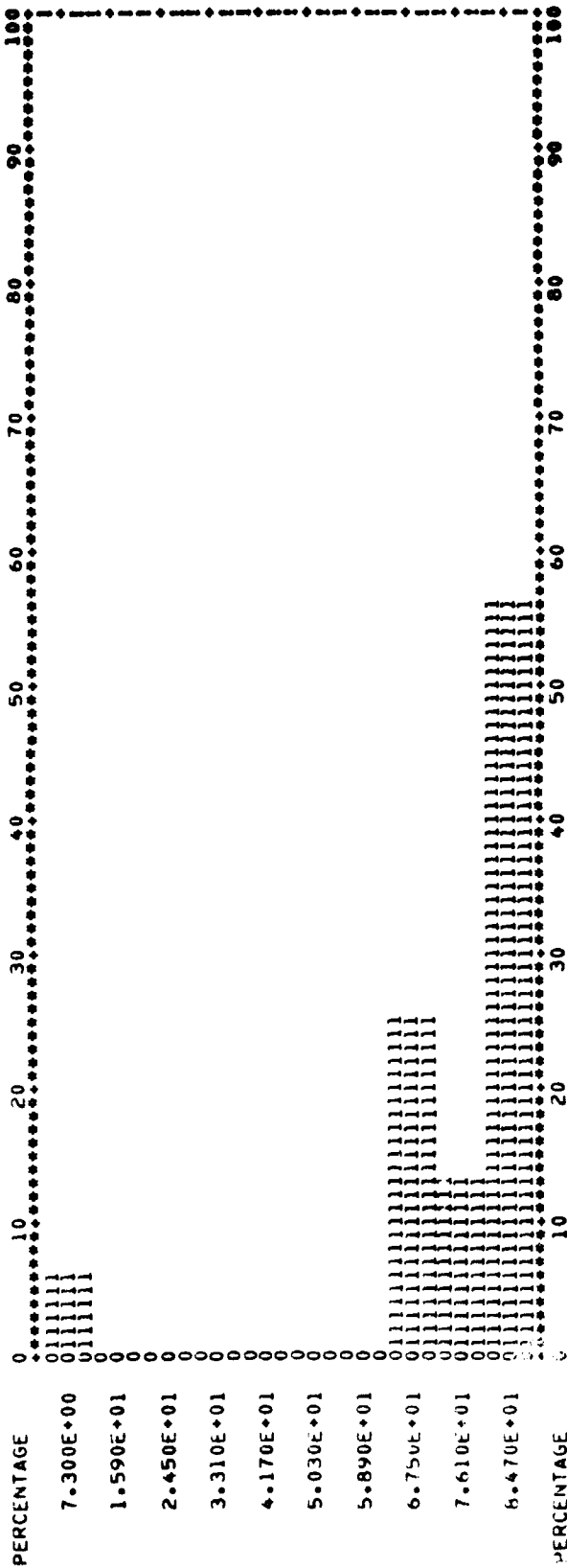


BIN CONTENT 57.15 59.45 61.75 64.05 66.35 68.65 70.95 73.25 75.55 77.85  
1.00 1.00 1.00 3.00 1.00 1.00 0.0 6.00 1.00 2.00

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OF POOR QUALITY

EMERGENCE DATE

CROP TYPE IS CR 308  
 SEGMENTS = 288  
 SLP = 8.59999847  
 CENTERPOINT OF INITIAL GROUP = 7.29999828  
 CENTERPOINT OF FINAL GROUP = 84.6999969  
 NUMBER OF OBSERVATIONS = 16  
 NUMBER OF GROUPS

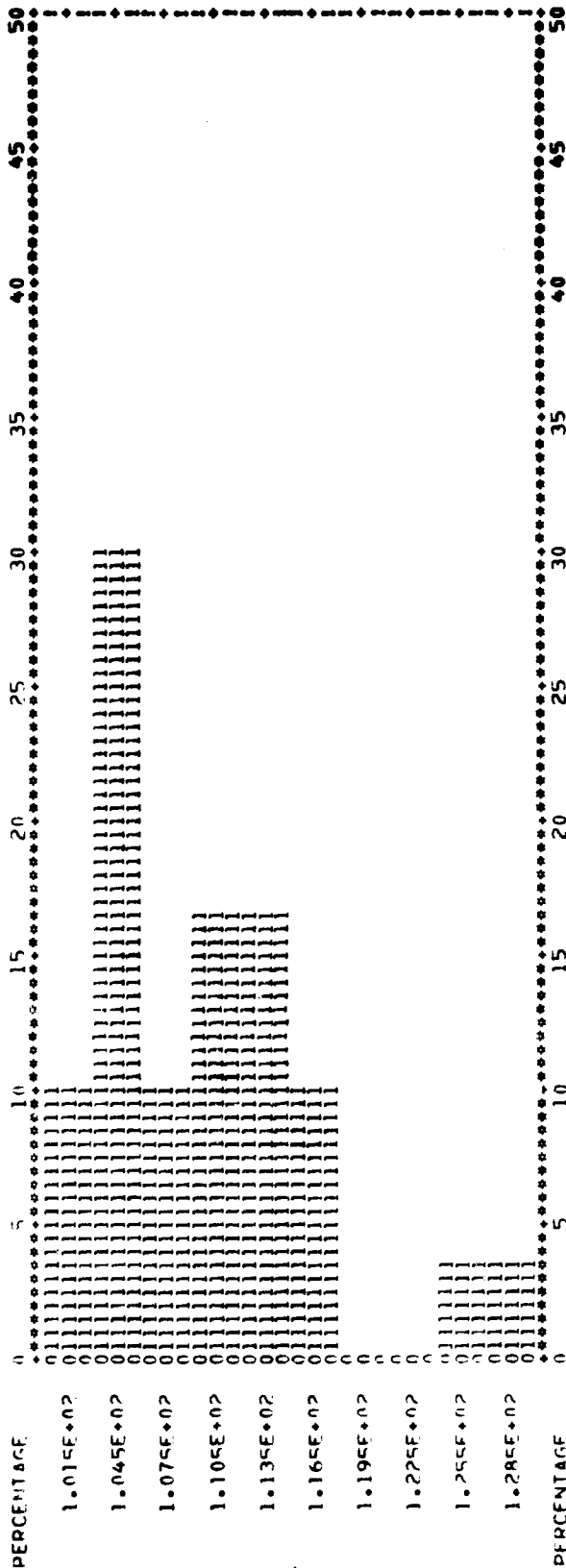


PLANTING DATE

CROP TYPE IS CT

SEGMENTS = 309 310  
 STEP = 3.00000095  
 CENTERPOINT OF INITIAL GROUP = 101.500000  
 CENTERPOINT OF FINAL GROUP = 125.500000

NUMBER OF OBSERVATIONS = 30  
 NUMBER OF GROUPS = 10

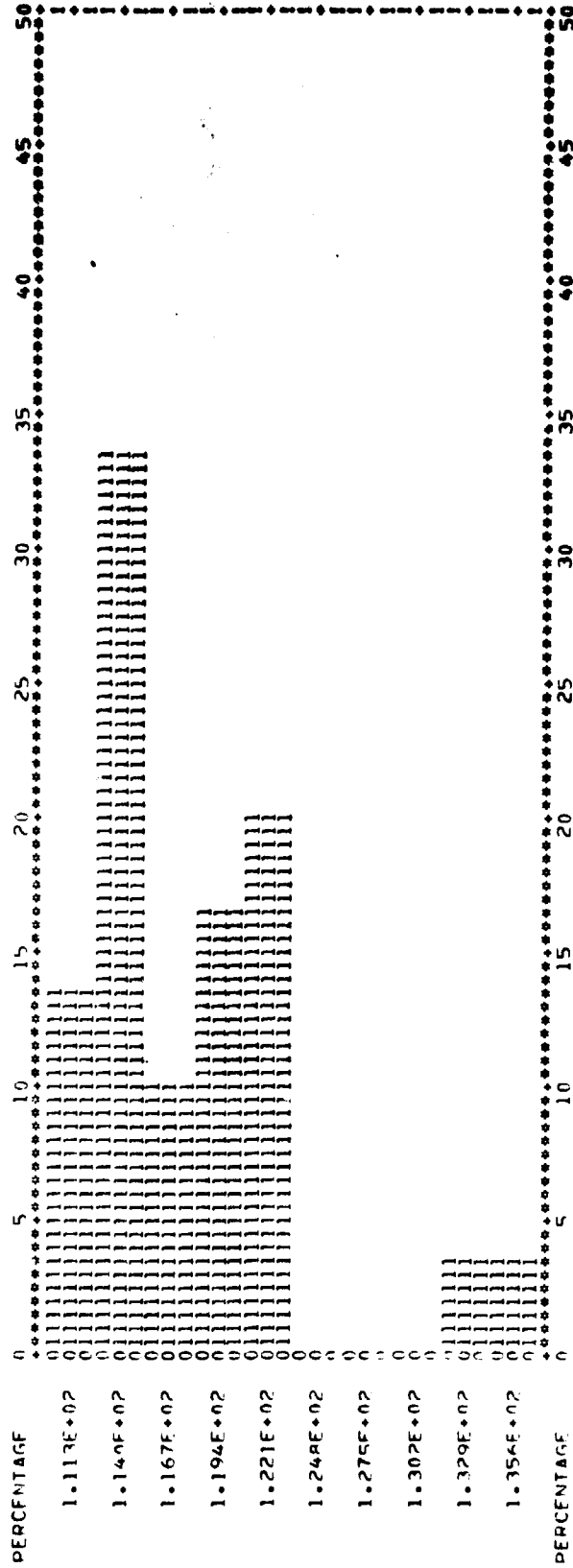


CONTENT BIN 101.50 104.50 107.50 110.50 113.50 116.50 119.50 122.50 125.50 128.50  
 3.00 9.00 3.00 5.00 5.00 3.00 3.00 0.0 0.0 1.00 1.00

EMERGENCE DATE

CROP TYPE IS CT  
SEGMENTS =

STEP = 309 310 2.700000172  
 CENTERPOINT OF INITIAL GROUP = 111.303975  
 CENTERPOINT OF FINAL GROUP = 135.643994  
 NUMBER OF OBSERVATIONS = 10 30



MIN 111.35 114.05 116.75 119.45 122.15 124.85 127.55 130.25 132.95 135.65  
 CONTENT 4.00 10.00 3.00 5.00 6.00 0.0 0.0 0.0 0.0 1.00 1.00

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 29

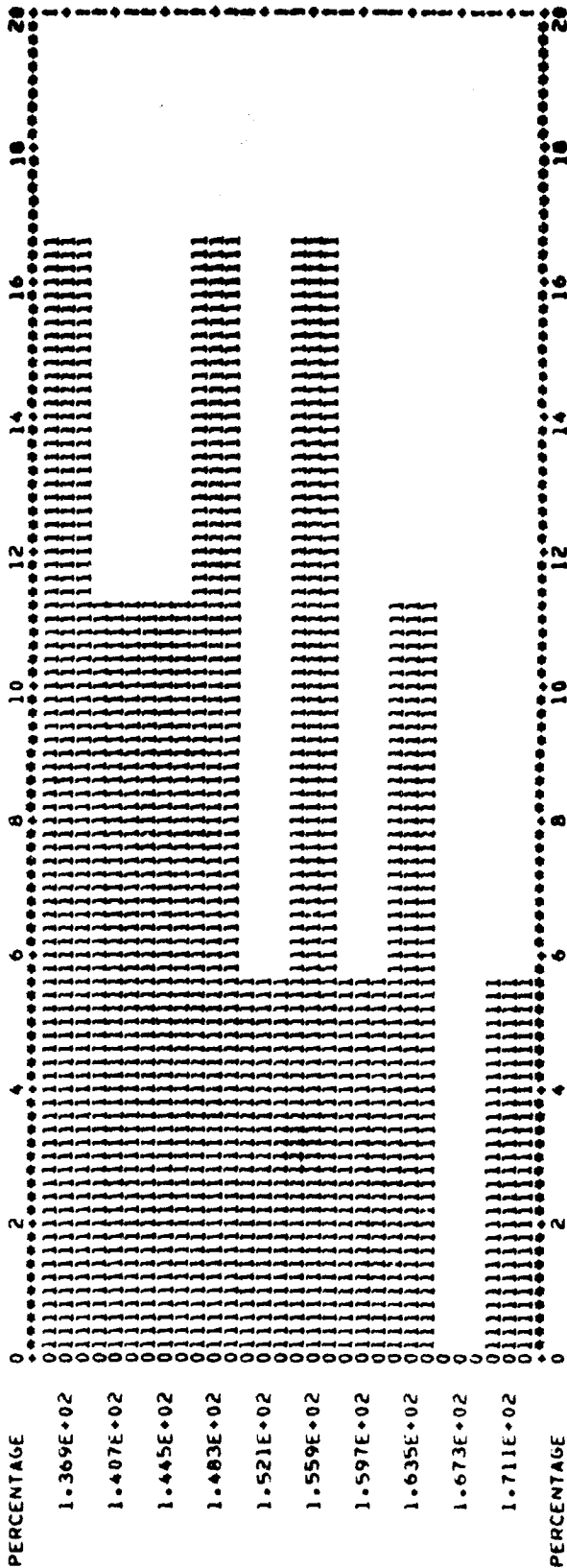
PLANTING DATE

CHOP TYPE IS 50  
SEGMENTS = 288

308

STEP 1  
CENTERPOINT OF INITIAL GROUP = 136.899979  
CENTERPOINT OF FINAL GROUP = 171.099991

NUMBER OF OBSERVATIONS = 18  
NUMBER OF GROUPS = 10



BIN CONTENT 136.90 140.70 144.50 148.30 152.10 155.90 159.70 163.50 167.30 171.10

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OF POOR QUALITY

EMERGENCE DATE

CROP TYPE IS SO

SEGMENTS = 288

STEP = 3.70000172

CENTERPOINT OF INITIAL GROUP =

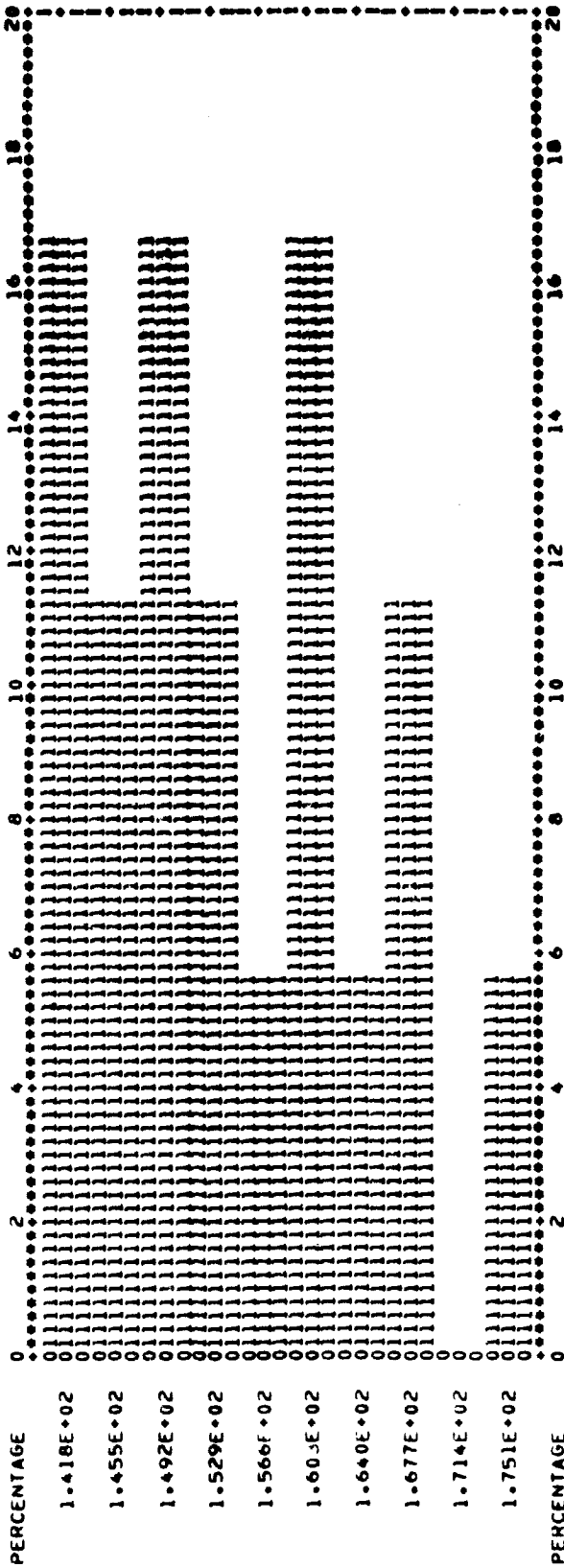
141.849976

NUMBER OF OBSERVATIONS = 10

CENTERPOINT OF FINAL GROUP =

175.149994

NUMBER OF GROUPS = 10



BIN CONTENT 141.85 145.55 149.25 152.95 156.65 160.35 164.05 167.75 171.45 175.15  
 3.00 2.00 3.00 2.00 1.00 3.00 1.00 2.00 0.00 1.00

ARKANSAS

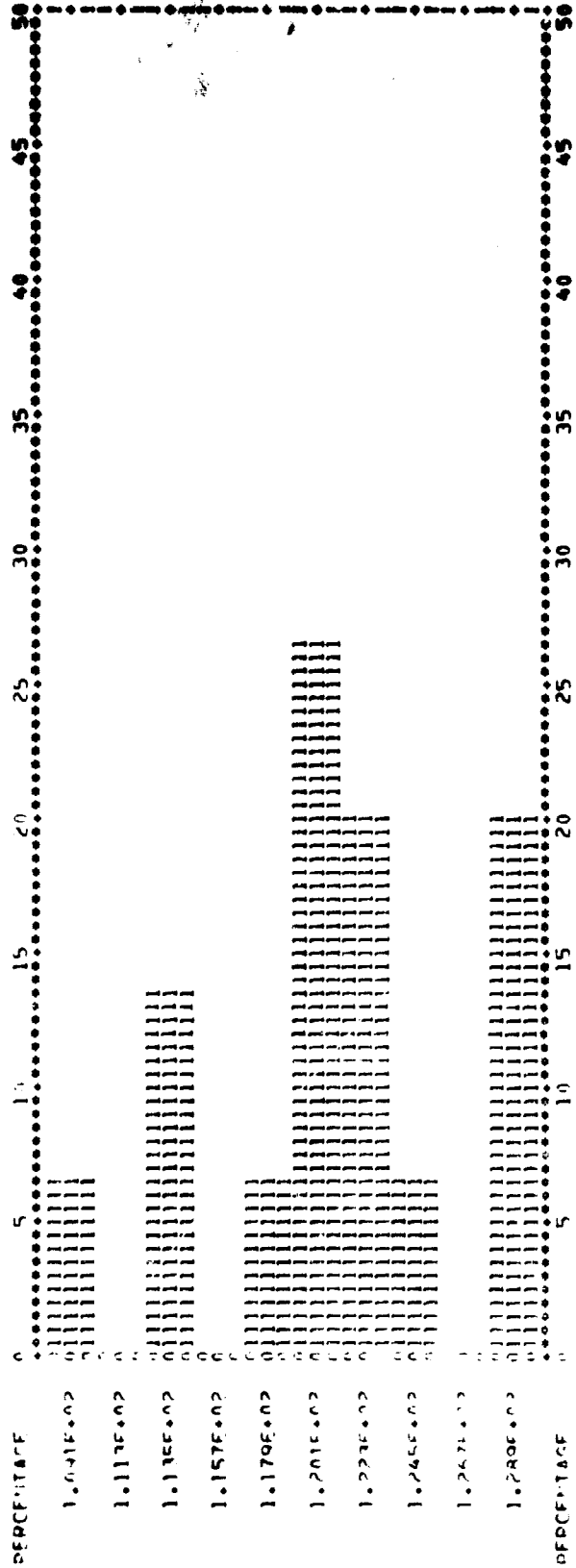
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32



PLAYING DATE

CPOR TYPE IS CT

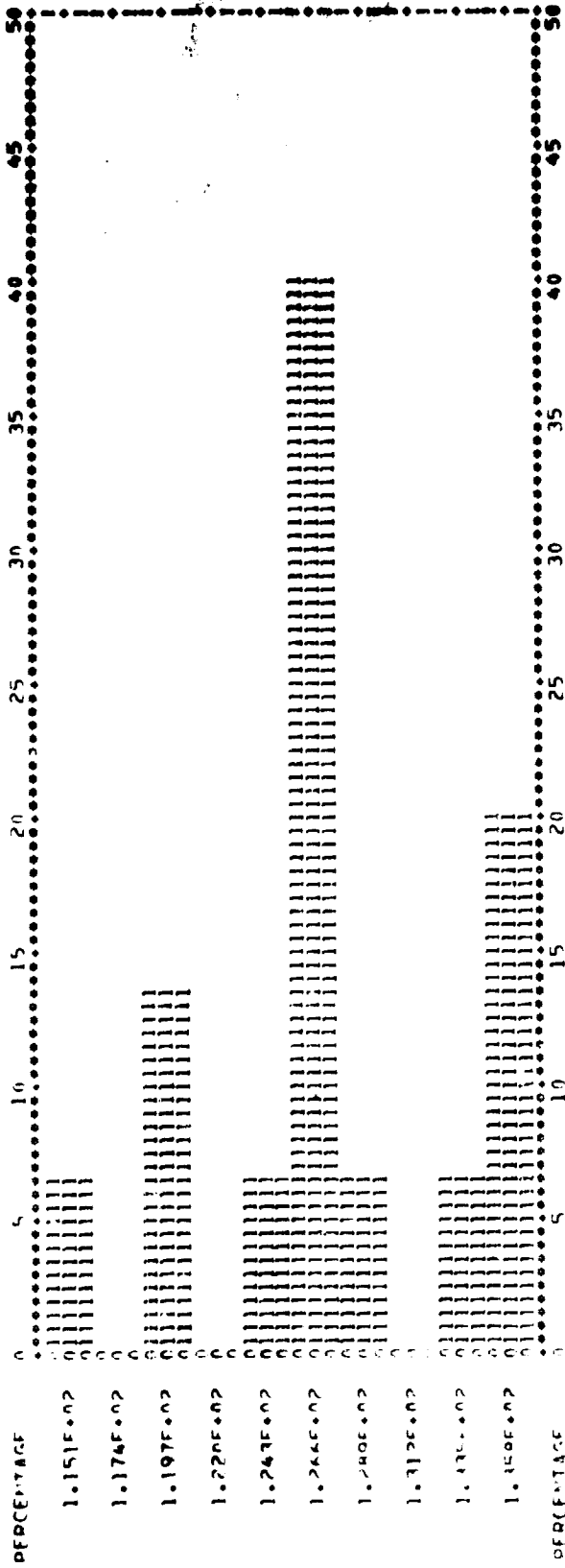
STEP = 301 2.20000172 NUMBER OF OBSERVATIONS = 15  
CENTERPOINT OF INITIAL GROUP = 107.000000 NUMBER OF GROUPS = 10  
CENTERPOINT OF FINAL GROUP = 124.000000



109.10 111.30 113.50 115.70 117.90 120.10 122.30 124.50 126.70 128.90  
 1.00 0.0 2.00 0.0 1.00 4.00 3.00 1.00 0.0 3.00

EMERGENCE DATE

CROP TYPE IS CT 103 301 2.30000114 304  
 SEGMENTS = 15  
 CENTERPOINT OF INITIAL GROUP = 115.12474  
 CENTERPOINT OF FINAL GROUP = 135.24993  
 NUMBER OF OBSERVATIONS = 15  
 NUMBER OF GROUPS = 10



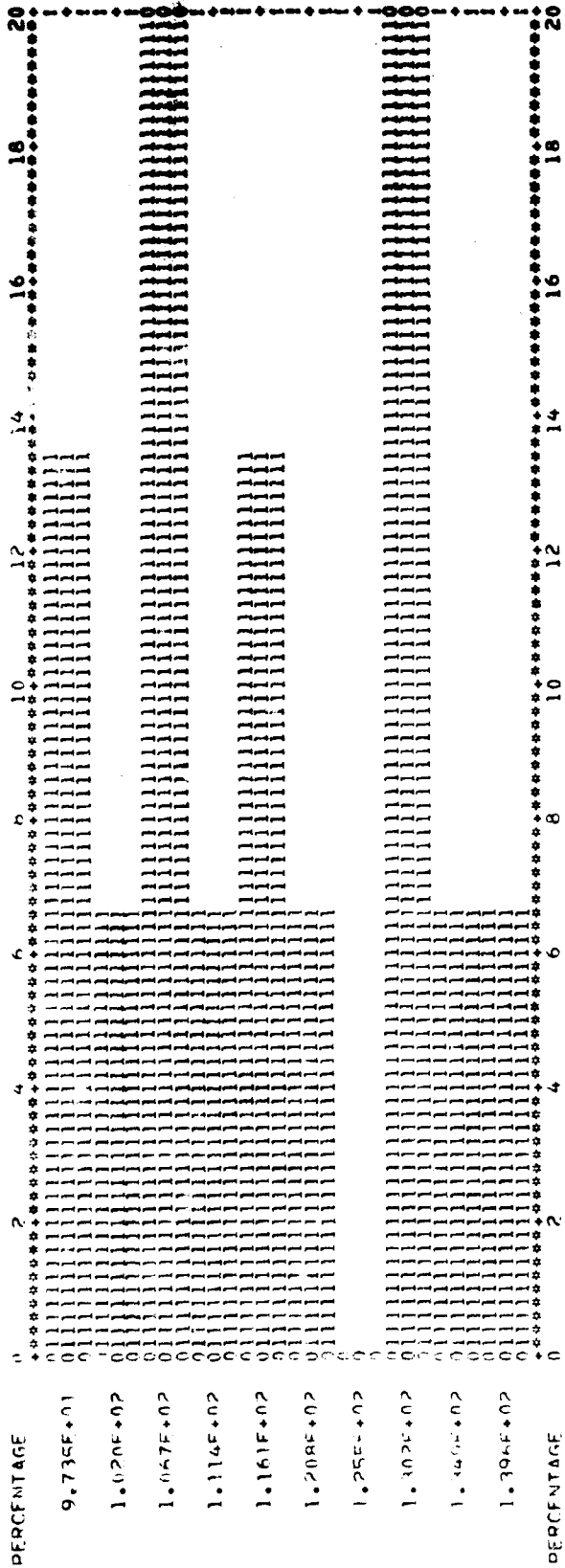
MIN 115.15 117.45 119.75 122.05 124.35 126.65 128.95 131.25 133.55 135.85  
 CONTENT 1.00 0.00 2.00 0.00 1.00 6.00 1.00 0.00 1.00 3.00

PLANTING DATE

CROP TYPE IS RI

103 104 305

STEP = 4.70000172 SQUARE OF OBSERVATIONS = 15  
CENTERPOINT OF INITIAL GROUP = 97.444756 NUMBER OF GROUPS = 10  
CENTERPOINT OF FINAL GROUP = 139.649944



CONTENT 97.35 102.05 106.75 111.45 116.15 120.85 125.55 130.25 134.95 139.65  
2.00 1.00 3.00 1.00 2.00 1.00 0.0 3.00 1.00 1.00

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EMERGENCE DATE

CROP TYPE IS RI

SEGMENTS = 103 104

305

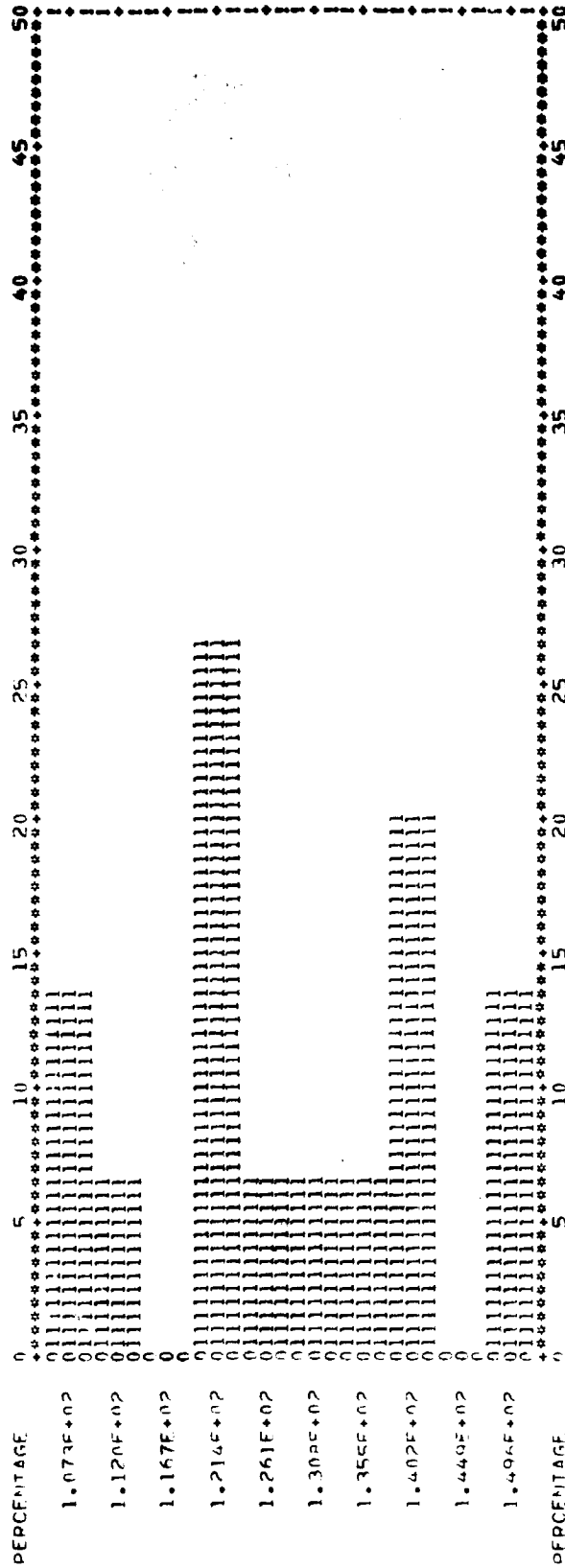
STEP = 4.70000172

CENTERPOINT OF INITIAL GROUP = 107.349976

CENTERPOINT OF FINAL GROUP = 149.649994

NUMBER OF OBSERVATIONS = 15

NUMBER OF GROUPS = 10



CONTENT 107.35 112.05 116.75 121.45 126.15 130.85 135.55 140.25 144.95 149.65

2.00 1.00 0.0 4.00 1.00 1.00 1.00 3.00 0.0 2.00

GROUP PA...  
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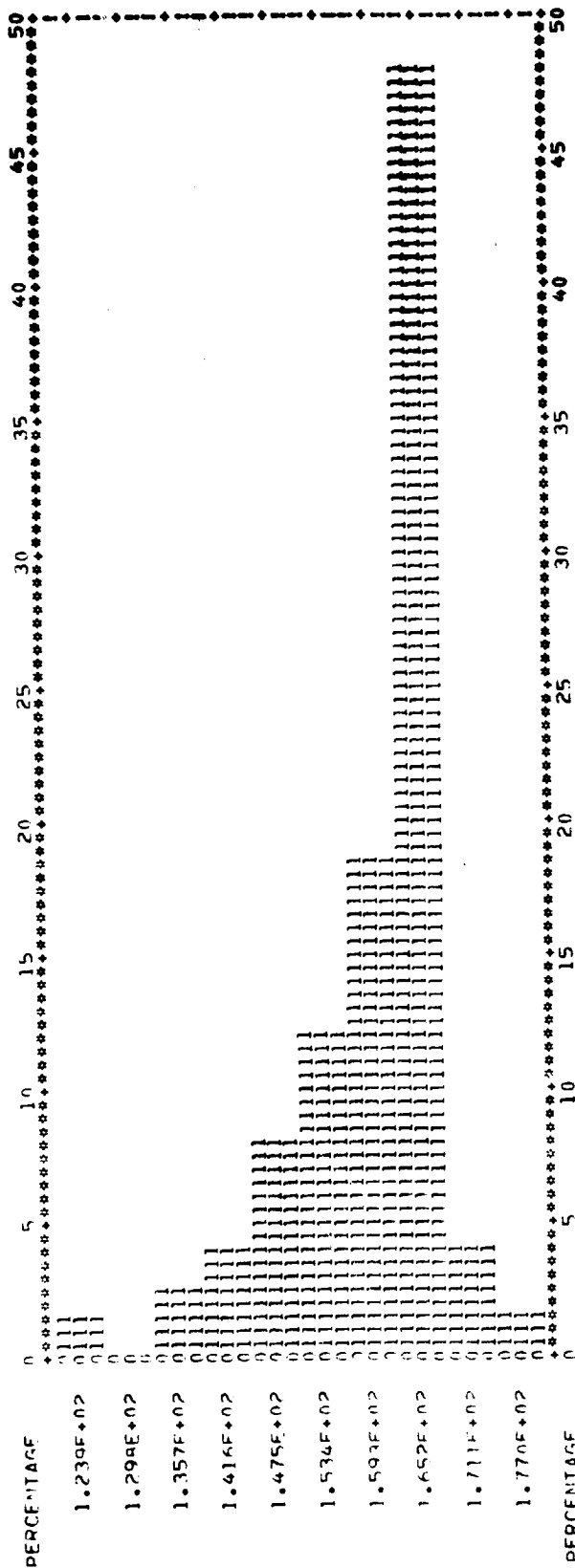
PLANTING DATE

CROP TYPE IS 50

SEGMENTS = 102 103 104 301 302 303 304 305

STEP = 5  
 CENTERPOINT OF INITIAL GROUP = 123.949342  
 CENTERPOINT OF FINAL GROUP = 177.049988

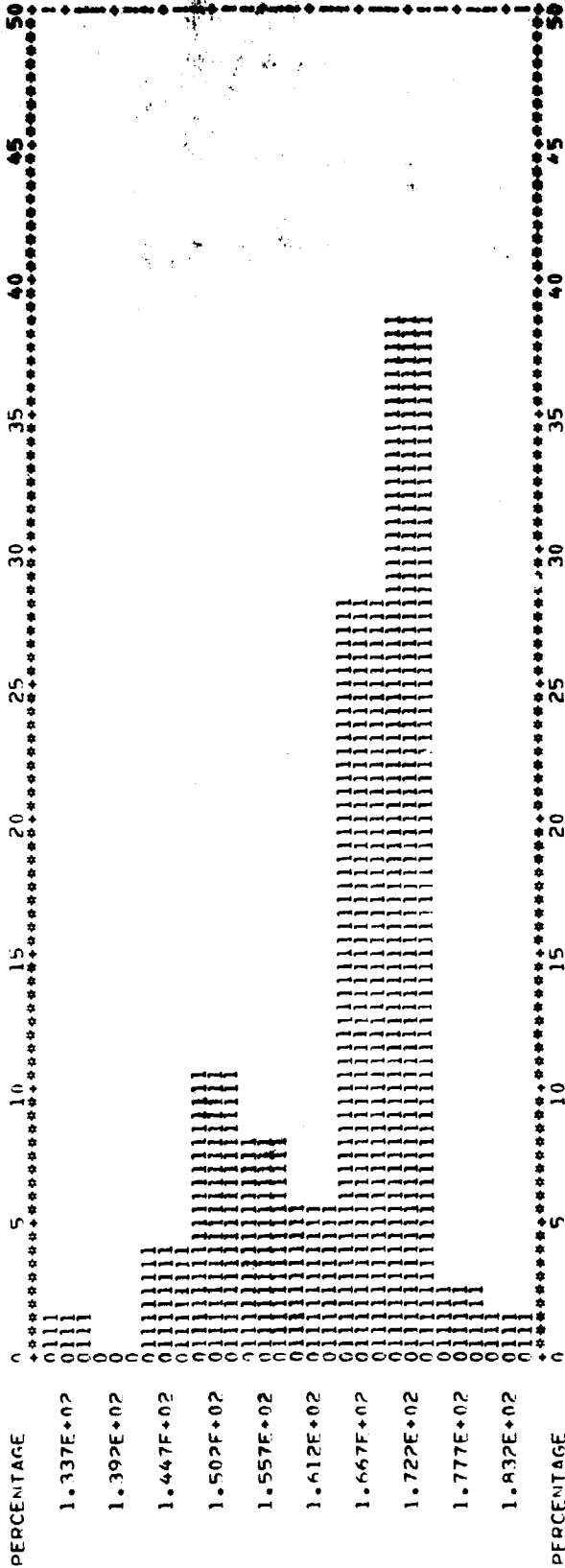
NUMBER OF OBSERVATIONS = 75  
 NUMBER OF GROUPS = 10



API 123.95 129.85 135.75 141.65 147.55 153.45 159.35 165.25 171.15 177.05  
 CONVENT 1.00 0.0 2.00 3.00 6.00 9.00 14.00 36.00 3.00 1.00

EMERGENCE DATE

CROP TYPE IS 50  
 SEGMENTS = 102 103 104 301 302 303 304 305  
 STIP = 50000000  
 CENTERPOINT OF INITIAL GROUP = 133.749965  
 CENTERPOINT OF FINAL GROUP = 183.250000  
 NUMBER OF OBSERVATIONS = 75  
 NUMBER OF GROUPS = 10



BIN CONTENT 133.75 139.25 144.75 150.25 155.75 161.25 166.75 172.25 177.75 183.25  
 1.00 0.00 3.00 8.00 6.00 4.00 21.00 29.00 2.00 1.00

A-75  
 38

CALIFORNIA

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39

PLANTING DATE

CROP TYPE IS CT

SEGMENTS = 261 263 278

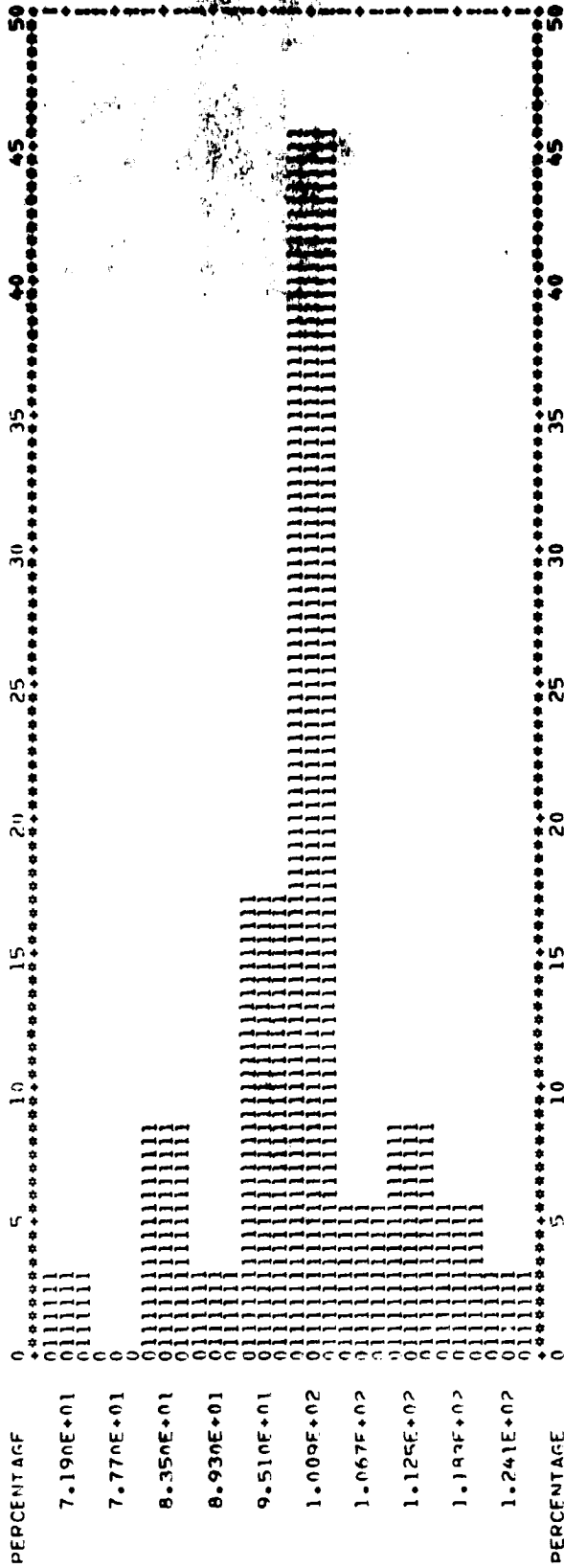
STEP = 5.40000114

CENTERPOINT OF INITIAL GROUP = 71.8999786

CENTERPOINT OF FINAL GROUP = 124.0999931

NUMBER OF OBSERVATIONS = 35

NUMBER OF GROUPS = 10



HIN	71.90	77.70	83.50	89.30	95.10	100.90	106.70	112.50	118.30	124.10
CONTENT	1.00	0.0	3.00	1.00	6.00	16.00	2.00	5.00	2.00	1.00

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4-17  
40



EMERGENCE DATE

CROP TYPE IS CT

261 263 27A

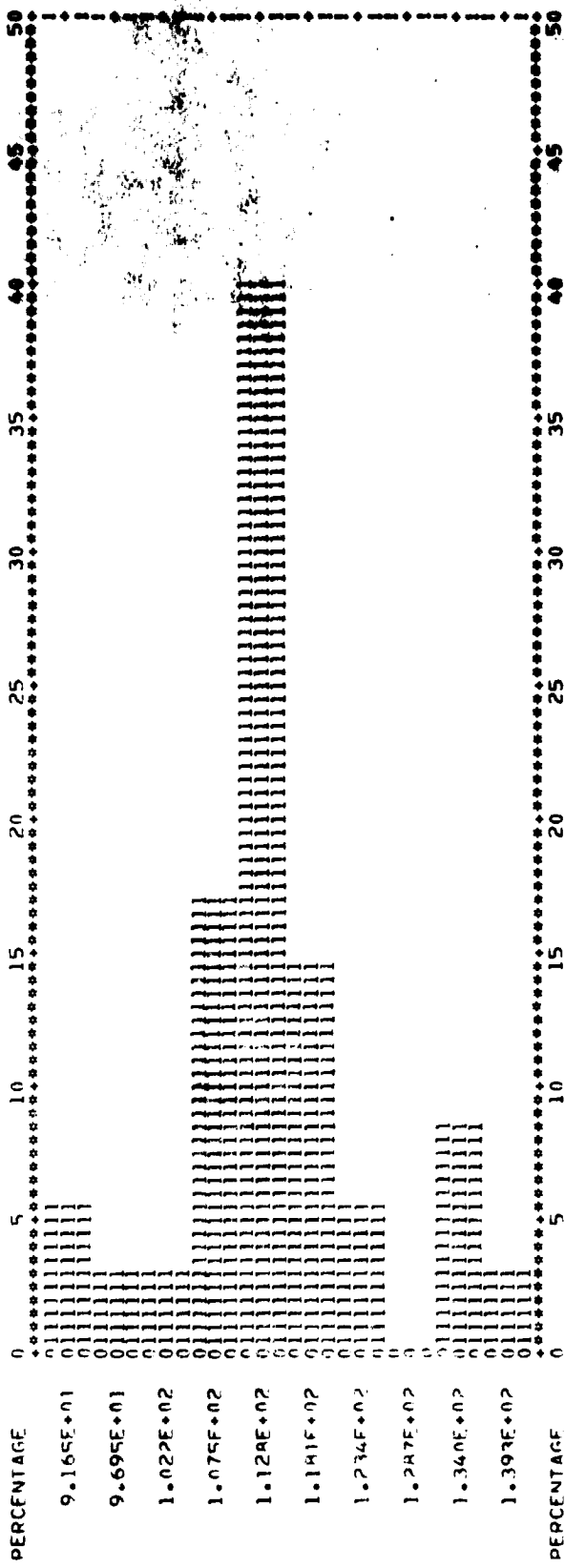
STEP = 5.00000011+

CENTERPOINT OF INITIAL GROUP = 91.6499780

CENTERPOINT OF FINAL GROUP = 139.349991

NUMBER OF OBSERVATIONS = 35

NUMBER OF GROUPS = 10



PERCENTAGE 0 5 10 15 20 25 30 35 40 45 50

PERCENTAGE 0 5 10 15 20 25 30 35 40 45 50

CONTENT 91.65 96.95 102.25 107.55 112.85 118.15 123.45 128.75 134.05 139.35

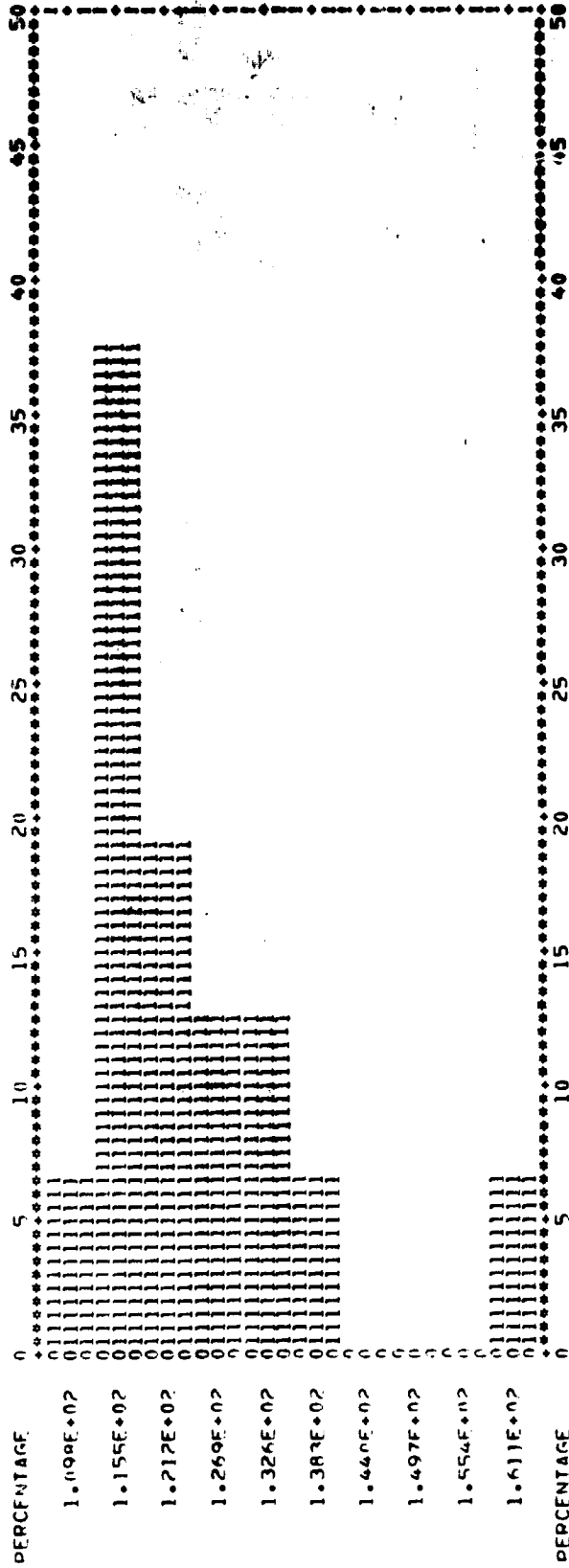
CONTENT 2.00 1.00 1.00 6.00 14.00 5.00 2.00 0.0 3.00 1.00

PLANTING DATE

CROP TYPE IS RI  
SEGMENTS = 260

STED = 5.70000172  
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CENTREPOINT OF FINAL GROUP = 161.319994

NUMBER OF OBSERVATIONS = 16  
NUMBER OF GROUPS = 10

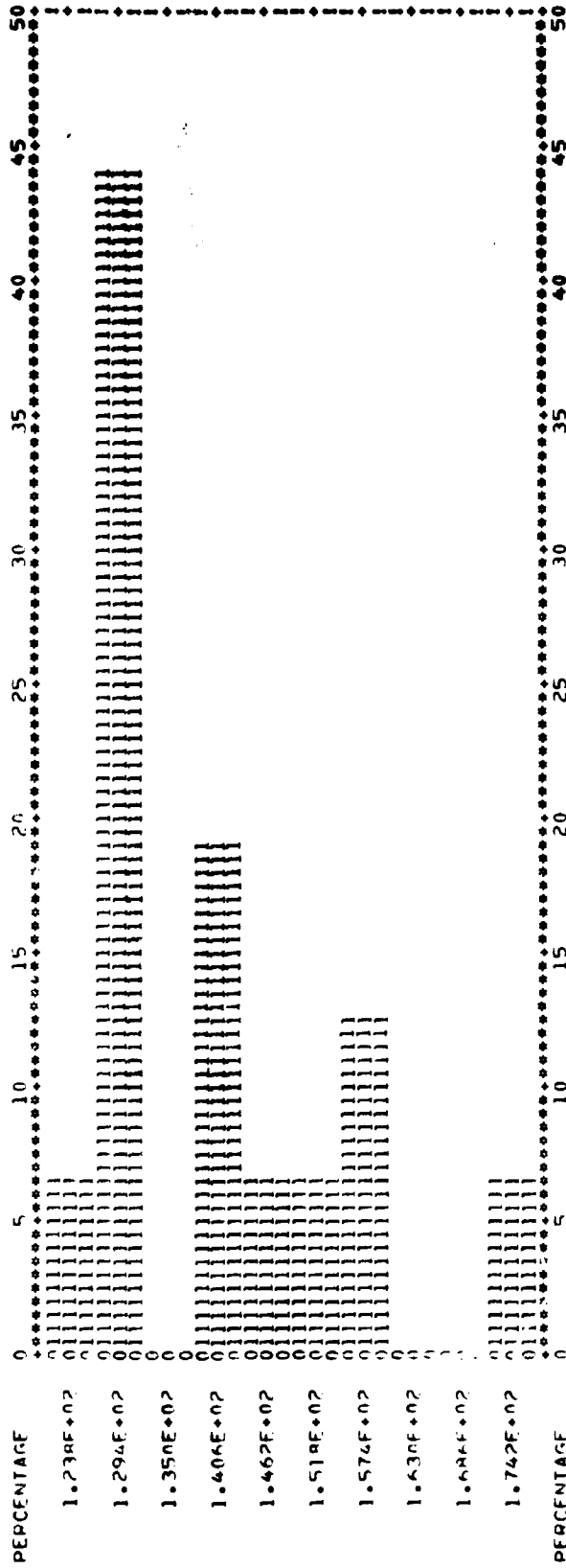


CONTENT 107.45 115.55 121.25 126.95 132.65 138.35 144.05 149.75 155.45 161.15

EMERGENCE DATE

CROP TYPE IS RI  
SEGMENTS = 260

CTRP = 5.60000229  
 CENTERPOINT OF INITIAL GROUP = 174.144497  
 CENTERPOINT OF FINAL GROUP = 174.144497  
 NUMBER OF OBSERVATIONS = 16  
 NUMBER OF GROUPS = 10



MIN CONTENT 123.80 129.40 135.00 140.60 146.20 151.80 157.40 163.00 168.60 174.20  
 1.00 7.00 0.00 3.00 1.00 1.00 2.00 0.00 0.00 1.00

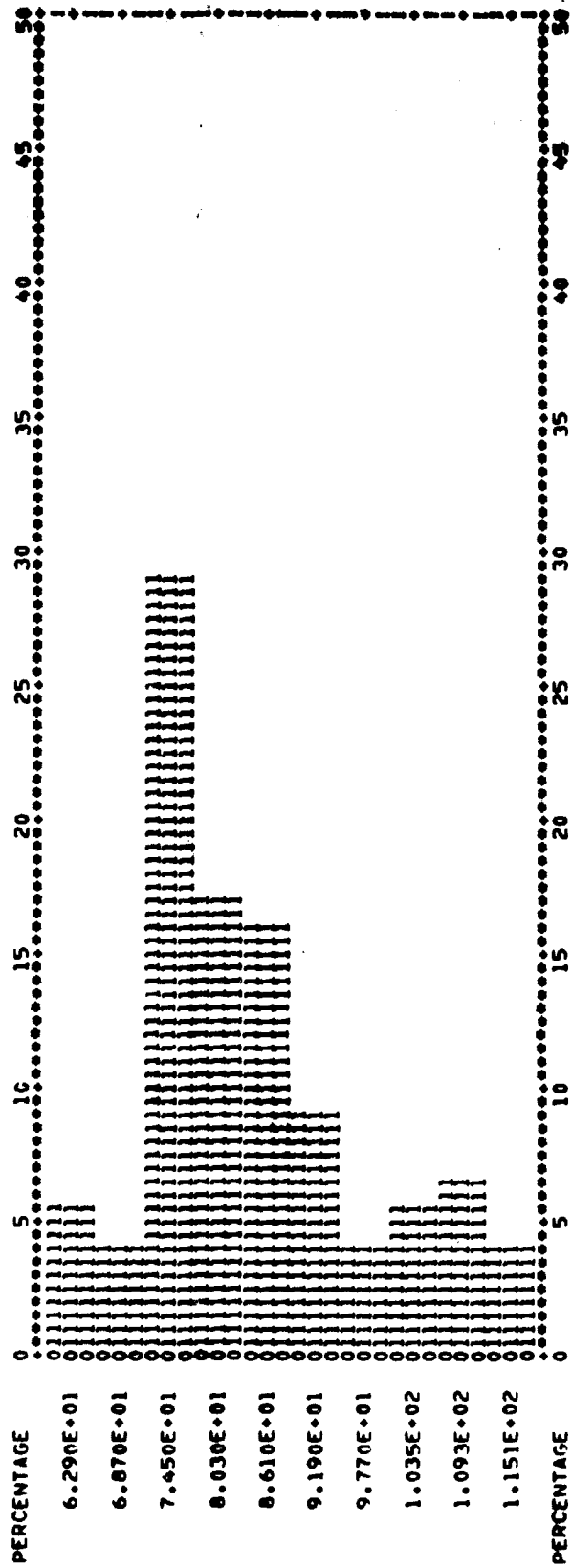
GEORGIA

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KK

PLANTING DATE

CROP TYPE IS CR  
 SEGMENTS = 311 312 330 333 334  
 STEP = 5  
 CENTERPOINT OF INITIAL GROUP = 62.8999786  
 CENTERPOINT OF FINAL GROUP = 115.099991  
 NUMBER OF OBSERVATIONS = 76  
 NUMBER OF GROUPS = 10

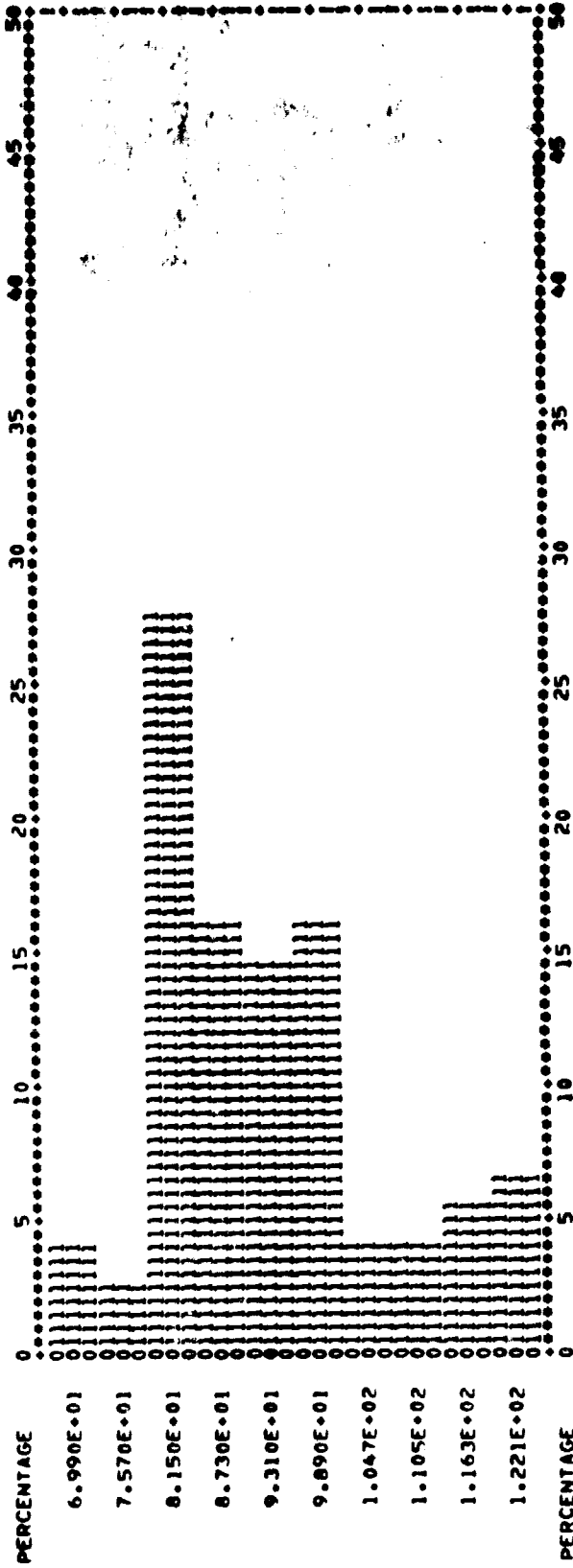


BIN CONTENT 62.90 68.70 74.50 80.30 86.10 91.90 97.70 103.50 109.30 115.10  
 4.00 3.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

CONFIDENTIAL

EMERGENCE DATE

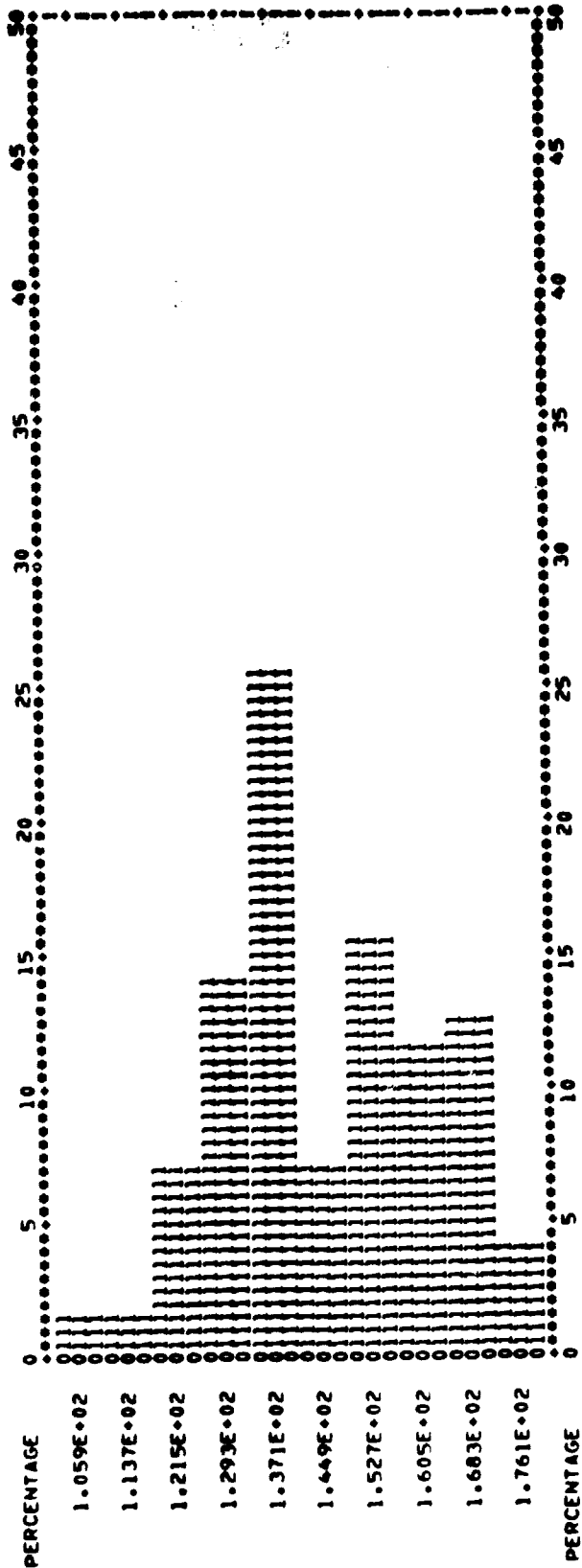
CROP TYPE IS CR 312 330 333 334  
 SEGMENTS = 311 5 AR000114  
 CENTERPOINT OF INITIAL GROUP = 69.8999786 NUMBER OF OBSERVATIONS = 76  
 CENTERPOINT OF FINAL GROUP = 122.099991 NUMBER OF GROUPS = 10



22  
 22

PLANTING DATE

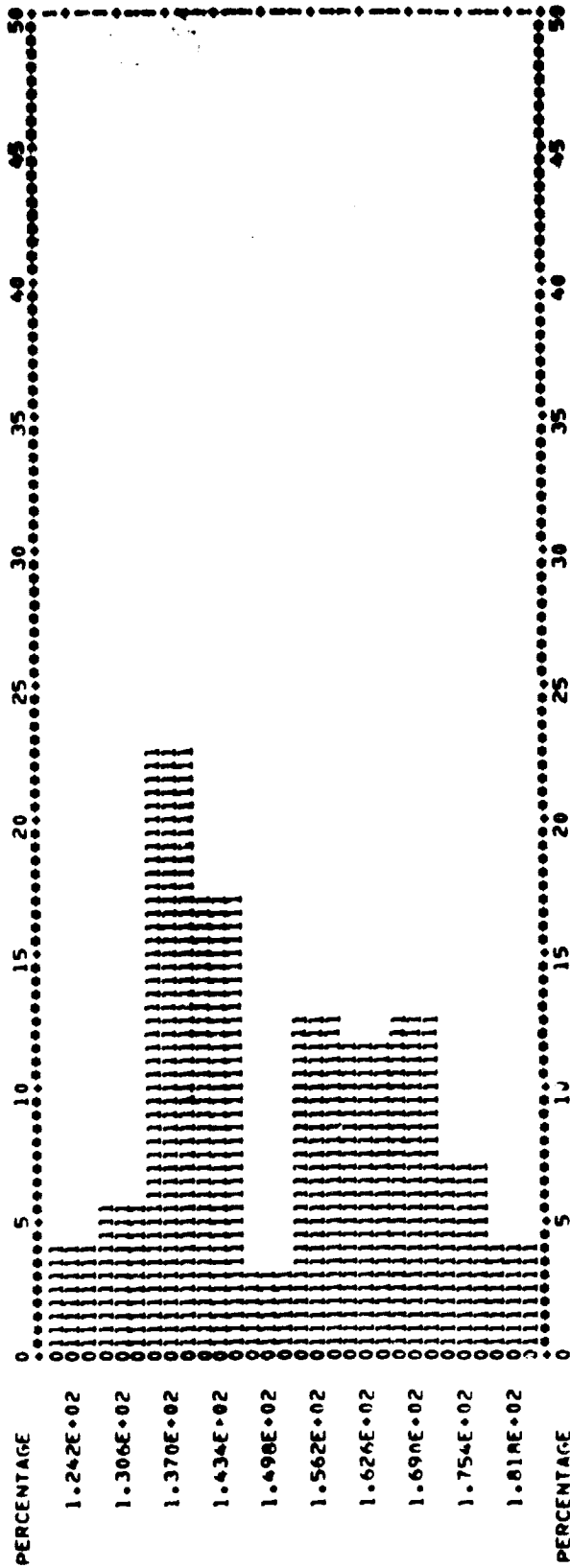
CROP TYPE IS 50  
 SEGMENTS = 311 312 330 333 334  
 STEP = 7.40000114  
 CENTERPOINT OF INITIAL GROUP = 105.899979  
 CENTERPOINT OF FINAL GROUP = 176.899991  
 NUMBER OF OBSERVATIONS = 71  
 NUMBER OF GROUPS = 10



BIN	105.90	113.70	121.50	129.30	137.10	144.90	152.70	160.50	168.30	176.10
CONTENT	1.00	1.00	5.00	10.00	16.00	25.00	35.00	45.00	50.00	5.00

EMERGENCE DATE

CROP TYPE IS 50  
SEGMENTS = 311 312 330 333 334  
STEP = 6.40000057  
CENTERPOINT OF INITIAL GROUP = 124.19982  
CENTERPOINT OF FINAL GROUP = 181.79988  
NUMBER OF OBSERVATIONS = 71  
NUMBER OF GROUPS = 10



A-45  
45



ILLINOIS

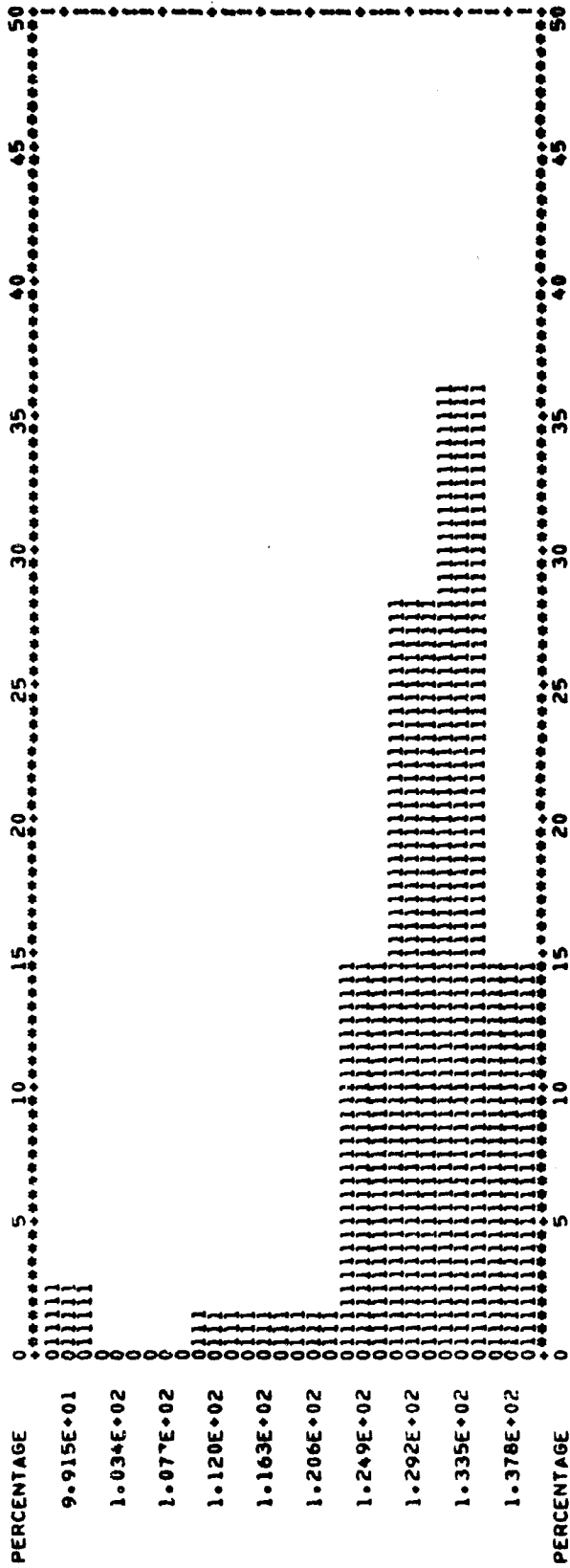
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49

PLANTING DATE

CROP TYPE IS CR  
SEGMENTS = 107

114 805 824 828 828 00114  
STEP = 4 300 00114  
INTERPOINT OF INITIAL GROUP = 92.1499786  
CENTERPOINT OF FINAL GROUP = 137.849991  
NUMBER OF OBSERVATIONS = 75  
NUMBER OF GROUPS = 10



BIN CONTENT 99.15 103.45 107.75 112.05 116.35 120.65 124.95 129.25 133.55 137.85  
2.00 0.0 0.0 1.00 1.00 1.00 1.00 1.00 1.00 1.00

A-27  
56

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EMERGENCE DATE

CROP TYPE IS CR

SEGMENTS = 107

114 805 824 828

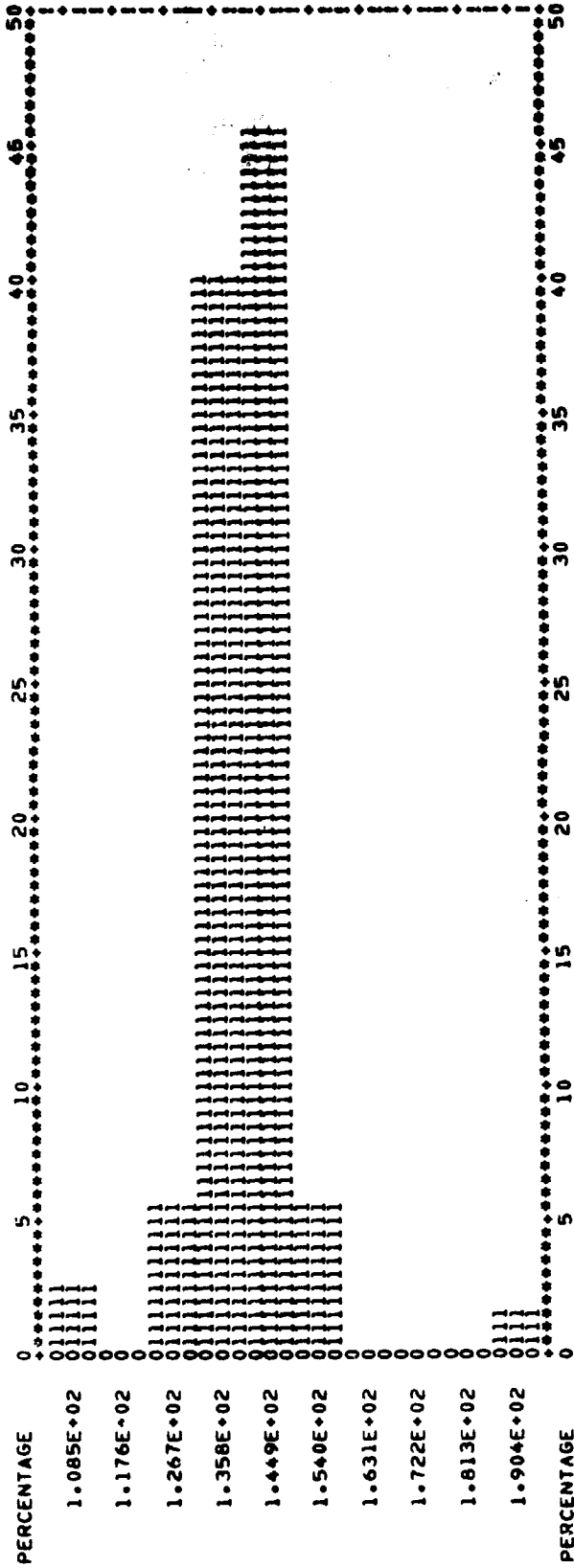
STEP = 9.10000229

CENTERPOINT OF INITIAL GROUP = 108.549973

CENTERPOINT OF FINAL GROUP = 190.449997

NUMBER OF OBSERVATIONS = 75

NUMBER OF GROUPS = 10

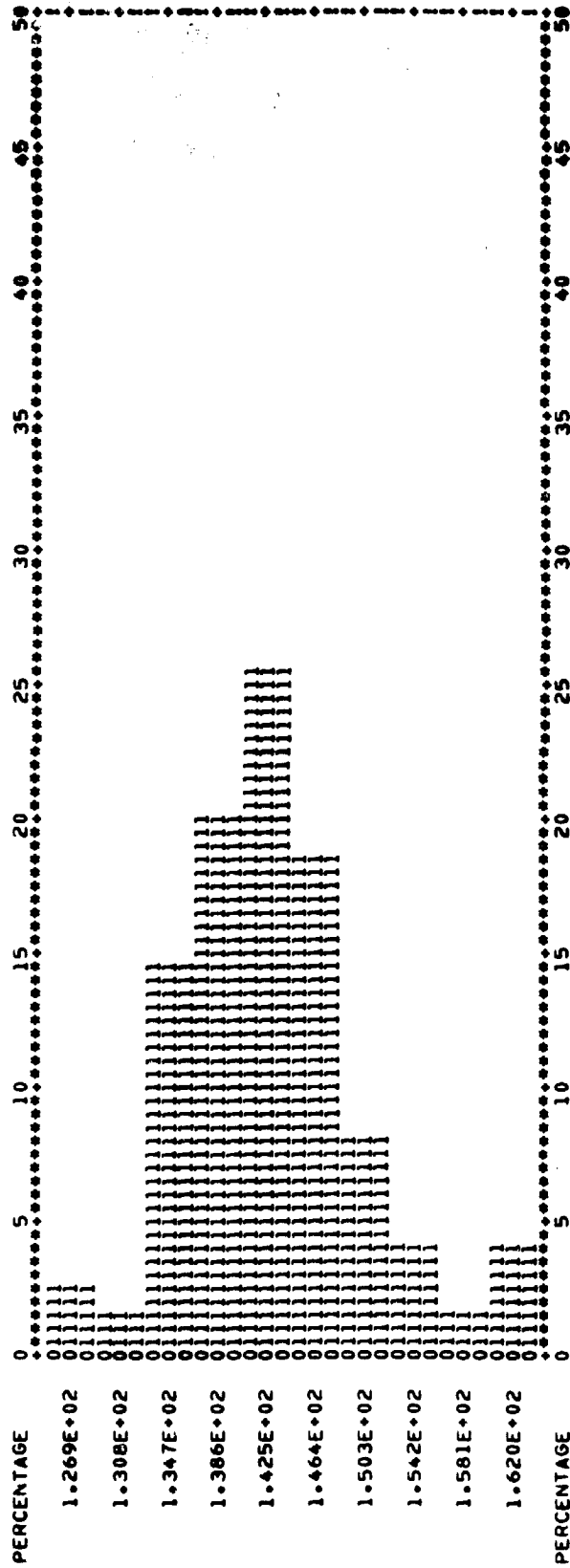


CONTENT BIN 108.55 117.65 126.75 135.85 144.95 154.05 163.15 172.25 181.35 190.45

2.00 0.0 4.00 30.00 34.00 4.00 0.0 0.0 0.0 0.0 0.0 1.00

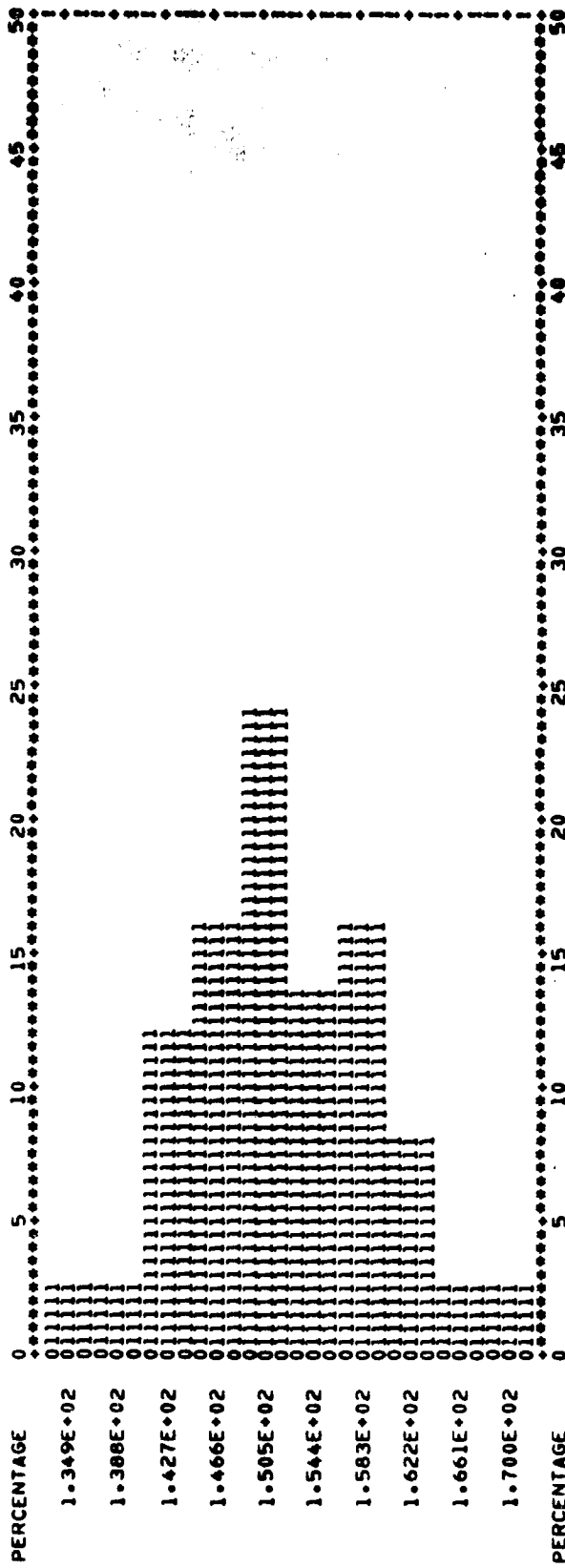
PLANTING DATE

CROP TYPE IS SO  
 SEGMENTS = 107 114 805 824 828  
 STEP = 3.90000057  
 CENTERPOINT OF INITIAL GROUP = 126.949982  
 CENTERPOINT OF FINAL GROUP = 162.049988  
 NUMBER OF OBSERVATIONS = 1075  
 NUMBER OF GROUPS



EMERGENCE DATE

CROP TYPE IS SO  
SEGMENTS = 107    114 805 824 828    STEP = 3.90000057    NUMBER OF OBSERVATIONS = 1075  
CENTERPOINT OF INITIAL GROUP = 134.949982    NUMBER OF GROUPS  
CENTERPOINT OF FINAL GROUP = 170.049988

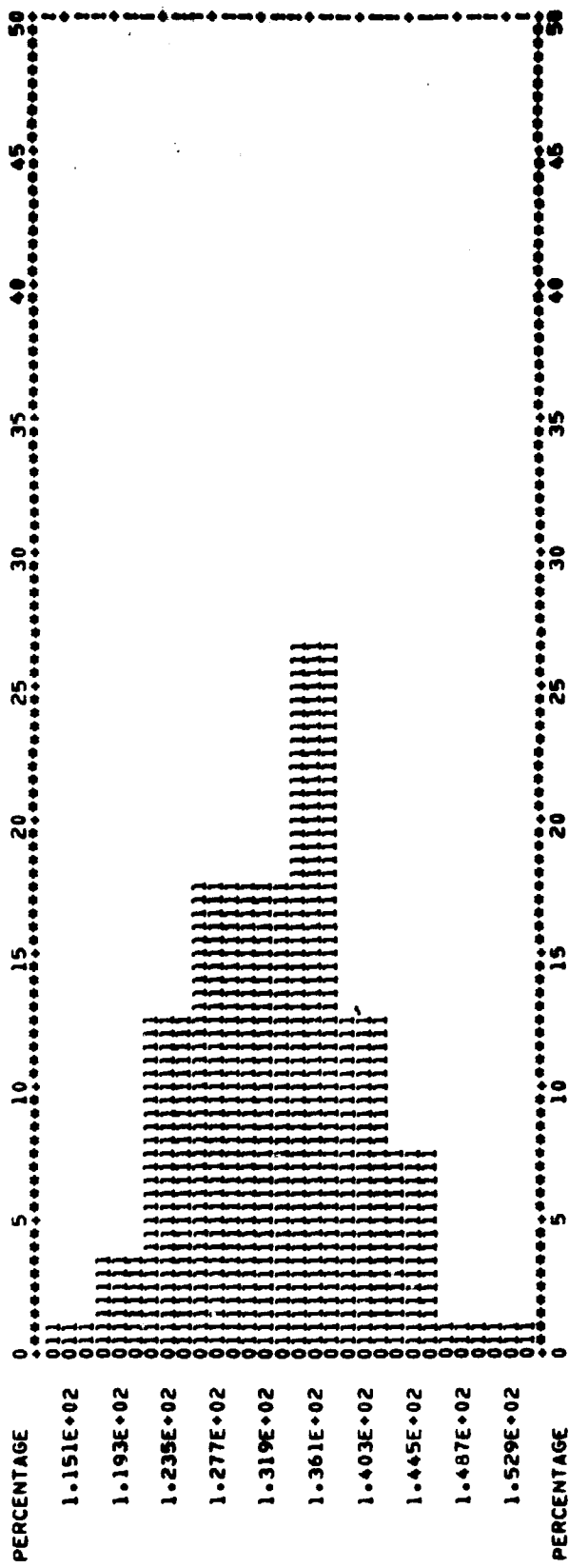


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54

PLANTING DATE

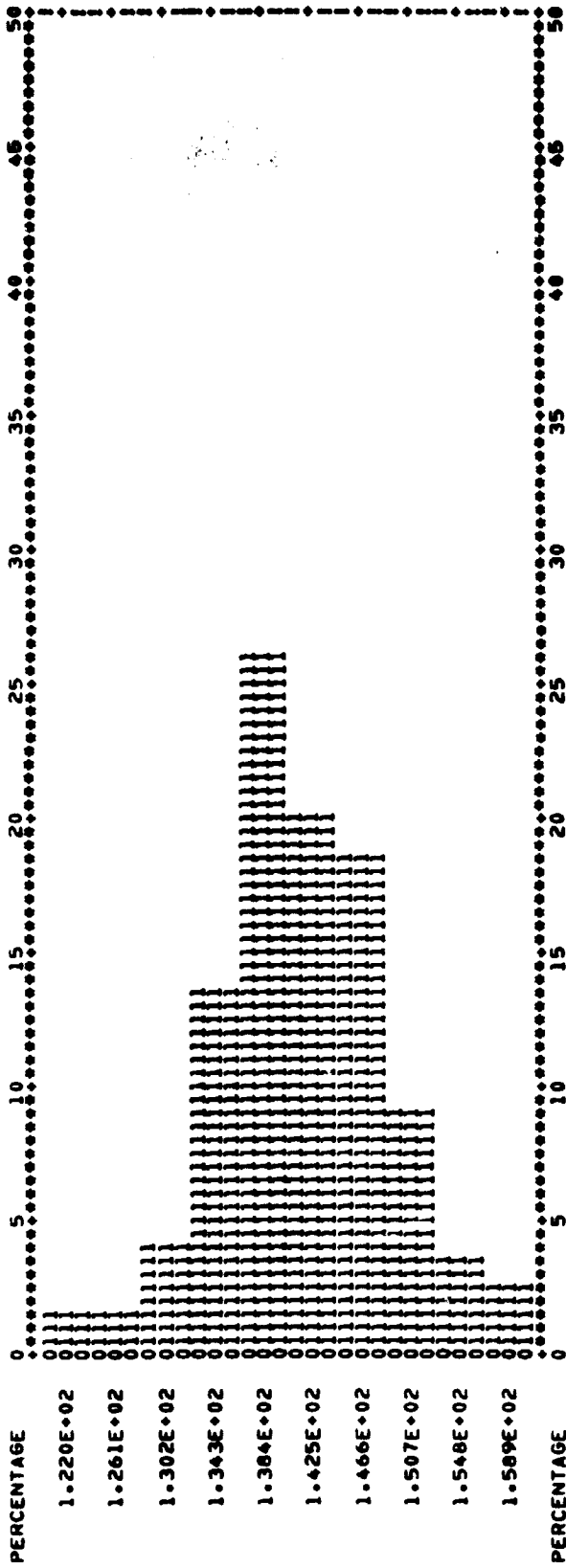
CROP TYPE IS CR 127 133 833 837 843 851 856  
 SEGMENTS = 123 STEP 2000072  
 CENTERPOINT OF INITIAL GROUP = 115.099976 NUMBER OF OBSERVATIONS = 120  
 CENTERPOINT OF FINAL GROUP = 152.899994 NUMBER OF GROUPS = 10



BIN CONTENT 115.10 119.30 123.50 127.70 131.90 136.10 140.30 144.50 148.70 152.90  
 1.00 4.00 15.00 21.00 21.00 32.00 15.00 9.00 1.00 1.00

EMERGENCE DATE

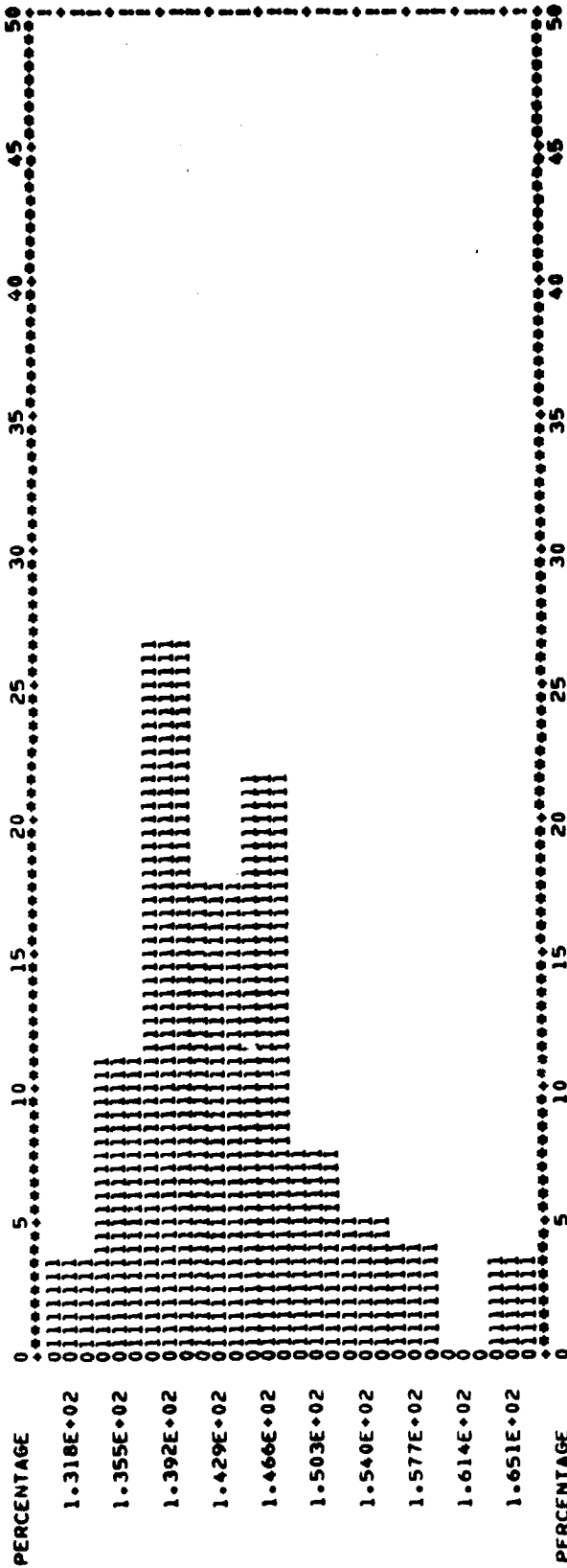
CROP TYPE IS CR  
SEGMENTS = 123 127 133 833 837 843 851 856  
STEP = 4 10000229  
CENTERPOINT OF INITIAL GROUP = 122.049973 NUMBER OF OBSERVATIONS = 12U  
CENTERPOINT OF FINAL GROUP = 158.949997 NUMBER OF GROUPS = 10





PLANTING DATE

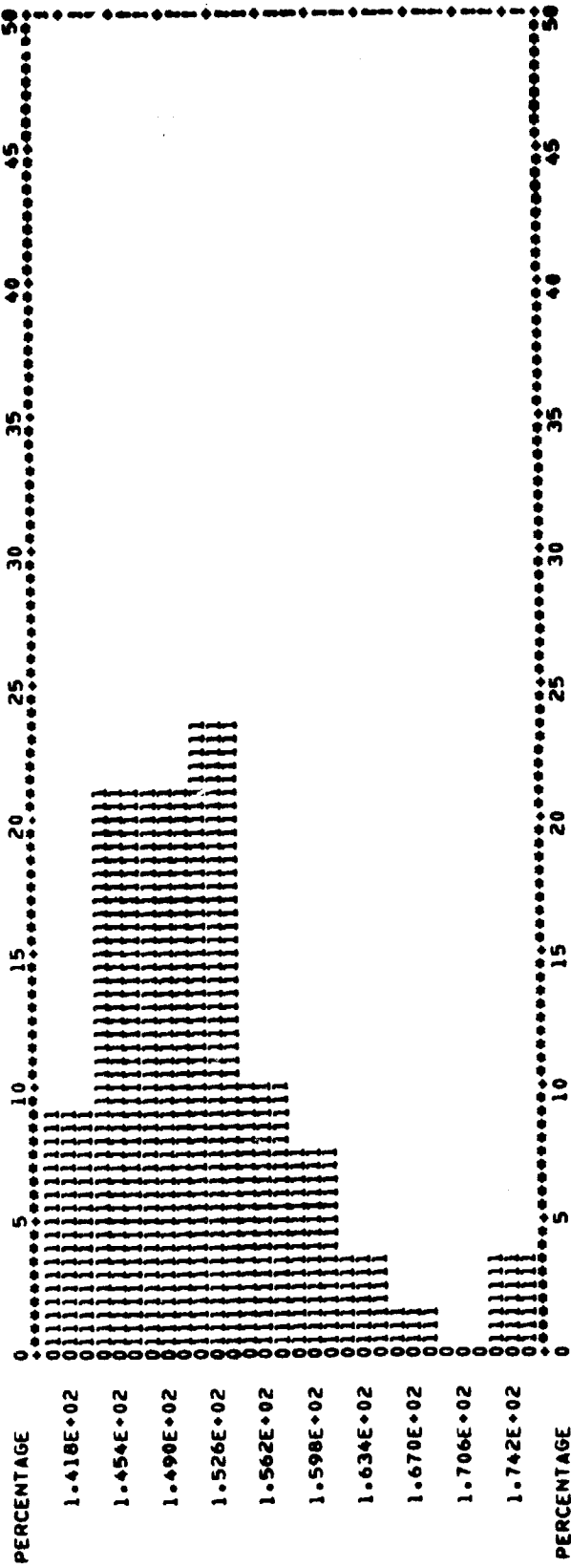
CROP TYPE IS SO  
 SEGMENTS = 123  
 STEP = 133 833 837 843 851 856  
 CENTERPOINT OF INITIAL GROUP = 370000172  
 CENTERPOINT OF FINAL GROUP = 165149994  
 NUMBER OF OBSERVATIONS = 120  
 NUMBER OF GROUPS = 10



BIN CONTENT 131.85 135.55 139.25 142.95 146.65 150.35 154.05 157.75 161.45 165.15  
 4.00 13.00 32.00 21.00 26.00 9.00 6.00 5.00 0.0 4.00

EMERGENCE DATE

CROP TYPE IS 50  
 SEGMENTS = 123 127 133 833 837 843 851 856  
 CENTERPOINT OF INITIAL GROUP = 141.799973  
 CENTERPOINT OF FINAL GROUP = 174.199997  
 NUMBER OF OBSERVATIONS = 120  
 NUMBER OF GROUPS = 10



CONTENT BIN 141.80 145.40 149.00 152.60 156.20 159.80 163.40 167.00 170.60 174.20  
 11.00 25.00 25.00 28.00 12.00 9.00 4.00 2.00 0.0 4.00

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5.2

IOWA

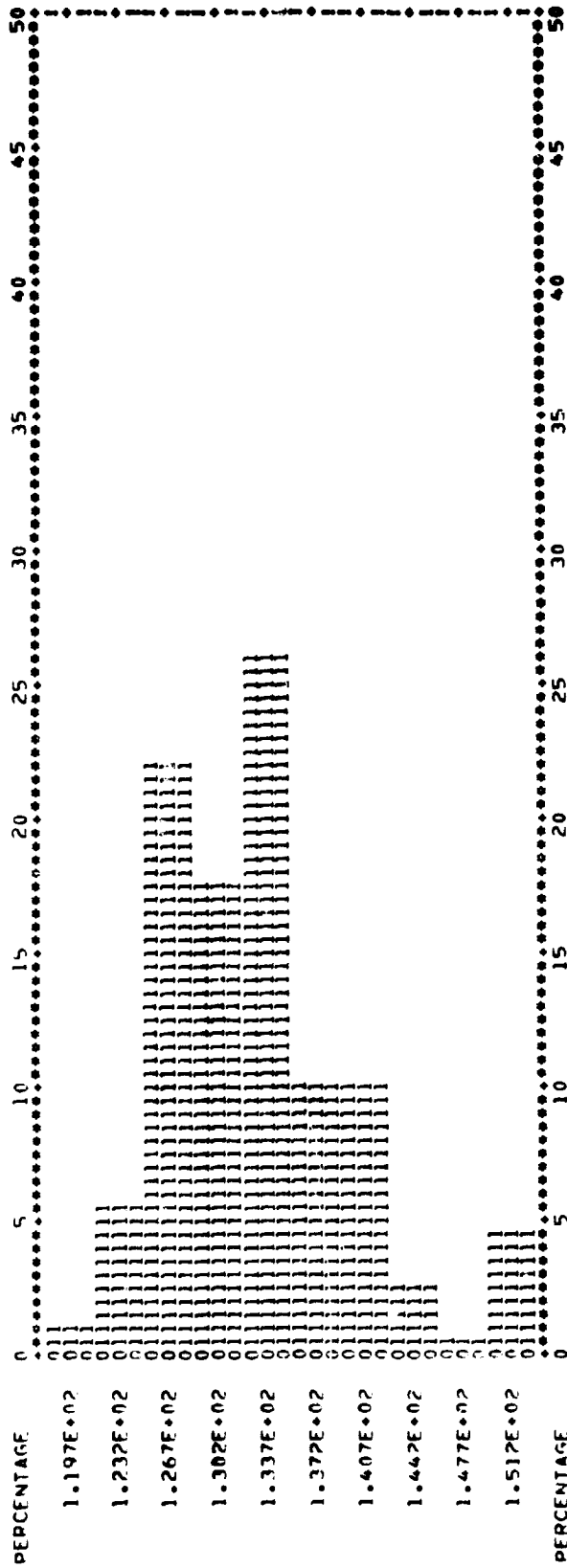
~~A-36~~  
59

PLANTING DATE

CROP TYPE IS CP  
SEGMENTS = 135

144 145 801 804 883 886 892 893  
STEP = 50000095  
CENTERPOINT OF INITIAL GROUP = 119.749925  
CENTERPOINT OF FINAL GROUP = 151.250000

NUMBER OF OBSERVATIONS = 160  
NUMBER OF GROUPS = 10



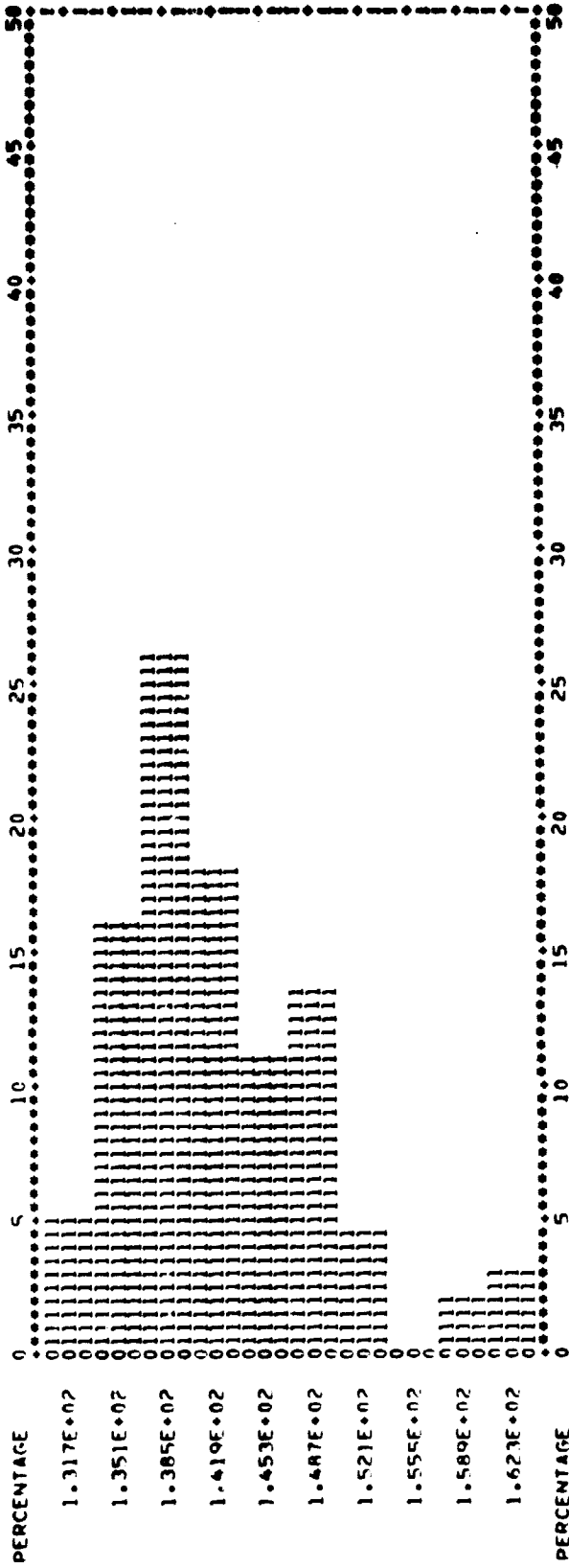
3IN 119.75 123.25 126.75 130.25 133.75 137.25 140.75 144.25 147.75 151.25  
CONTENT 2.00 9.00 35.00 28.00 42.00 16.00 16.00 4.00 1.00 1.00

A-37

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EMERGENCE DATE

CROP TYPE IS CR  
 SEGMENTS = 175  
 144 145 A01 804 883 886 842 893  
 STFP = 3.40000057  
 CENTERPOINT OF INITIAL GROUP = 131.699982  
 CENTERPOINT OF FINAL GROUP = 162.299988  
 NUMBER OF OBSERVATIONS = 160  
 NUMBER OF GROUPS = 10



PERCENTAGE  
 1.317E+02  
 1.351E+02  
 1.385E+02  
 1.419E+02  
 1.453E+02  
 1.487E+02  
 1.521E+02  
 1.555E+02  
 1.589E+02  
 1.623E+02  
 PERCENTAGE

BIN CONTENT  
 131.70 135.10 138.50 141.90 145.30 148.70 152.10 155.50 158.90 162.30  
 A.00 26.00 42.00 29.00 18.00 22.00 7.00 0.0 3.00 5.00

A-38  
 61

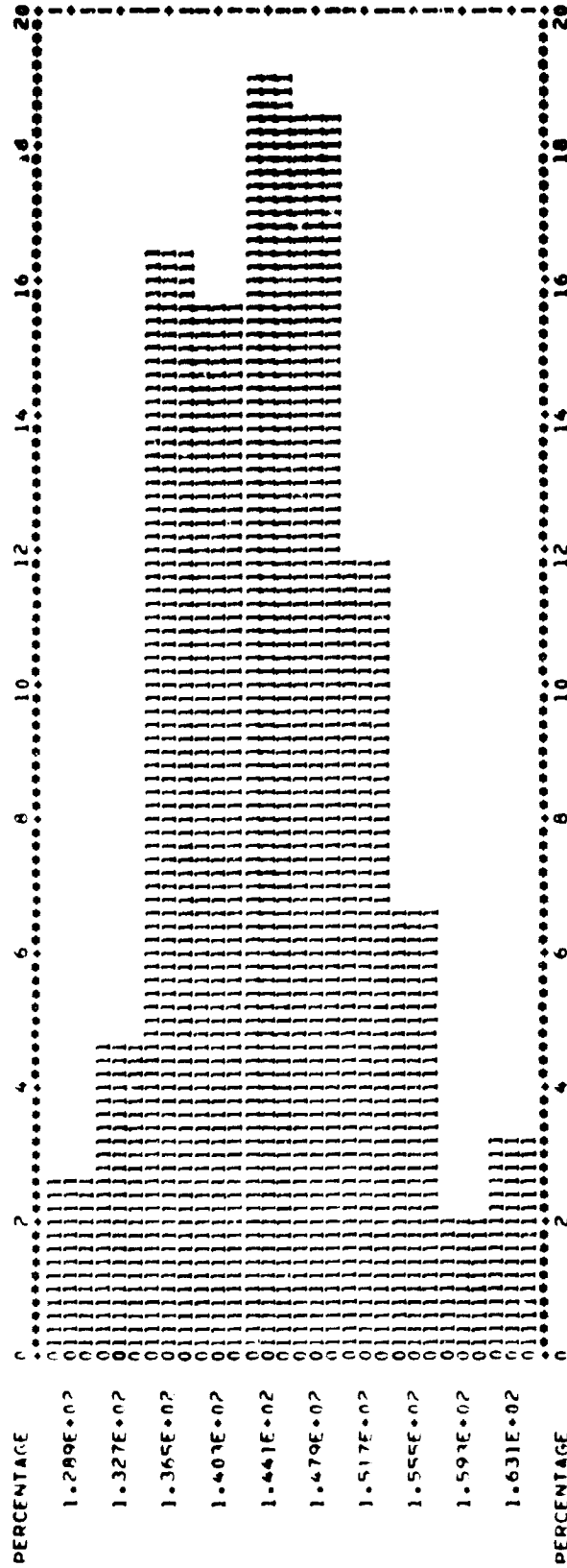
PLANTING DATE

CROP TYPE IS 50

SEGMENTS = 135 144 145 801 804 883 884 892 893

STED = 3 400000114  
CENTERPOINT OF INITIAL GROUP = 128.899979  
CENTERPOINT OF FINAL GROUP = 163.099991

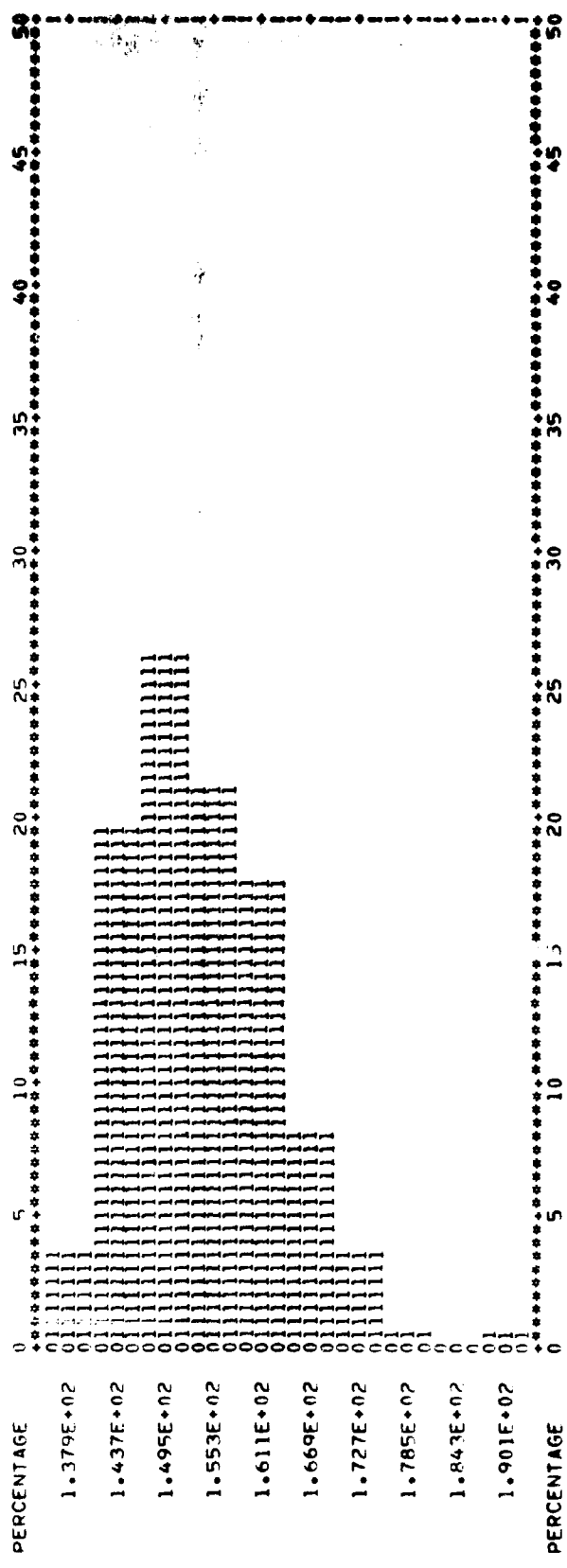
NUMBER OF OBSERVATIONS = 153  
NUMBER OF GROUPS = 10



BIN CONTENT 128.90 132.70 136.50 140.30 144.10 147.90 151.70 155.50 159.30 163.10  
4.00 7.00 25.00 24.00 29.00 28.00 18.00 10.00 3.00 5.00

EMERGENCE DATE

CROP TYPE IS 50  
 SEGMENTS = 135  
 STEP = 145 801 804 883 886 892 893  
 CENTERPOINT OF INITIAL GROUP = 137.899979  
 CENTERPOINT OF FINAL GROUP = 190.099991  
 NUMBER OF OBSERVATIONS = 153  
 NUMBER OF GROUPS = 10



Bin 137.90 143.70 149.50 155.30 161.10 166.90 172.70 178.50 184.30 190.10  
 Content 5.00 30.00 40.00 32.00 27.00 12.00 5.00 1.00 0.0 1.00

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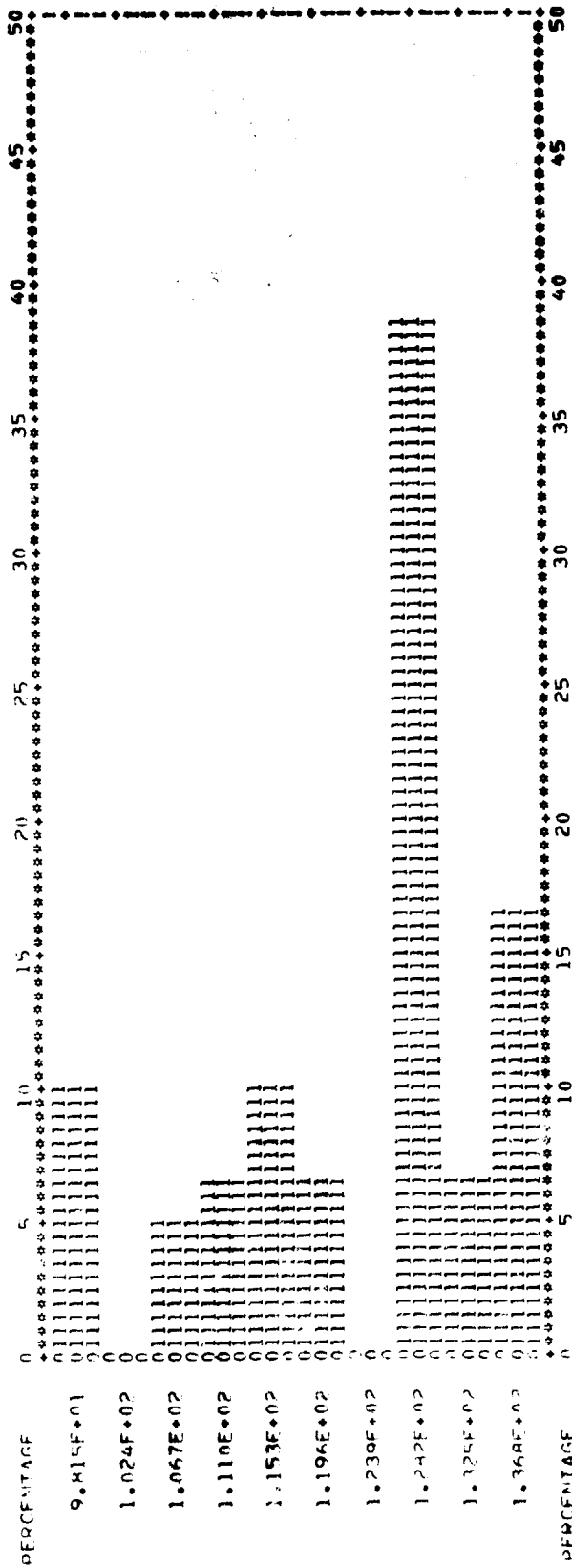
68



PLANTING DATE

CROP TYPE IS CT  
SEGMENTS = 174

269 270 271 273 274  
 4 30000114  
 STEP # OF INITIAL GROUP = 98.1499746  
 CENTERPOINT OF INITIAL GROUP = 136.849991  
 NUMBER OF OBSERVATIONS = 60  
 NUMBER OF GROUPS = 10



94.15 102.45 106.75 111.05 115.35 119.65 123.95 128.25 132.55 136.85  
 6.00 0.0 3.00 4.00 6.00 4.00 0.0 23.00 4.00 10.00

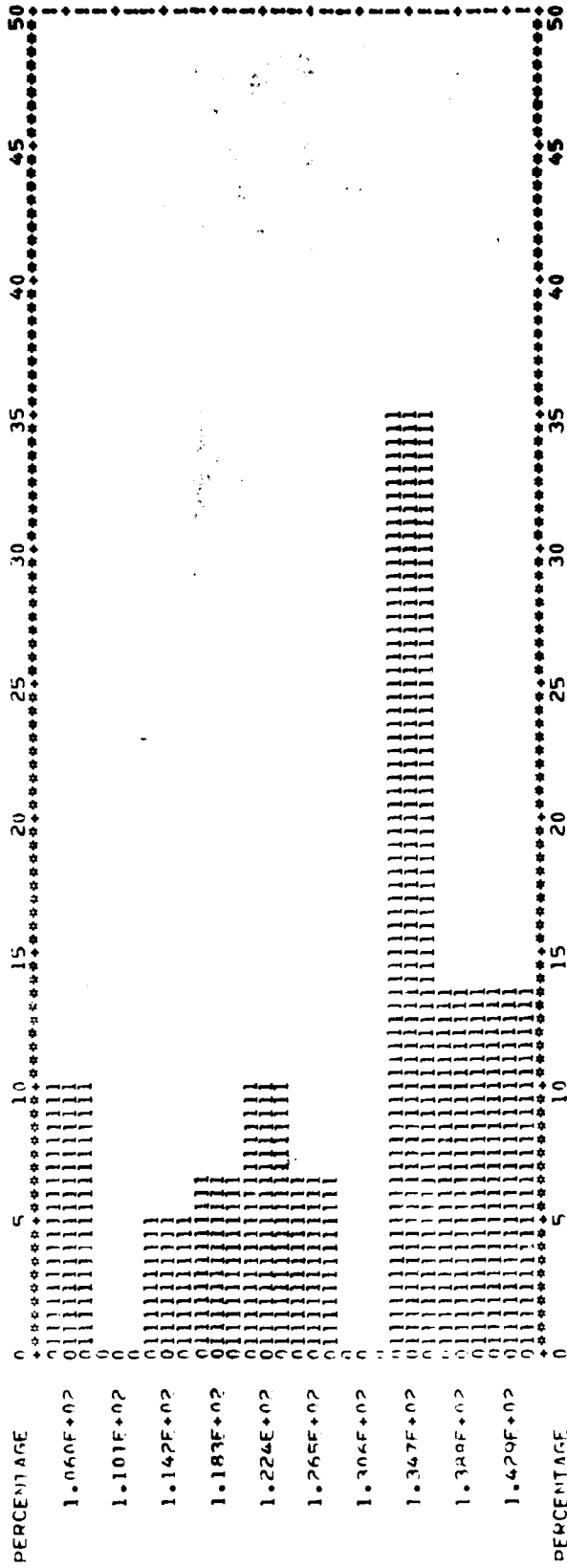
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OF POOR QUALITY

A-42  
65

EMERGENCE DATE

COOP TYPE IS CI  
SEGMENTS = 174

STEP = 269 270 271 273 274  
4.1000220  
CENTROPOINT OF INITIAL GROUP = 106.049974  
CENTROPOINT OF FINAL GROUP = 142.949997  
NUMBER OF OBSERVATIONS = 60  
NUMBER OF GROUPS = 10

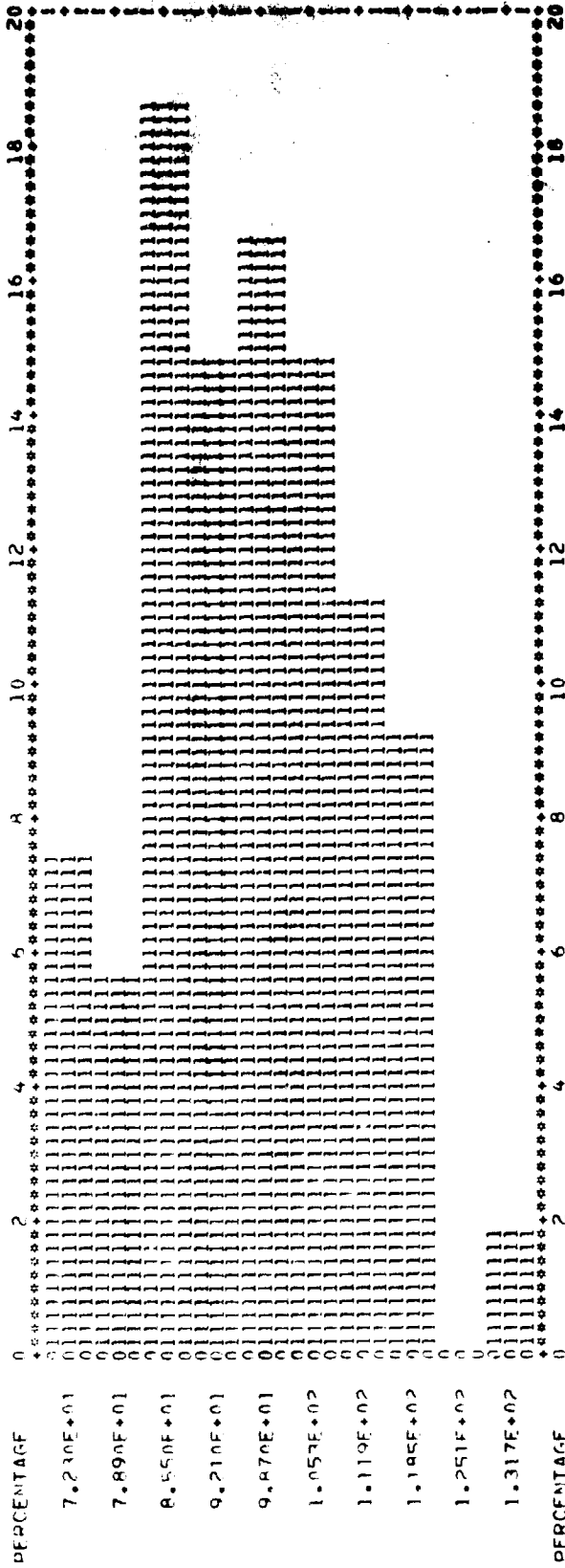


CONTENT 106.05 110.15 114.25 118.35 122.45 126.55 130.65 134.75 138.85 142.95  
6.00 0.0 3.00 4.00 6.00 4.00 0.0 21.00 8.00 8.00

PLANTING DATE

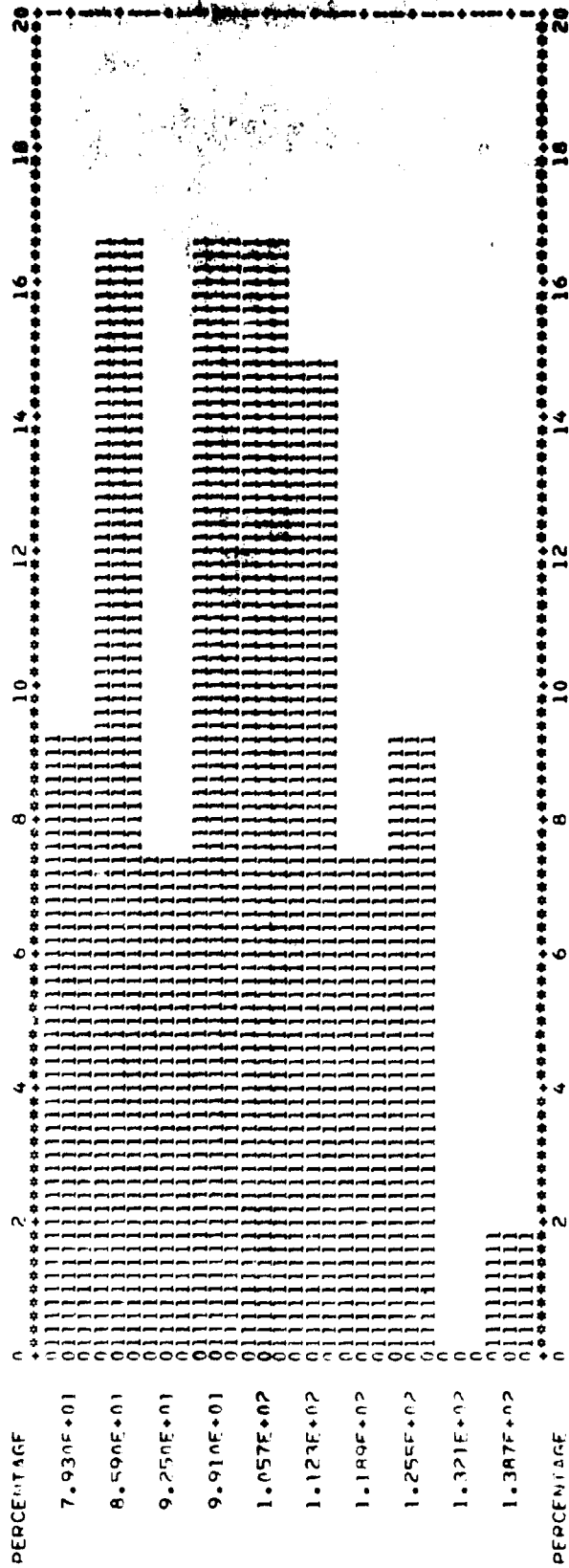
CROP TYPE IS RI 174 266 267 268  
 STEPS = 6.60000229  
 CENTERPOINT OF INITIAL GROUP = 72.2999725  
 CENTERPOINT OF FINAL GROUP = 131.699997

NUMBER OF OBSERVATIONS = 54  
 NUMBER OF GROUPS = 10



EMERGENCE DATE

CROP TYPE IS RI 266 267 268  
SEGMENTS = 174 STEP = 0.60000229  
CENTERPOINT OF INITIAL GROUP = 79.24475  
CENTERPOINT OF FINAL GROUP = 138.69997  
NUMBER OF OBSERVATIONS = 54  
NUMBER OF GROUPS = 10



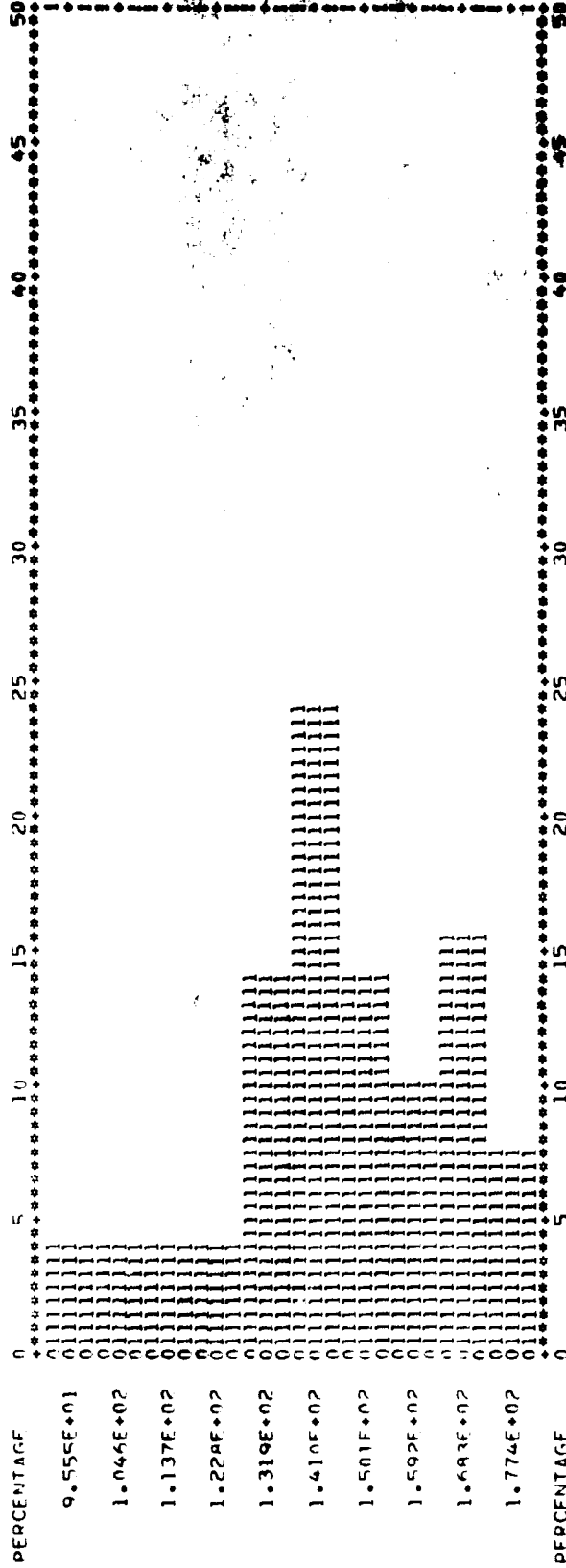
CONTENT 79.30 85.90 92.50 99.10 105.70 112.30 118.90 125.50 132.10 138.70

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OF RECORDS UNIT

PLANTING DATE

CROP TYPE IS 50  
 SEGMENTS = 174  
 STEP = 4  
 CENTERPOINT OF INITIAL GROUP = 95.5499725  
 CENTERPOINT OF FINAL GROUP = 177.449997

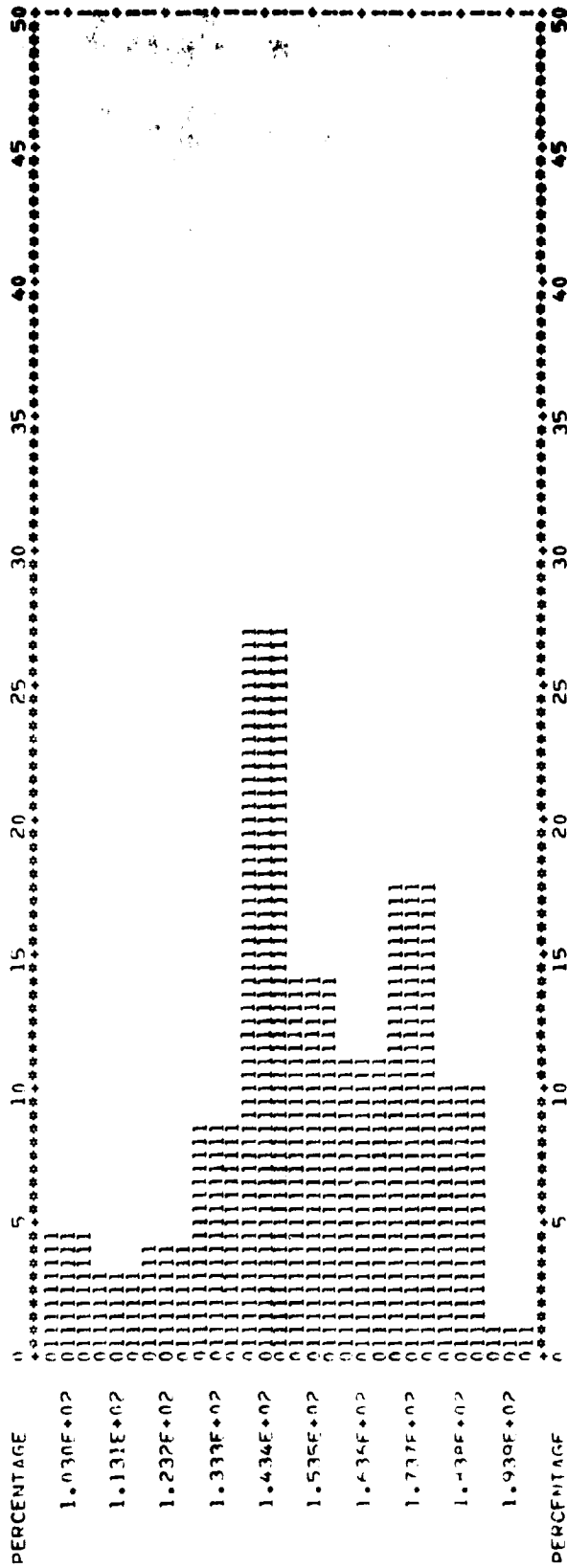
NUMBER OF OBSERVATIONS = 130  
 NUMBER OF GROUPS = 10



BIN CONTENT  
 95.55 104.65 113.75 122.85 131.95 141.05 150.15 159.25 168.35 177.45  
 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00

EMERGENCE DATE

CROP TYPE IS 50  
 SEGMENTS = 174 269 267 26A 259 270 271 272 273  
 STEP = 10.1000023  
 CENTERPOINT OF INITIAL GROUP = 103.049973  
 CENTERPOINT OF FINAL GROUP = 193.949997  
 NUMBER OF OBSERVATIONS = 130  
 NUMBER OF GROUPS = 10



MIN CONTENT 103.05 113.15 123.25 133.35 143.45 153.55 163.65 173.75 183.85 193.95  
 6.00 4.00 5.00 11.00 35.00 18.00 14.00 23.00 13.00 1.00

MINNESOTA

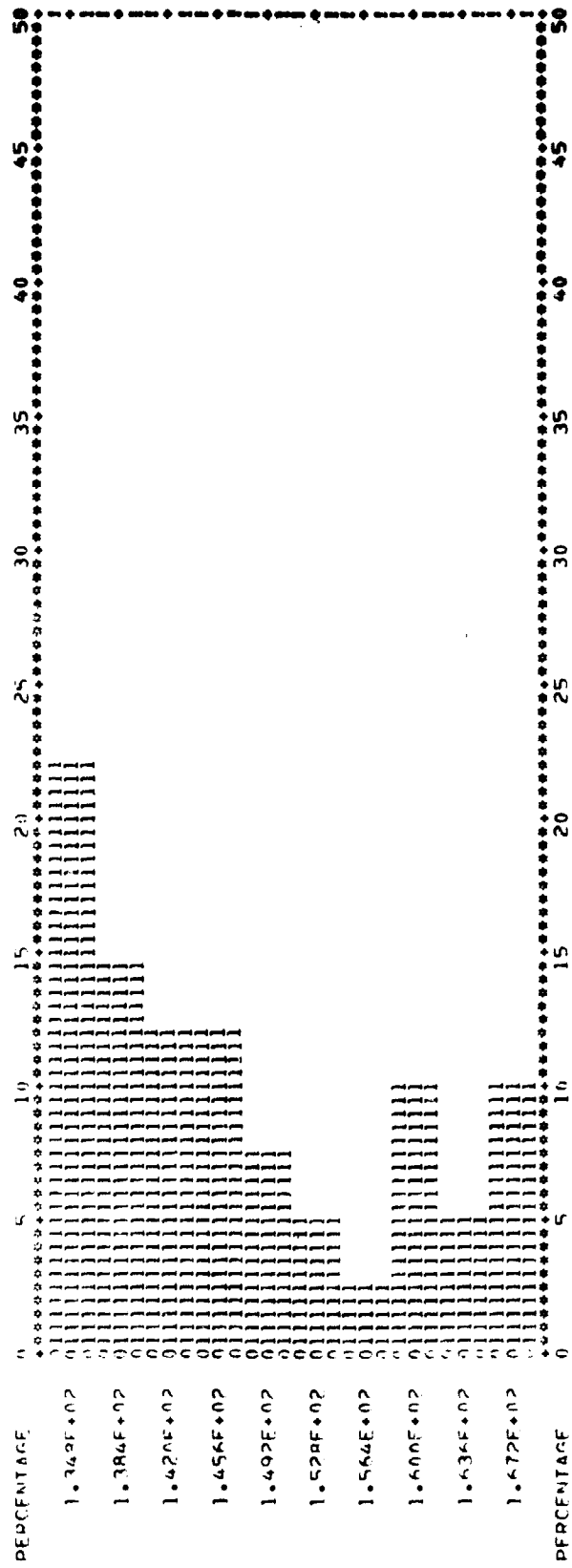
~~A-48~~  
71

PLANTING DATE

CROP TYPE IS HR

SEGMENTS = 1514 1514 1566 1825 1835  
STEP = 3.40000229  
CENTRUM OF INITIAL GROUP = 134.799873  
CENTRUM OF FINAL GROUP = 167.199987

NUMBER OF OBSERVATIONS = 41  
NUMBER OF GROUPS = 10



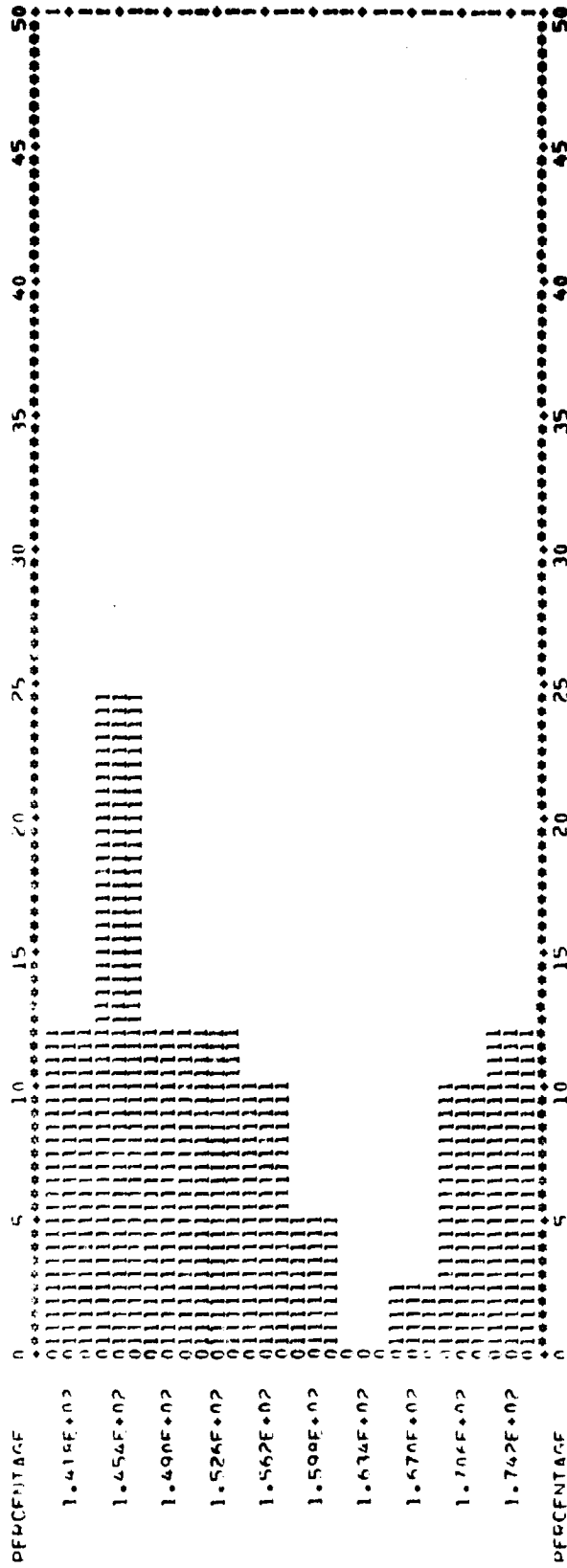


EMERGENCE DATE

CROP TYPE IS RR

SEGMENTS = 1514 151A 156A 1825 1835  
SFB = 320000224  
CENTROPOINT OF INITIAL GROUP = 141.749974  
CENTROPOINT OF FINAL GROUP = 174.149974

NUMBER OF OBSERVATIONS = 41  
NUMBER OF GROUPS = 10



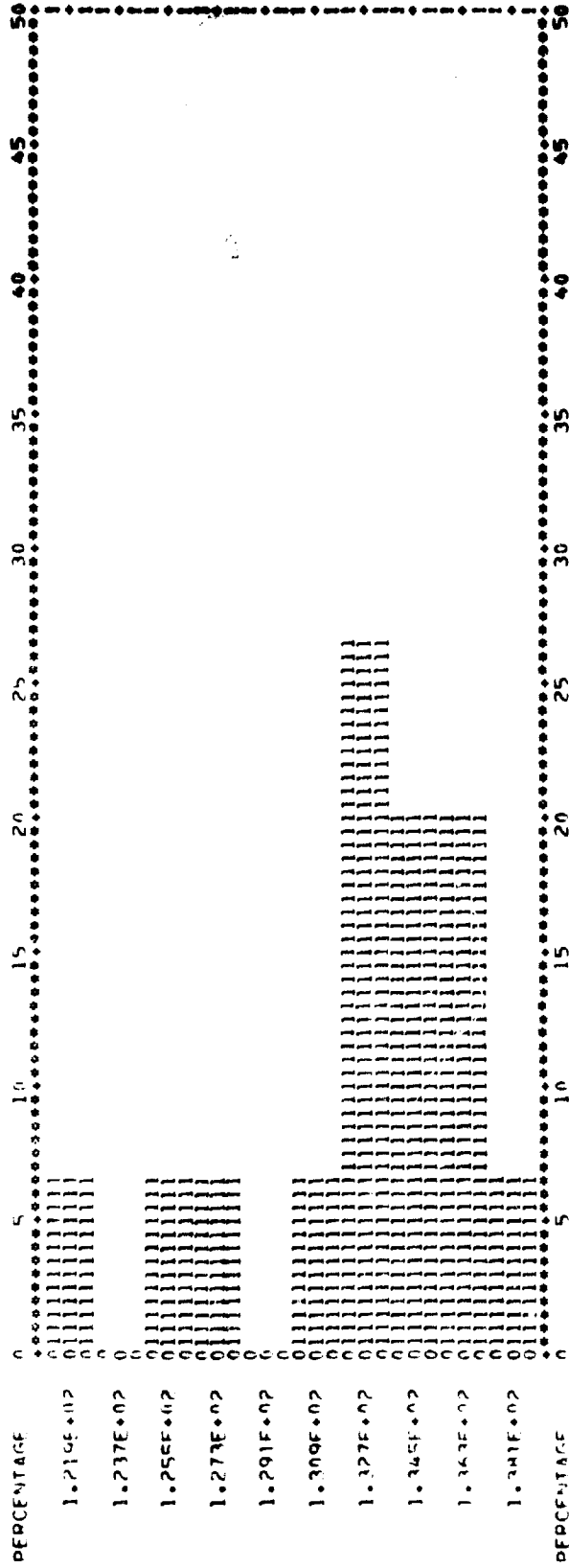
CONTENT 141.80 145.40 149.00 152.60 156.20 159.80 163.40 167.00 170.60 174.20  
5.00 5.00 5.00 5.00 4.00 2.00 0.0 1.00 4.00 5.00

A-50  
73

PLANTING DATE

CROP TYPE IS CR  
SEGMENTS = 316

STEP = 1.40000114  
CENTERPOINT OF INITIAL GROUP = 121.899979  
CENTERPOINT OF FINAL GROUP = 138.099991  
NUMBER OF OBSERVATIONS = 15  
NUMBER OF GROUPS = 10

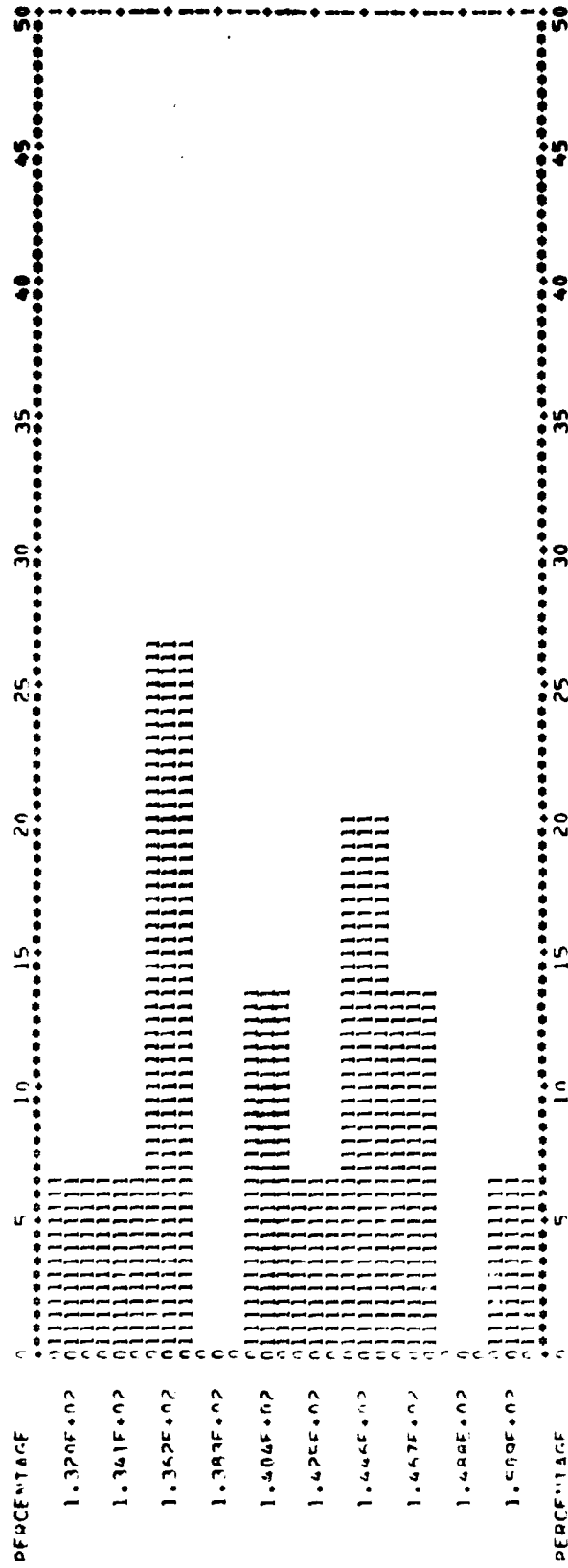


CONTENT 121.90 123.70 125.50 127.30 129.10 130.90 132.70 134.50 136.30 138.10  
1.00 0.0 1.00 1.00 0.0 1.00 4.00 3.00 3.00 1.00

EMERGENCE DATE

COOP TYPE IS CP  
SEGMENTS = 315

STEP = 2 INC000224 NUMBER OF OBSERVATIONS = 15  
 CENTERPOINT OF INITIAL GROUP = 132.049973 NUMBER OF GROUPS = 10  
 CENTERPOINT OF FINAL GROUP = 150.949997



HIT CONTENT 132.05 134.15 136.25 138.35 140.45 142.55 144.65 146.75 148.85 150.95  
 1.00 1.00 4.00 0.0 2.00 1.00 3.00 2.00 0.0 1.00

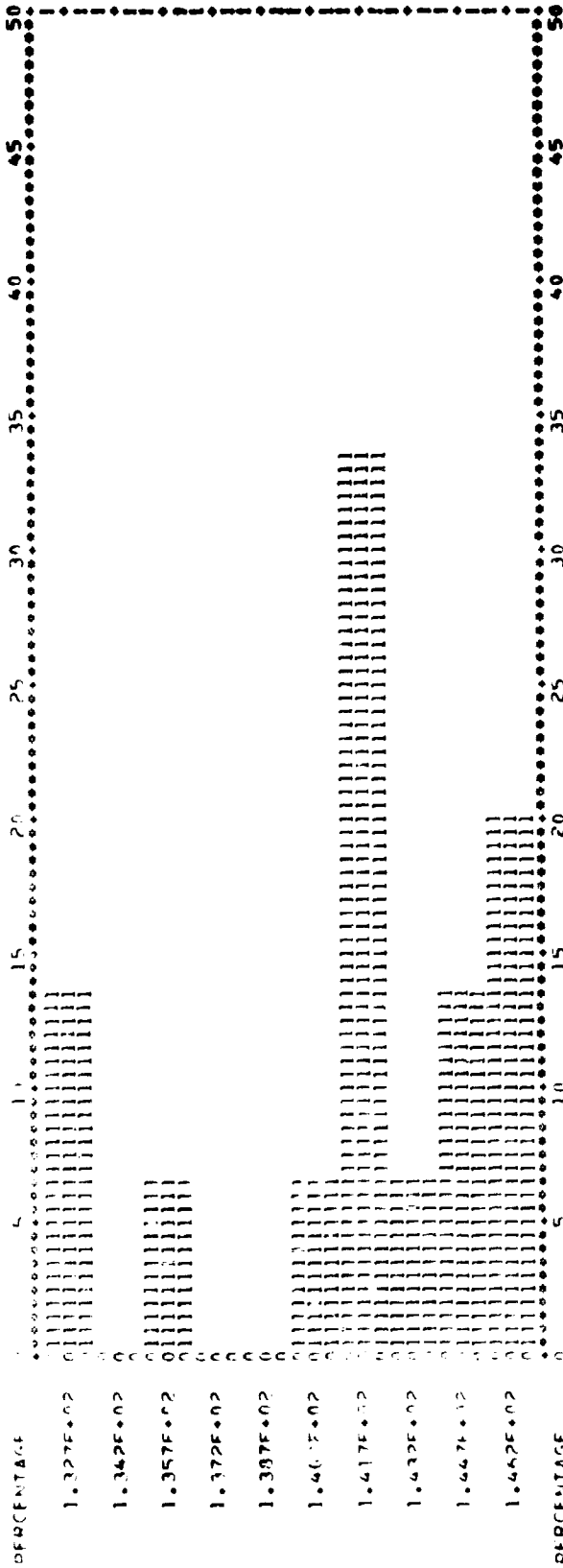
PLANTING DATE

CEAD TYPE IS SC

SEQUENCE = 316

INITIALS OF PERSONS  
INITIALS OF INITIAL GROUPS = 132.749985 NUMBER OF OBSERVATIONS = 15

INITIALS OF FINAL GROUPS = 146.350000 NUMBER OF GROUPS = 10



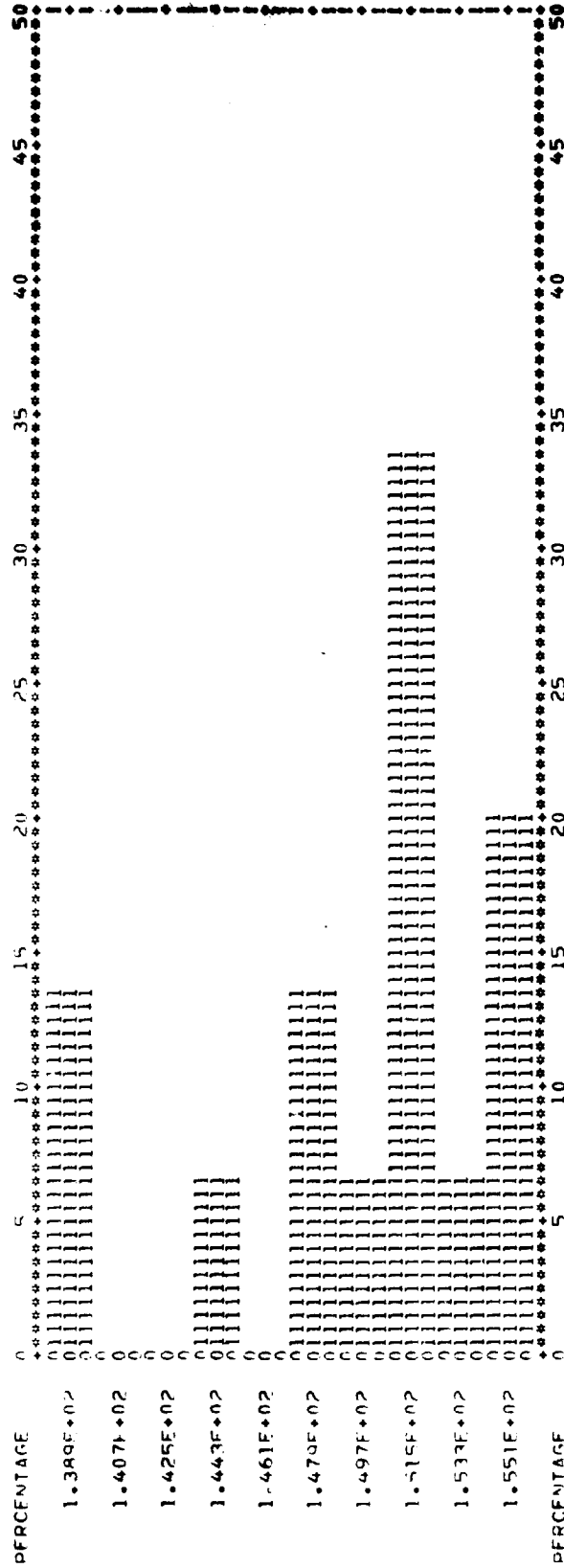
INITIALS OF FINAL GROUPS = 132.75 134.25 135.75 137.25 138.75 140.25 141.75 143.25 144.75 146.25

INITIALS OF INITIAL GROUPS = 146.00 0.00 1.00 2.00 3.00

EMERGENCE DATE

CROP TYPE IS SO  
SEGMENTS = 315

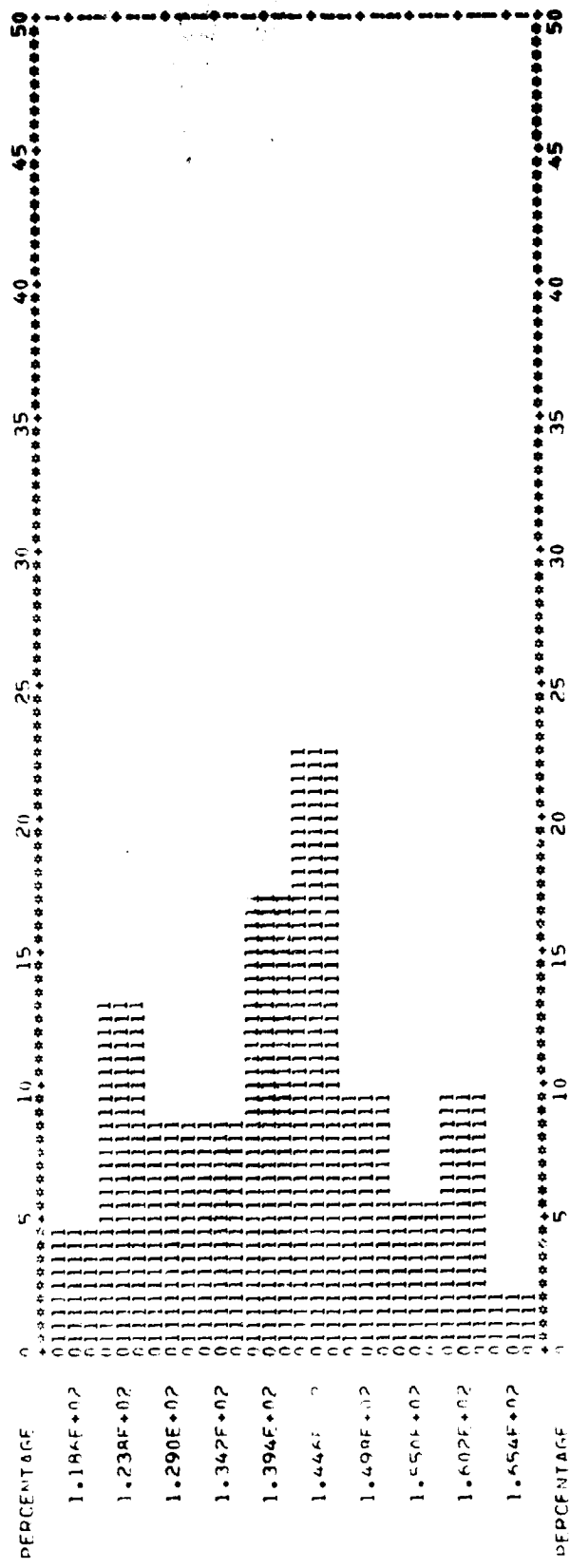
INITIAL CENTERPOINT OF INITIAL GROUP = 133.0000174  
INITIAL CENTERPOINT OF FINAL GROUP = 155.099979  
NUMBER OF OBSERVATIONS = 15  
NUMBER OF GROUPS = 10



CONTENT 138.90 140.70 142.50 144.30 146.10 147.90 149.70 151.50 153.30 155.10  
2.00 0.0 0.0 1.00 0.0 2.00 1.00 5.00 1.00 3.00

PLANTING DATE

CROP TYPE IS SW  
 SEGMENTS = 1340 1514 1518 15 1425 1435 1442  
 STIP = 520000172  
 CENTERPOINT OF INITIAL GROUP = 118.599976  
 CENTERPOINT OF FINAL GROUP = 165.399994  
 NUMBER OF OBSERVATIONS = 94  
 NUMBER OF GROUPS = 10



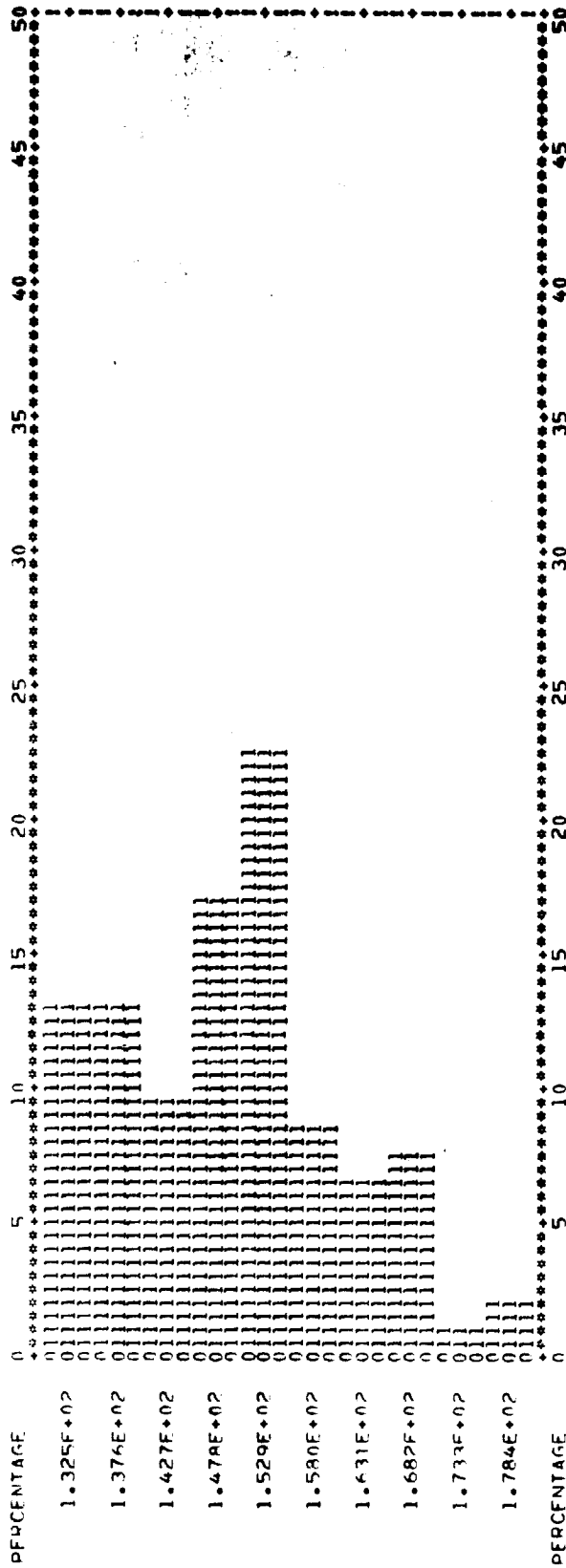
HI 118.60 123.80 129.00 134.20 139.40 144.60 149.80 155.00 160.20 165.40  
 CONTENT 4.00 12.00 8.00 8.00 16.00 21.00 9.00 5.00 9.00 2.00

UNIVERSITY OF CALIFORNIA  
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EMERGENCE DATE

CROP TYPE IS SW 1340 1514 1518 1566 1825 1835 1842  
 SEGMENTS = 5 1000229  
 STEPS = 1000229  
 CENTERPOINT OF INITIAL GROUP = 132.549873  
 CENTERPOINT OF FINAL GROUP = 178.449997

NUMBER OF OBSERVATIONS = 94  
 NUMBER OF GROUPS = 10



HIV CONTENT 132.55 137.65 142.75 147.85 152.95 158.05 163.15 168.25 173.35 178.45  
 12.00 12.00 9.00 16.00 21.00 8.00 6.00 7.00 1.00 2.00

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80



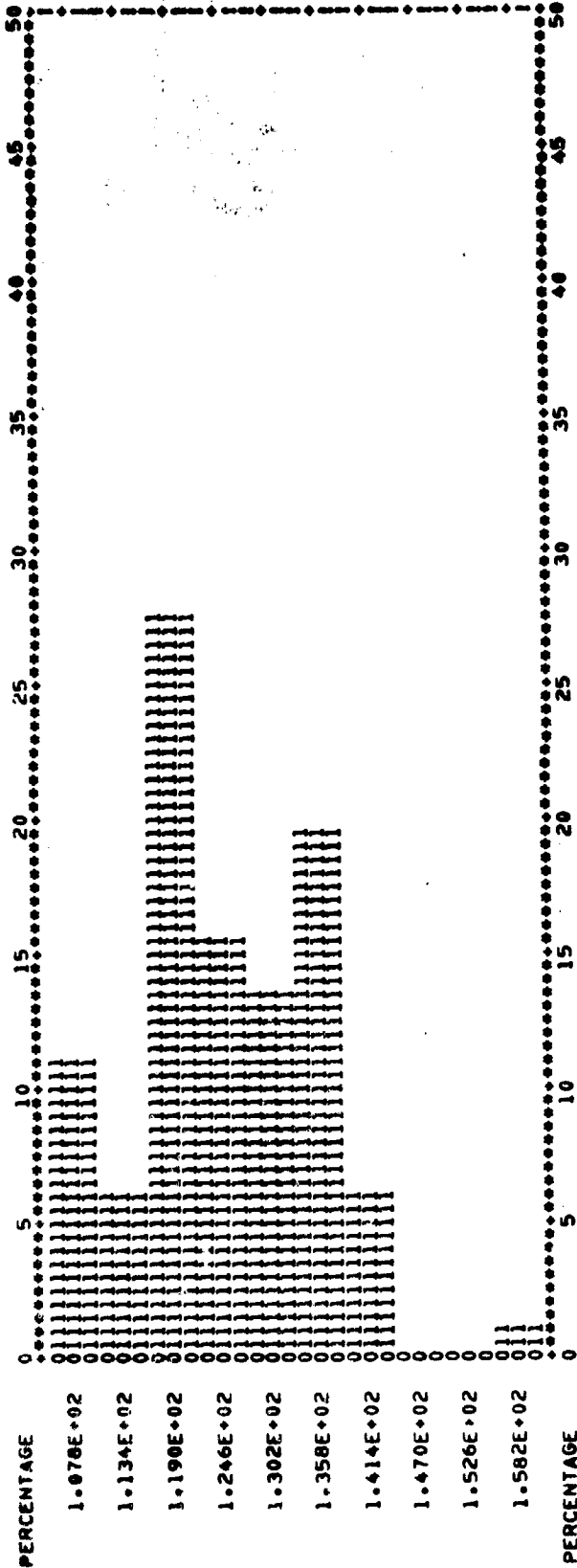
83

PLANTING DATE

CROP TYPE IS CT  
SEGMENTS = 187

195 196 198 200 297 298  
STEP = 0000029  
CENTERPOINT OF INITIAL GROUP = 107.799973  
CENTERPOINT OF FINAL GROUP = 158.199997

NUMBER OF OBSERVATIONS = 1083  
NUMBER OF GROUPS



BIN	CONTENT	9.00	5.00	23.00	13.00	11.00	16.00	135.80	141.40	147.00	152.60	158.20
0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8
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10	10	10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11	11	11
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16	16	16	16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24	24	24	24
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34	34	34	34	34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36	36	36	36	36
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42	42	42	42	42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50	50	50	50	50

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A-58

EMERGENCE DATE

CROP TYPE IS CT  
SEGMENTS = 187

195 196 198 200 297 298

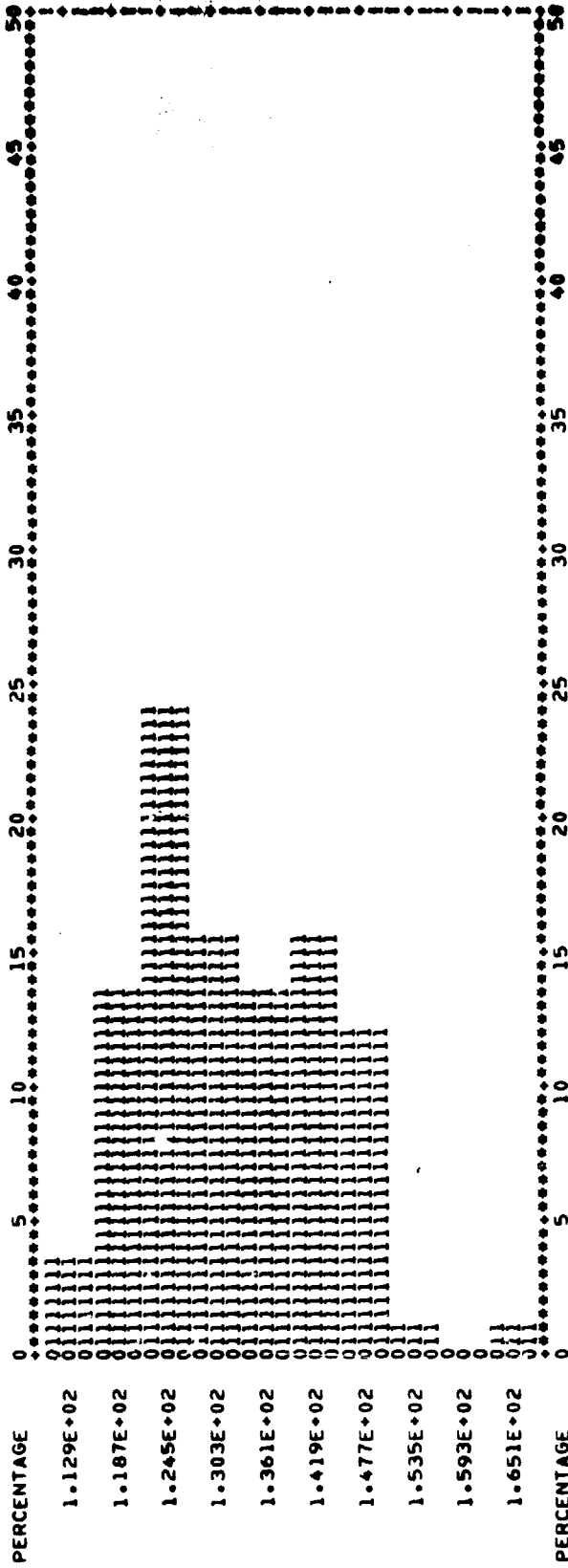
STEP = 5.80000

CENTERPOINT OF INITIAL GROUP = 112.899979

CENTERPOINT OF FINAL GROUP = 165.099991

NUMBER OF OBSERVATIONS = 10 03

NUMBER OF GROUPS = 10

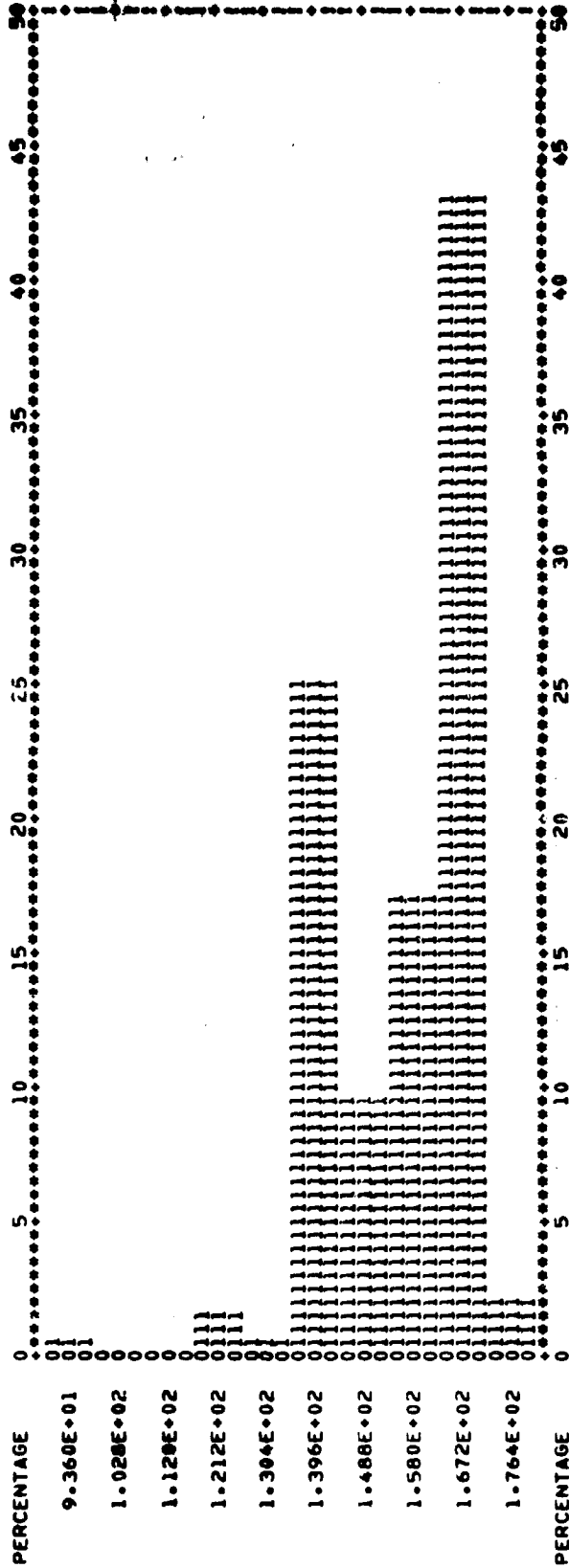


BIN CONTENT 112.90 118.70 124.50 130.30 136.10 141.90 147.70 153.50 159.30 165.10  
5.00 11.00 20.00 13.00 13.00 11.00 13.00 10.00 1.00 0.0 1.00

82

PLANTING DATE

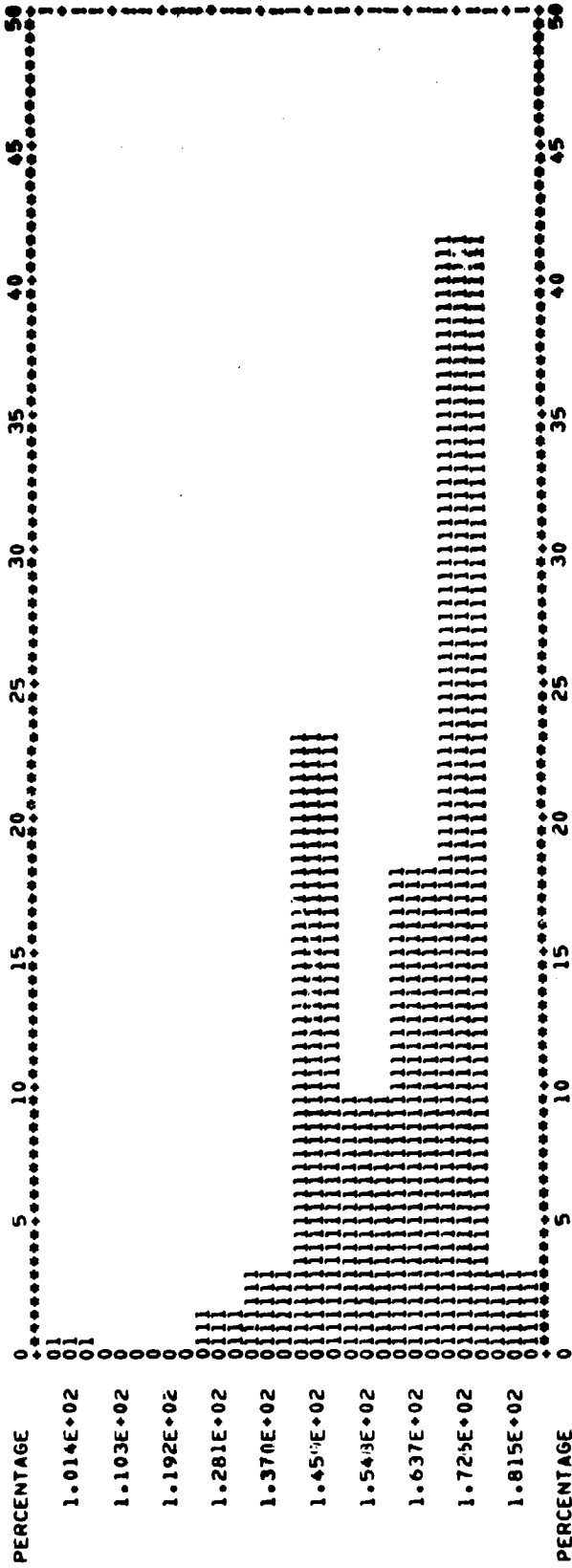
CROP TYPE IS 50  
 SEGMENTS = 187 188 195 196 198 200 297 298 299  
 STEP = 9.20000172  
 CENTERPOINT OF INITIAL GROUP = 93.5999756  
 CENTERPOINT OF FINAL GROUP = 176.3999994  
 NUMBER OF OBSERVATIONS = 135  
 NUMBER OF GROUPS = 10



BIN CONTENT  
 93.60 102.80 112.00 121.20 130.40 139.60 148.80 158.00 167.20 176.40  
 1.00 0.0 0.0 2.00 1.00 34.00 13.00 23.00 58.00 3.00

EMERGENCE DATE

CROP TYPE IS 50  
 SEGMENTS = 187  
 188 195 196 198 200 297 298 299  
 SEP 8 0000657  
 CENTERPOINT OF INITIAL GROUP = 101.449982  
 CENTERPOINT OF FINAL GROUP = 181.549988  
 NUMBER OF OBSERVATIONS = 135  
 NUMBER OF GROUPS = 10



BIN	CONTENT	101.45	110.35	119.25	128.15	137.05	145.95	154.85	163.75	172.65	181.55
		1.00	0.0	0.0	2.00	4.00	31.00	13.00	24.00	56.00	4.00

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85

PLANTING DATE

CROP TYPE IS CR

SEGMENTS = 209 211 217 316

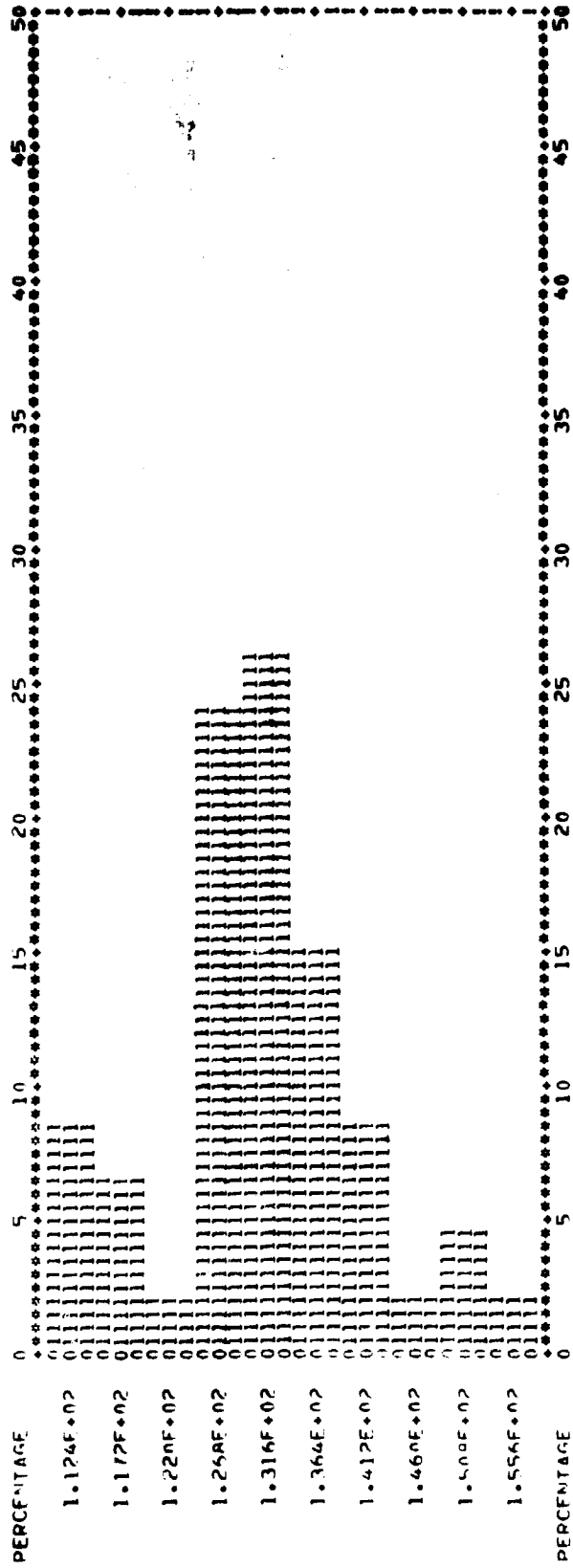
STEPS = 4 30 30 114

CENTERPOINT OF INITIAL GROUP = 112.349979

CENTERPOINT OF FINAL GROUP = 155.549991

NUMBER OF OBSERVATIONS = 46

NUMBER OF GROUPS = 10



HIN 112.40 117.20 122.00 126.80 131.60 136.40 141.20 146.00 150.80 155.60

CONTENT 4.00 3.00 1.00 1.00 11.00 12.00 7.00 4.00 1.00 2.00 1.00

EMERGENCE DATE

CROP TYPE IS CP

209 211 217 314

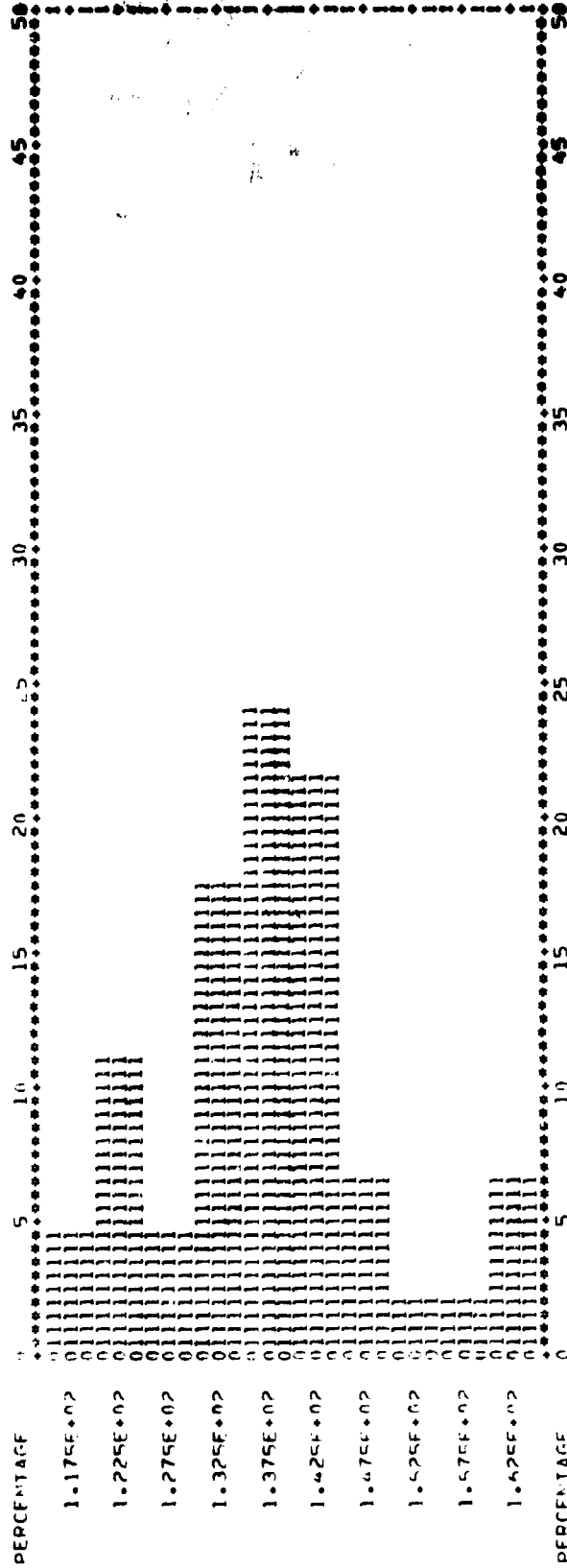
SEMENTS = 5,00000045

CENTERPOINT OF INITIAL GROUP = 117.5000005

CENTERPOINT OF FINAL GROUP = 162.5000000

NUMBER OF GROUPS = 10

NUMBER OF OBSERVATIONS = 46



CONTENT 117.50 122.50 127.50 132.50 137.50 142.50 147.50 152.50 157.50 162.50

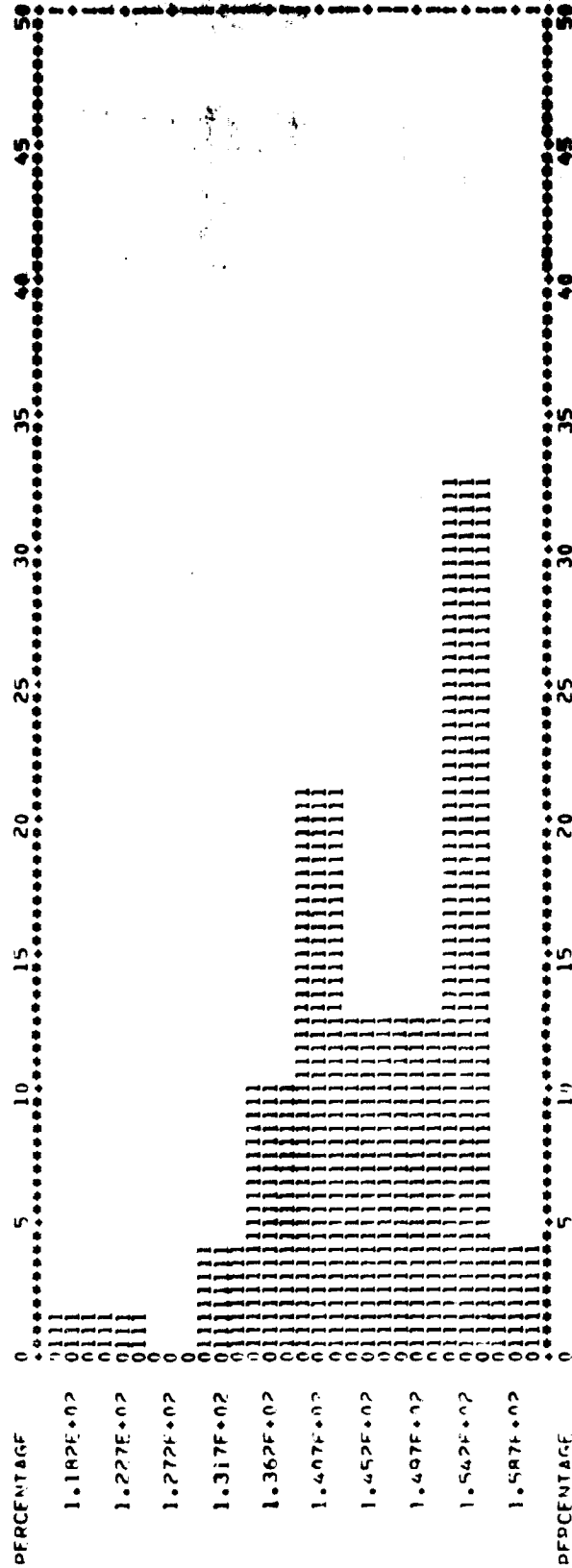
2.00 5.00 2.00 8.00 11.00 10.00 3.00 1.00 1.00 3.00

1.5  
1.6

PLANTING DATE

CROP TYPE IS 50  
 SEGMENTS = 20 209 211 217 316  
 STEP = 4.50000095  
 CENTERPOINT OF INITIAL GROUP = 118.249995  
 CENTERPOINT OF FINAL GROUP = 155.750000

NUMBER OF OBSERVATIONS = 71  
 NUMBER OF GROUPS = 10



HIN 118.25 122.75 127.25 131.75 136.25 140.75 145.25 149.75 154.25 158.75  
 CONTENT 1.00 1.00 0.00 3.00 7.00 15.00 9.00 9.00 23.00 3.00



EMERGENCE DATE

CROP TYPE IS 50  
SEGMENTS = 204

209 211 217 314

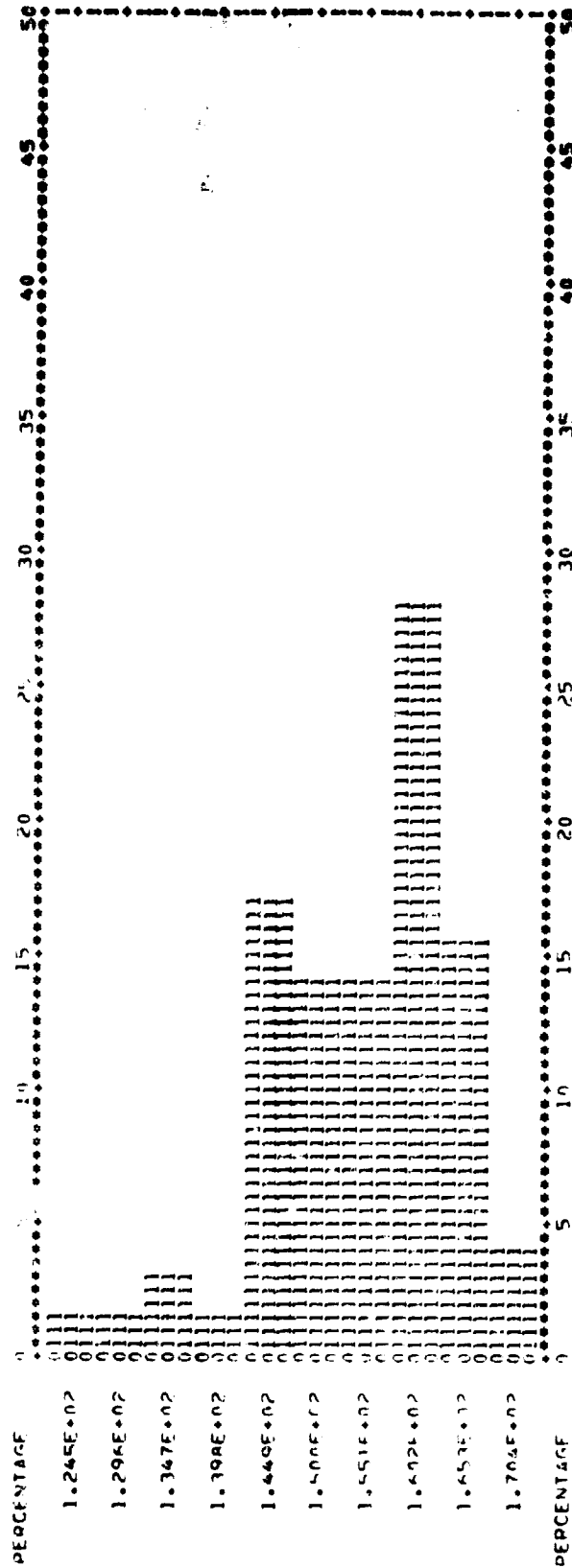
STEP = 5,10000229

CENTERPOINT OF INITIAL GROUP = 124.549973

CENTERPOINT OF FINAL GROUP = 170.449997

NUMBER OF OBSERVATIONS = 71

NUMBER OF GROUPS = 10



BIN CONTENT 124.55 129.65 134.75 139.85 144.95 150.05 155.15 160.25 165.35 170.45  
1.00 1.00 2.00 1.00 12.00 10.00 20.00 11.00 3.00

NEBRASKA

~~A-67~~

90

PLANTING DATE

CROP TYPE IS CR

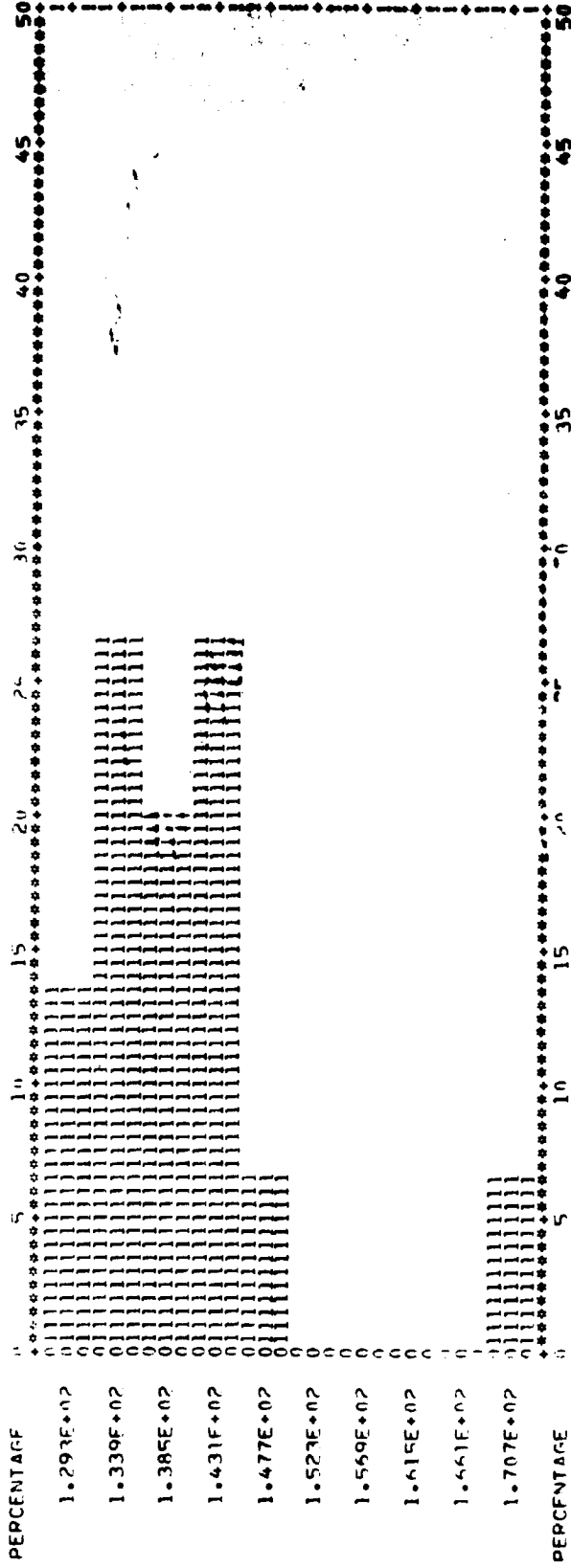
SEGMENTS = 1388 1594 1596

STP = 4.00000229

CENTERPOINT OF INITIAL GROUP = 129.699973

CENTERPOINT OF FINAL GROUP = 176.699997

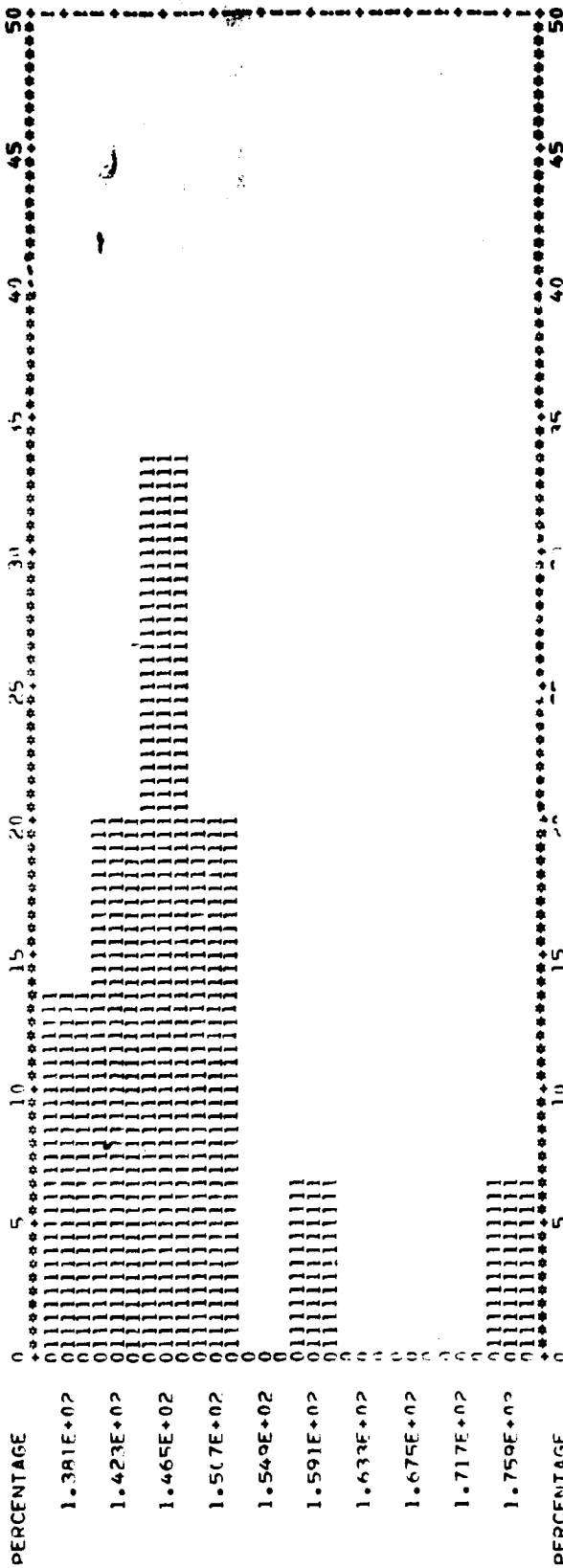
NUMBER OF OBSERVATIONS = 10 15



HIN 129.30 132.90 138.50 143.10 147.70 152.30 156.90 161.50 166.10 170.70  
 CONTENT 2.00 4.00 3.00 4.00 1.00 0.0 0.0 0.0 0.0 1.00

EMERGENCE DATE

CROP TYPE IS CR 138R 1594 1594  
 SEGMENTS = 4.20000172  
 CENTERPOINT OF INITIAL GROUP = 175.009975  
 CENTERPOINT OF FINAL GROUP = 175.009994  
 NUMBER OF OBSERVATIONS = 15  
 NUMBER OF GROUPS = 10



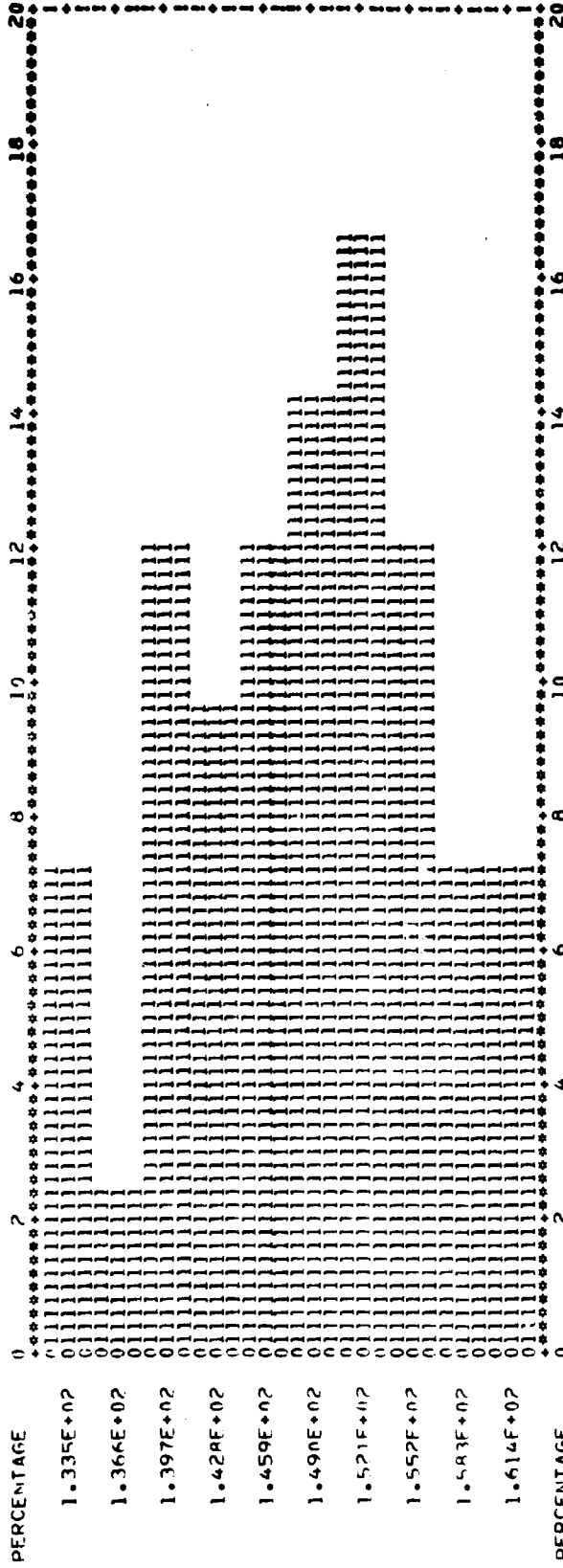
CONTENT 138.10 142.30 146.50 150.70 154.90 159.10 163.30 167.50 171.70 175.90  
 2.00 3.00 5.00 3.00 0.0 1.00 0.0 0.0 0.0 1.00

A-69  
 92

PLANTING DATE

CROP TYPE IS SR  
 SEGMENTS = 324 13RA 1594 1596  
 STEP = 3.10000229  
 CENTERPOINT OF INITIAL GROUP = 133.54973  
 CENTERPOINT OF FINAL GROUP = 161.44997

NUMBER OF OBSERVATIONS = 1042  
 NUMBER OF GROUPS



BIN CONTENT 133.55 136.65 139.75 142.85 145.95 149.05 152.15 155.25 158.35 161.45  
 3.00 1.00 5.00 4.00 5.00 6.00 7.00 5.00 3.00 3.00

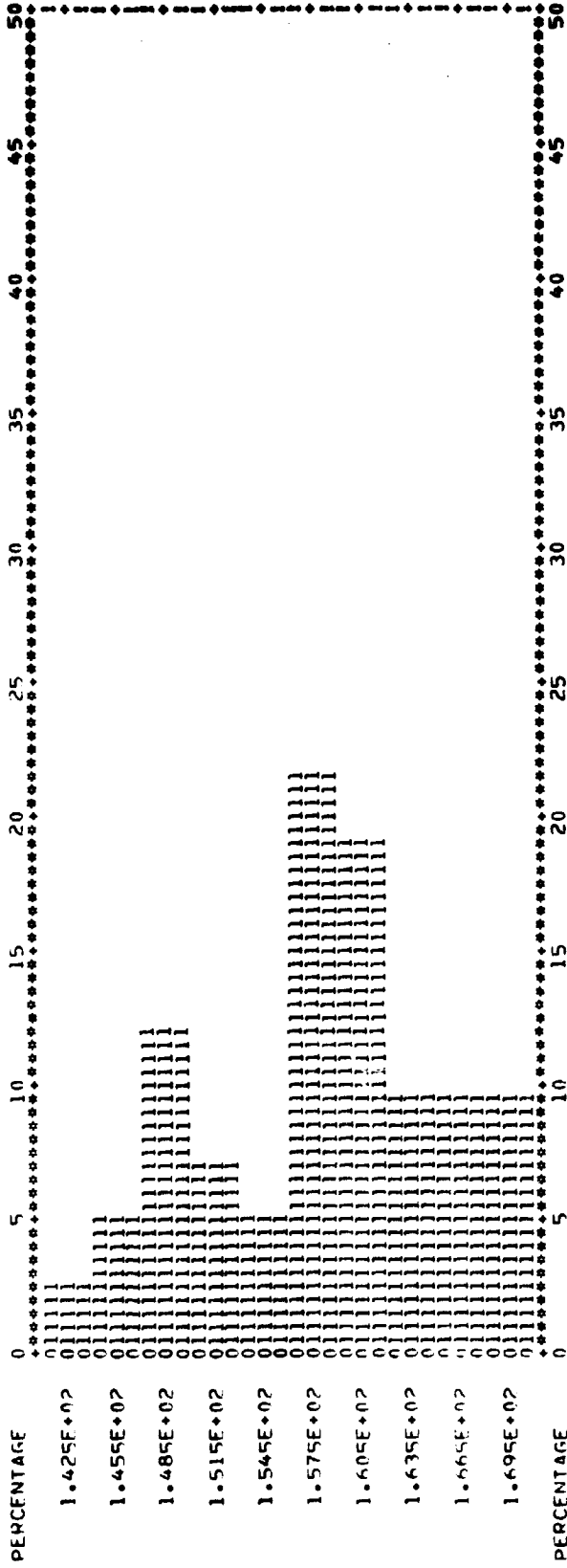
A-70  
 93

ORIGINAL DATA IS  
 OF FOOD CORP.

EMERGENCE DATE

CROP TYPE IS SR 324 1748 1594 1596  
 SEGMENTS = 324 1748 1594 1596  
 STEP = 3.00000095  
 CENTERPOINT OF INITIAL GROUP = 142.499995  
 CENTERPOINT OF FINAL GROUP = 169.500000

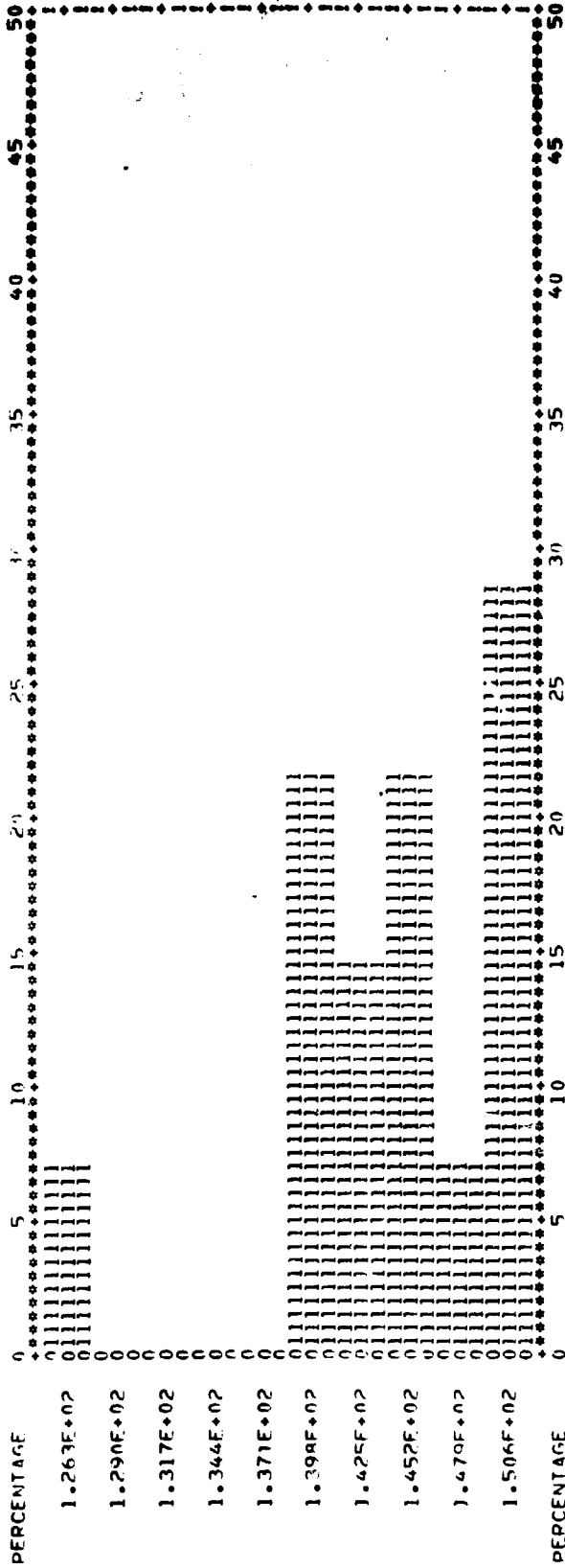
NUMBER OF OBSERVATIONS = 42  
 NUMBER OF GROUPS = 10



A-21  
94

PLANTING DATE

CROP TYPE IS SO 1388 1594 1596  
 SEGMENTS = 2,700000172  
 CENTERPOINT OF INITIAL GROUP = 129.349976  
 CENTERPOINT OF FINAL GROUP = 150.449994  
 NUMBER OF SECTIONS = 14  
 NUMBER OF GROUPS = 10



BIN CONTENT 126.35 129.05 131.75 134.45 137.15 139.85 142.55 145.25 147.95 150.65  
 1.00 0.0 0.0 0.0 0.0 3.00 2.00 3.00 1.00 4.00

95

EMERGENCE DATE

CROP TYPE IS SO

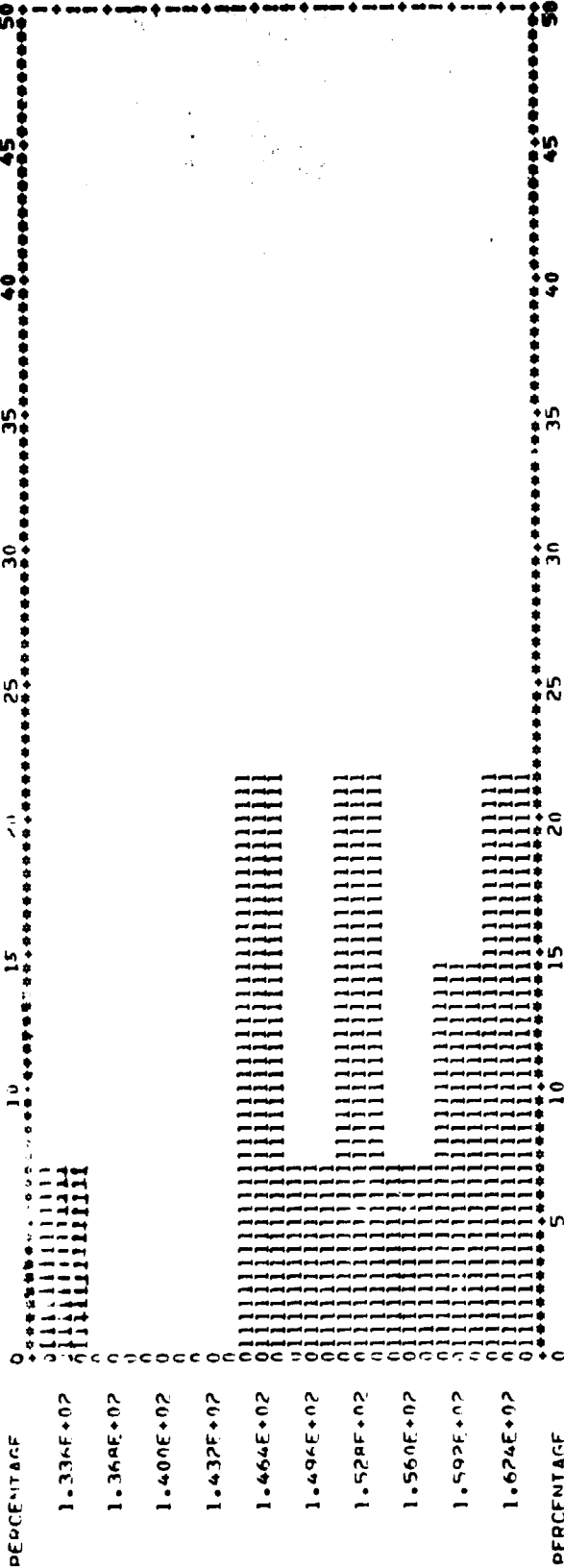
SEGMENTS = 1388 1594 1507

STEP

CENTERPOINT = 153.333370

CENTROID = 162.399999

NUMBER OF OBSERVATIONS = 14  
NUMBER OF GROUPS = 10



BIN CONTENT 133.60 136.80 140.00 143.20 146.40 149.60 152.80 156.00 159.20 162.40

1.00 0.00 0.00 0.00 3.00 1.00 3.00 1.00 2.00 3.00

A-73  
9C



NORTH CAROLINA

A-74  
97

PLANTING DATE

CROP TYPE IS CR

SEGMENTS = 332

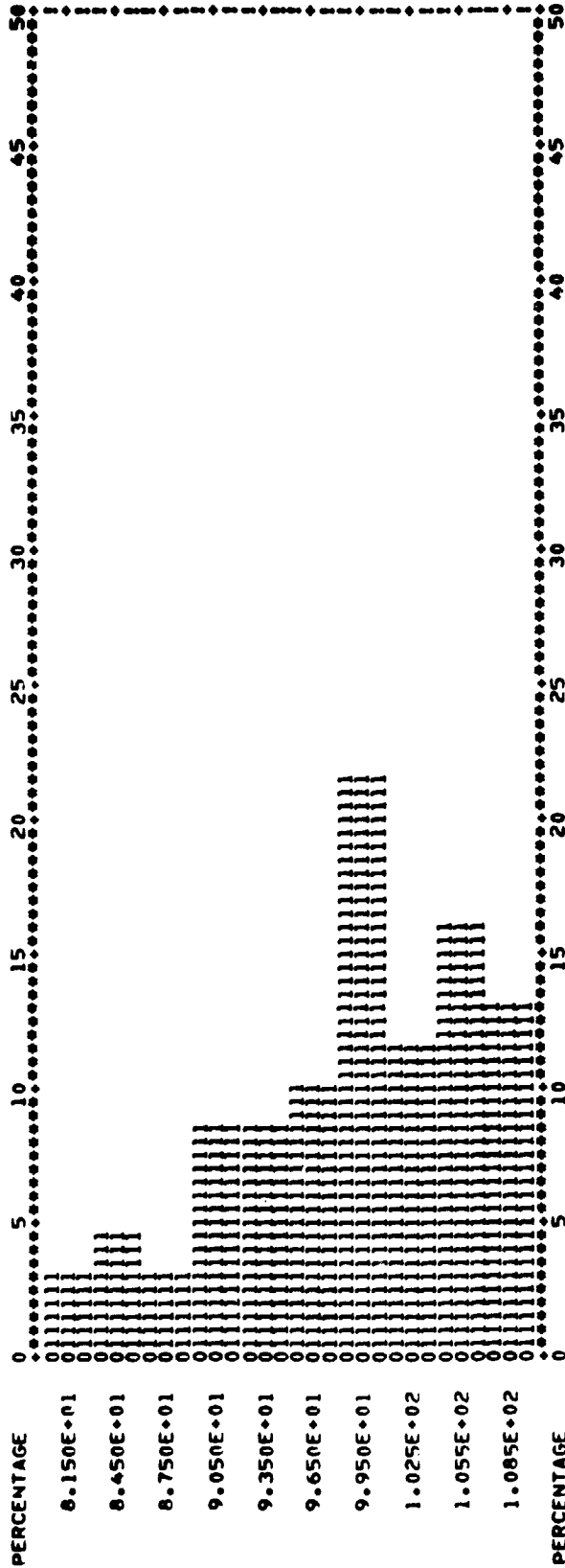
STEP = 341 342 343 344

CENTERPOINT OF INITIAL GROUP = 81.4999847

CENTERPOINT OF FINAL GROUP = 108.50000

NUMBER OF OBSERVATIONS = 69

NUMBER OF GROUPS = 10

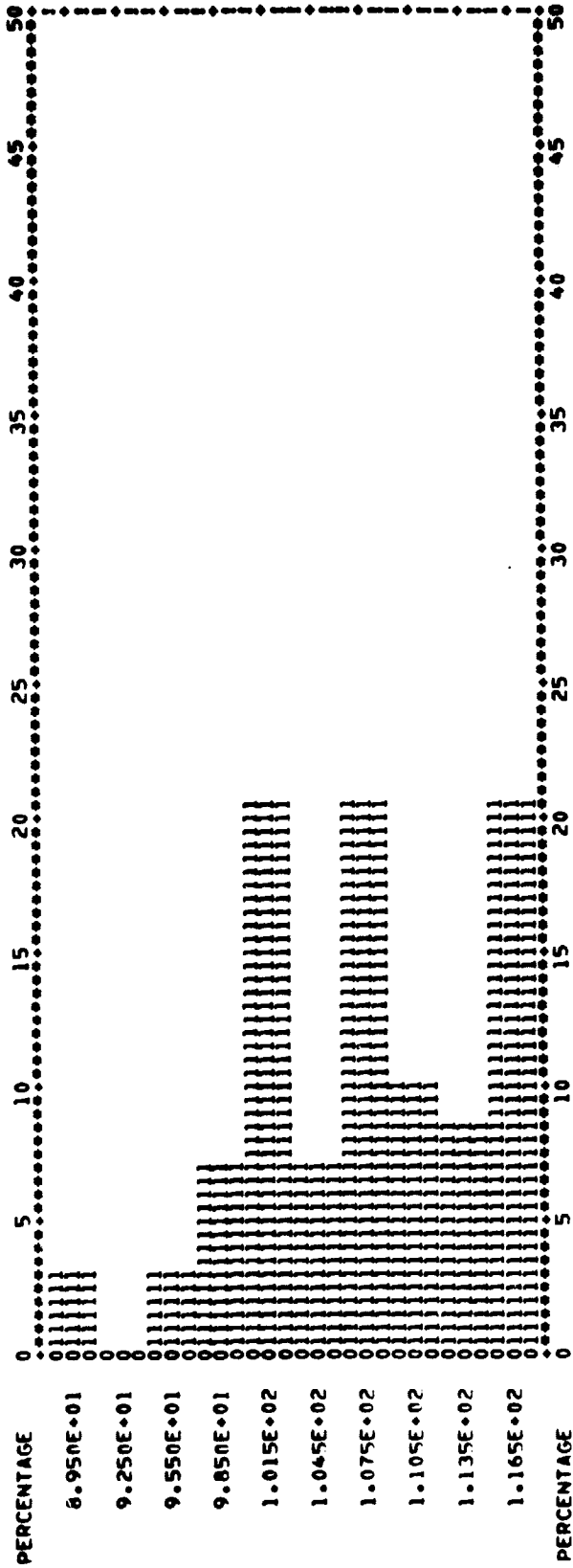


A-75  
48

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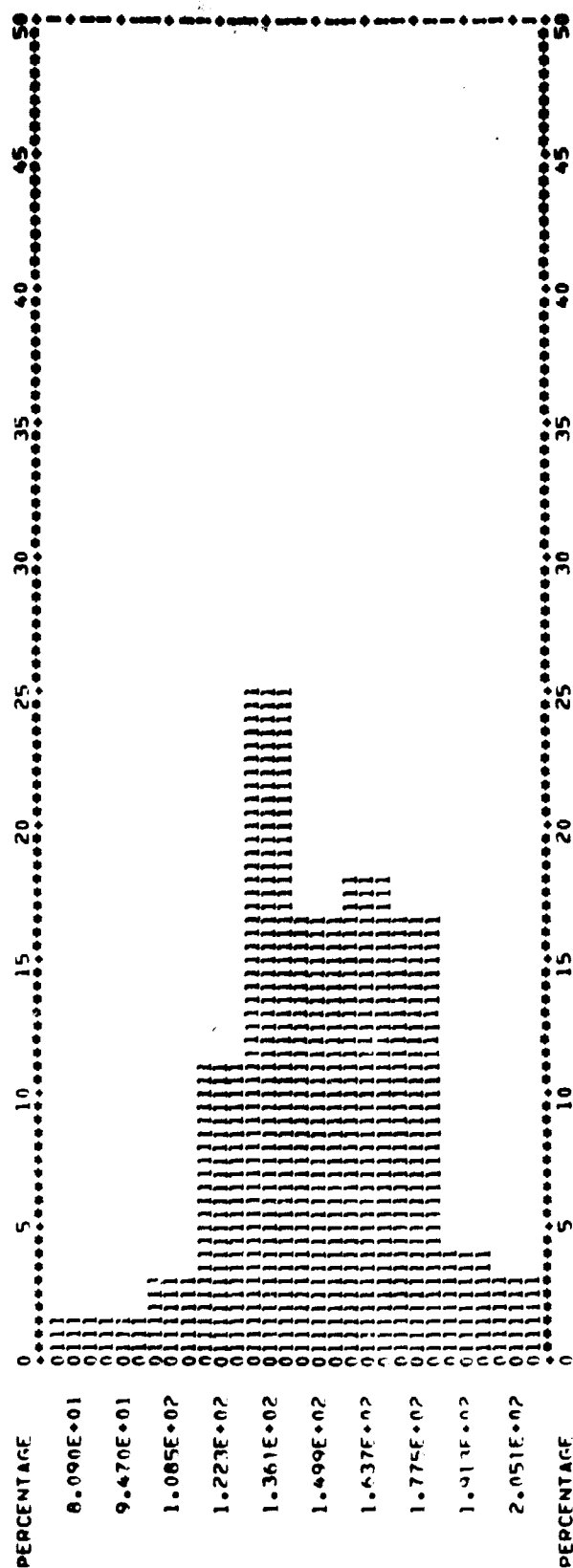
EMERGENCE DATE

CROP TYPE IS CR 341 342 343 344  
 SEGMENTS = 332  
 STEP = 3,00000095  
 CENTERPOINT OF INITIAL GROUP = 89.4999847  
 CENTERPOINT OF FINAL GROUP = 116.5000000  
 NUMBER OF OBSERVATIONS = 69  
 NUMBER OF GROUPS = 10



PLANTING DATE

CROP TYPE IS 50  
 SEGMENTS = 332 340 341 342 343 344  
 CTRP = 13.8000011  
 CENTER POINT OF INITIAL GROUP = 205.000001  
 CENTER POINT OF FINAL GROUP = 205.000001  
 NUMBER OF OBSERVATIONS = 1072



CONTENT  
 80.90 94.70 108.50 122.30 136.10 149.90 163.70 177.50 191.30 205.10  
 1.00 1.00 2.00 6.00 16.00 12.00 13.00 12.00 3.00 2.00

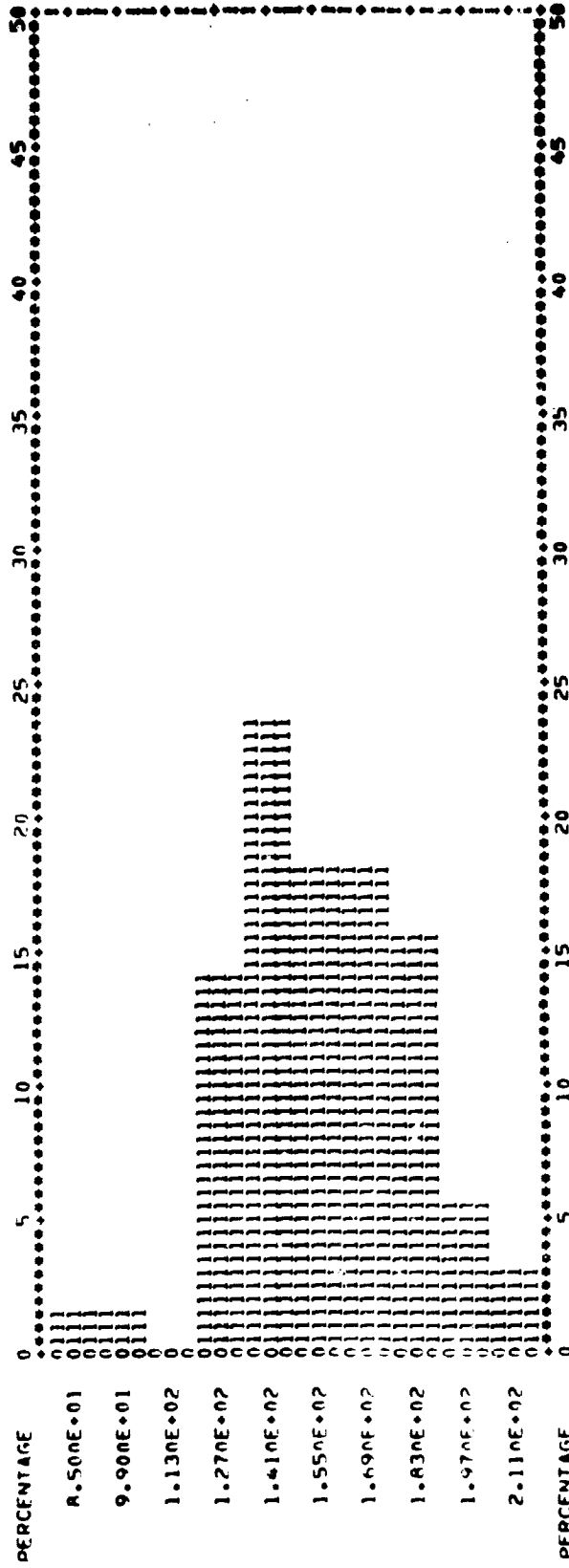
2-77  
 1-22

EMERGENCE DATE

CROP TYPE IS 50  
SEGMENTS = 332

340 341 342 343 344  
STEP = 14.0000010  
CENTERPOINT OF INITIAL GROUP = 211.0000000  
CENTERPOINT OF FINAL GROUP = 211.0000000

NUMBER OF OBSERVATIONS = 72  
NUMBER OF GROUPS = 10



MIN	CONTENT	45.00	99.00	113.00	127.00	141.00	155.00	169.00	183.00	197.00	211.00
1.00	0.0	10.00	17.00	13.00	15.00	11.00	4.00	2.00			

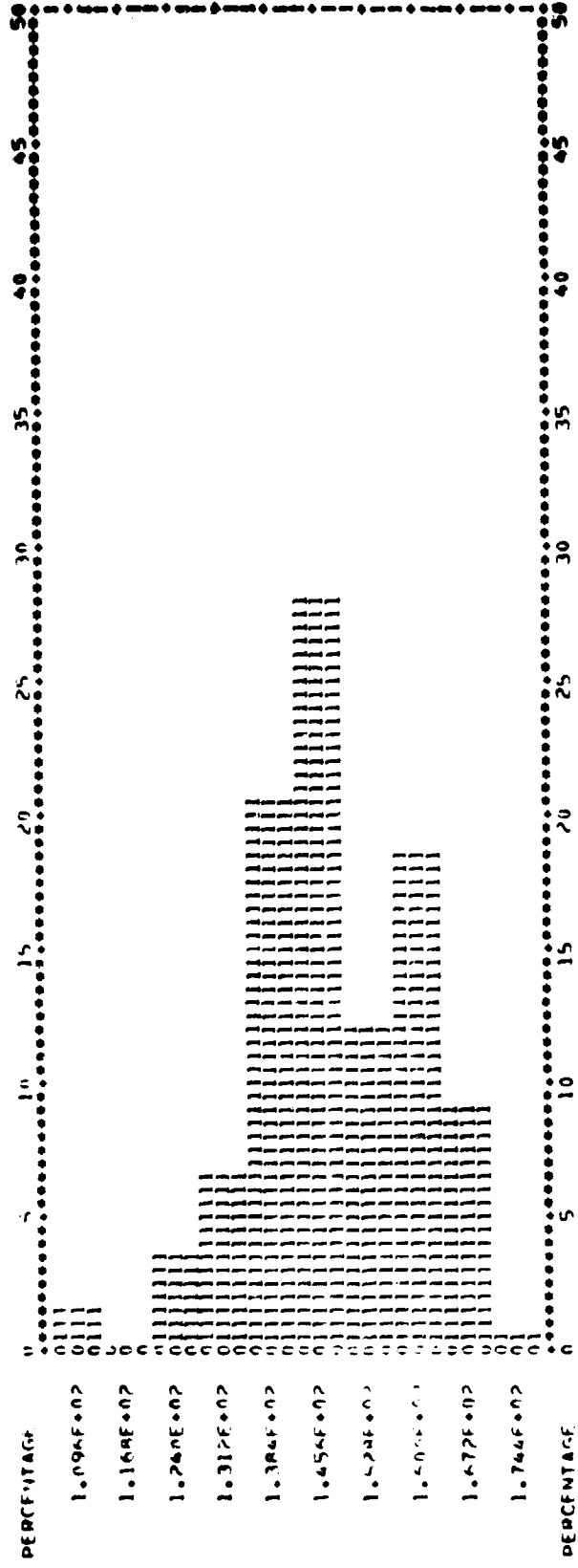
NORTH DAKOTA

~~A-79~~  
102

PLANTING DATE

CRIP TYPE IS 80  
 SEGMENTS = 1347 1392 144 139 147 144 144 147 147 147 1571 1571 1571 1607 1611 1624 1617 1617  
 1630 1630 1625

STEP = 7.2000172  
 CENTERPOINT OF INITIAL GROUP = 109.549676  
 CENTERPOINT OF FINAL GROUP = 174.399994  
 NUMBER OF OBSERVATIONS = 190  
 NUMBER OF GROUPS = 10



CONTENT 109.60 116.40 124.00 131.20 138.40 145.60 152.80 160.00 167.20 174.40  
 1.00 0.00 7.00 12.00 17.00 23.00 29.00 35.00 41.00 47.00

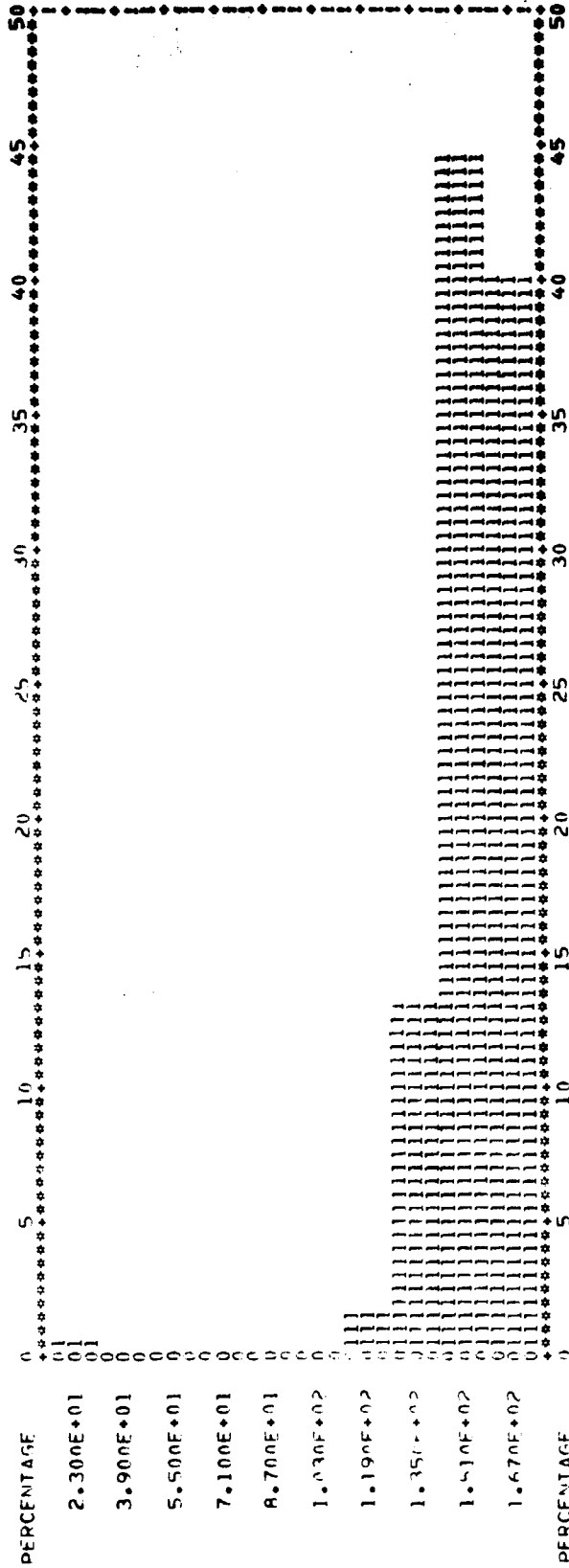
CRIP TYPE IS  
 OF POOR QUALITY

EMERGENCE DATE

CROP TYPE IS 20  
 SEGMENTIC = 1387 1392 1394 1399 1457 1461 1467 1472 1571 1584 1602 1611 1617 1617  
 1630 1636 1645 1655 1658 1651 1664 1669 1677 1684 1924

STEP = 16.0000000  
 CENTRE POINT OF INITIAL GROUP = 22.9999947  
 CENTRE POINT OF FINAL GROUP = 167.0000000

NUMBER OF OBSERVATIONS = 190  
 NUMBER OF GROUPS = 10



MIN CONTENT 23.00 39.00 55.00 71.00 87.00 103.00 119.00 135.00 151.00 167.00  
 1.00 0.00 0.00 0.00 0.00 0.00 3.00 25.00 85.00 76.00

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 104

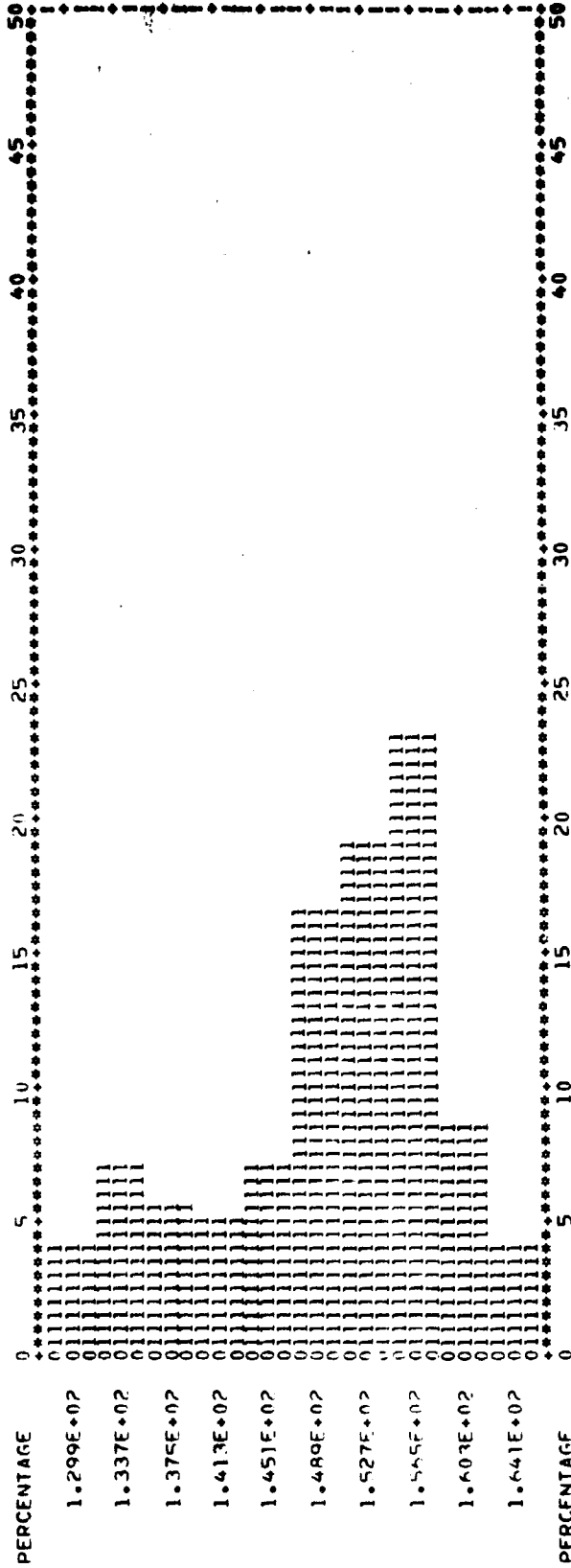


PLANTING DATE

CROP TYPE IS DW  
 SEGMENTS = 1387 1392 1394  
 1619 1627 1636  
 1924 1974

1457 1458 1467 1472 1917 1602 1611 1617

STFP = 3.40000114  
 CENTERPOINT OF INITIAL GROUP = 129.999979  
 CENTERPOINT OF FINAL GROUP = 164.099991  
 NUMBER OF OBSERVATIONS = 126  
 NUMBER OF GROUPS = 10



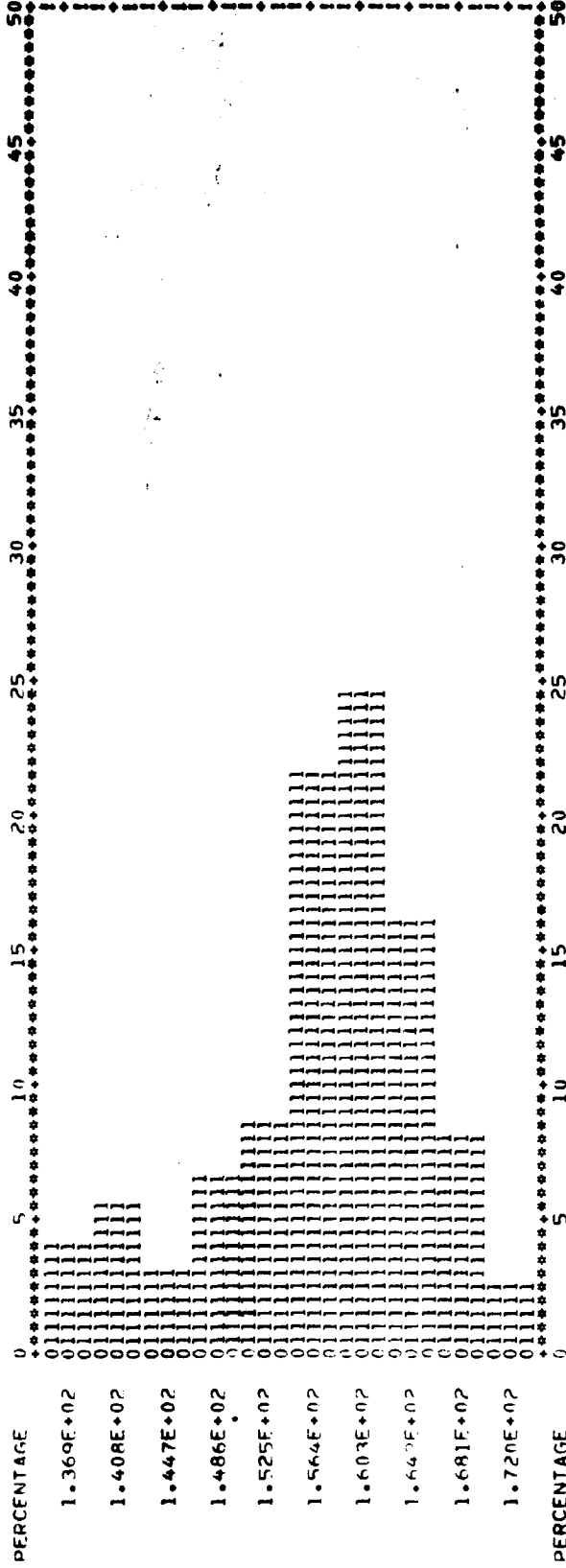
BIN 129.90 133.70 137.50 141.30 145.10 148.90 152.70 156.50 160.30 164.10  
 CONTENT 5.00 9.00 7.00 6.00 9.00 21.00 24.00 29.00 11.00 5.00

EMERGENCE DATE

CROP TYPE IS IN 1457 1451 1467 1472 1917 1602 1611 1617  
 SEGMENTS = 1387 1392 1394 1636  
 1619 1627  
 1924 1974

NUMBER OF OBSERVATIONS = 126  
 NUMBER OF GROUPS = 10

STFP = 3.90000057  
 CENTERPOINT OF INITIAL GROUP = 136.949982  
 CENTERPOINT OF FINAL GROUP = 172.049988



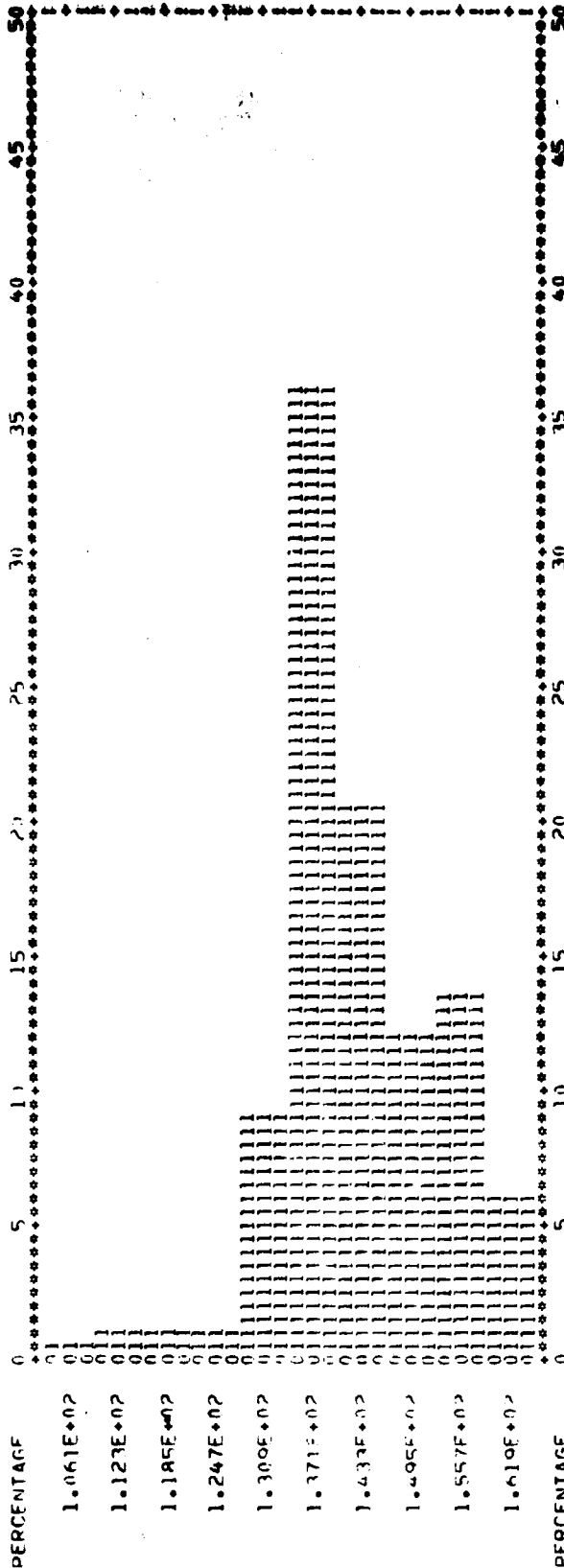
PERCENTAGE BIN CONTENT 136.95 140.85 144.75 148.65 152.55 156.45 160.35 164.25 168.15 172.05  
 5.00 7.00 4.00 6.00 11.00 27.00 31.00 20.00 10.00 3.00

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PLANTING DATE

CHOP TYPE IS SW  
 SEGMENTS = 1887 1892 1894 1899 1457 1461 1472 1473 1571 1584 1592 1611 1612 1617  
 1619 1627 1640 1645 1648 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900

SFP = 6.20000172  
 CENTERPOINT OF INITIAL GROUP = 106.099974  
 CENTERPOINT OF FINAL GROUP = 161.844444  
 NUMBER OF OBSERVATIONS = 354  
 NUMBER OF GROUPS = 10

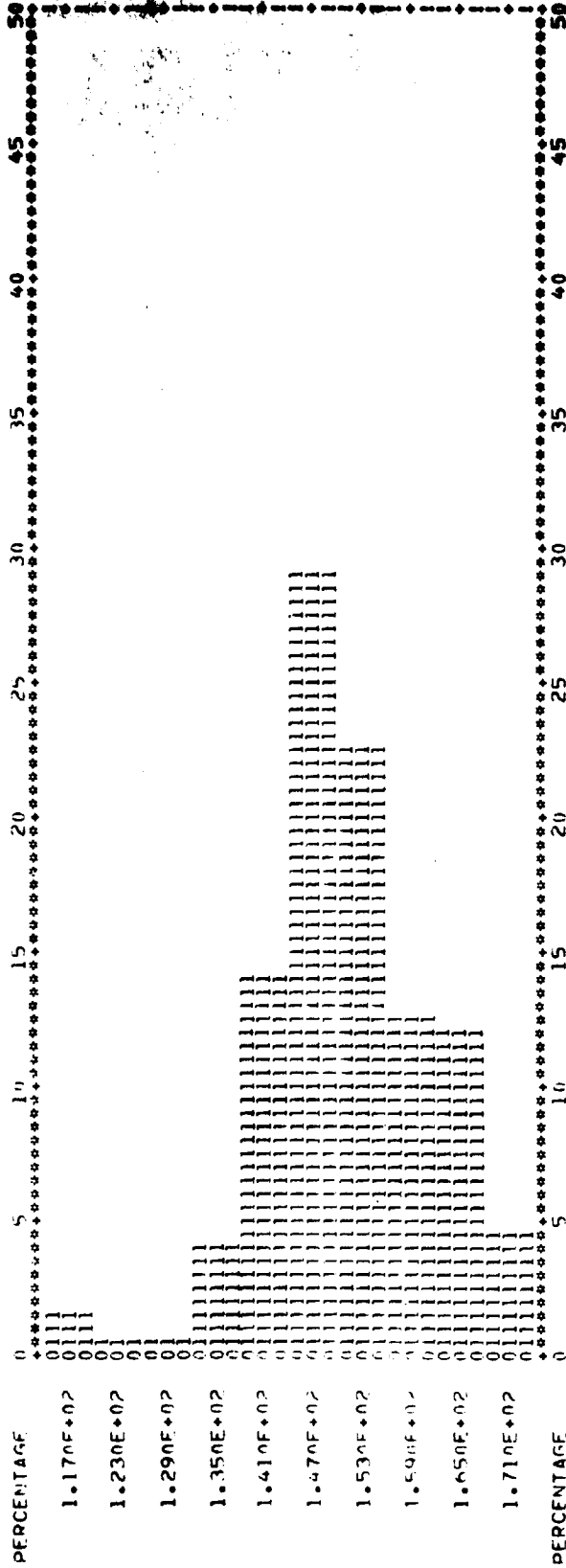


A-84  
 107

EMERGENCE DATE

GROUP TYPE IS SW  
 SEGMENTS = 1987 1302 1394 1309 1457 1461 1472 1473 1571 1584 1602 1611 1612 1617  
 1910 1927 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974

STEP = 6.00000095  
 CENTERPOINT OF INITIAL GROUP = 116.99995  
 CENTERPOINT OF FINAL GROUP = 171.00000  
 NUMBER OF OBSERVATIONS = 354  
 NUMBER OF GROUPS = 10



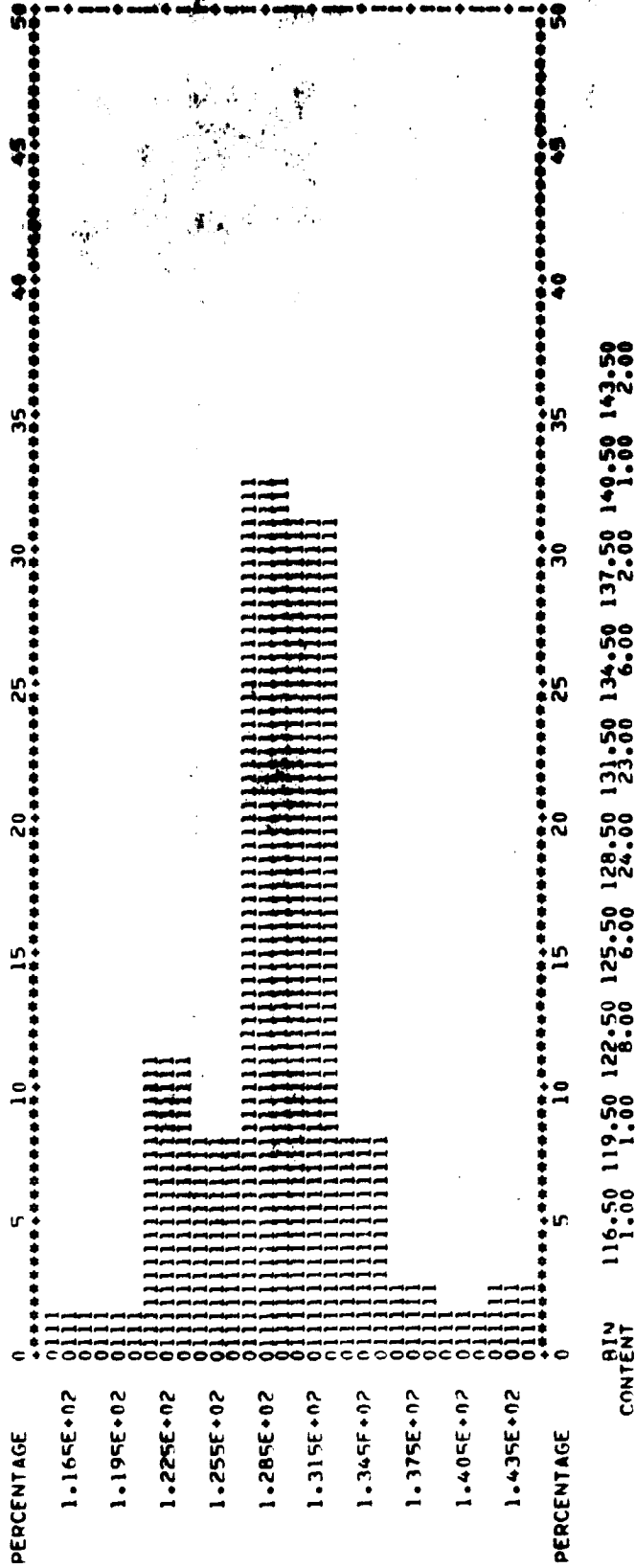
BIN CONTENT 117.00 123.00 129.00 135.00 141.00 147.00 153.00 159.00 165.00 171.00  
 5.00 1.00 2.00 14.00 49.00 102.00 79.00 44.00 42.00 16.00

OHIO

~~A-86~~  
109

PLANTING DATE

CROP TYPE IS CO  
 SEGMENTS = 229 230 231 234 238  
 STFP = 3.000000095  
 CENTERPOINT OF INITIAL GROUP = 115.4999995  
 CENTERPOINT OF FINAL GROUP = 143.5000000  
 NUMBER OF OBSERVATIONS = 74  
 NUMBER OF GROUPS = 10

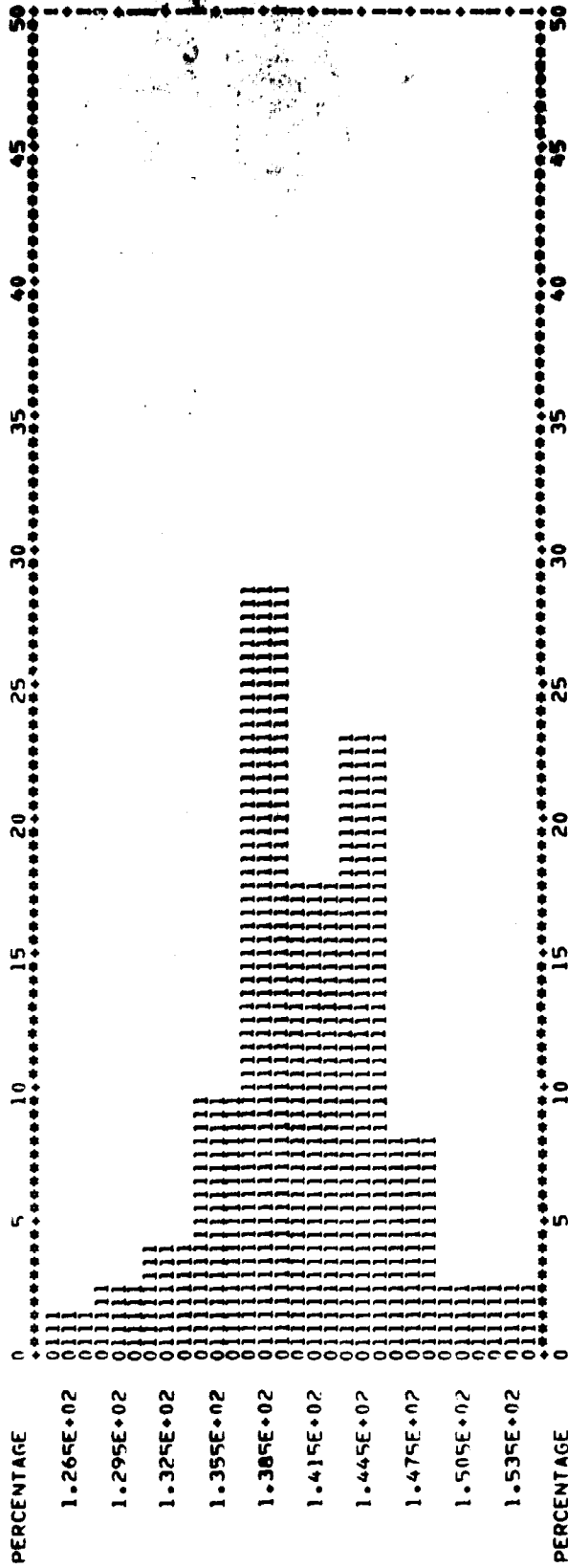


A-87

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 OF POOR QUALITY

EMERGENCE DATE

CROP TYPE IS CR  
 SEGMENTS = 229 230 231 234 238  
 STFP 3,000,000,005  
 CENTERPOINT OF INITIAL GROUP = 125.99985  
 CENTERPOINT OF FINAL GROUP = 153.500000  
 NUMBER OF OBSERVATIONS = 74  
 NUMBER OF GROUPS = 10



BIN CONTENT 126.50 129.50 132.50 135.50 138.50 141.50 144.50 147.50 150.50 153.50  
 1.00 2.00 3.00 7.00 21.00 13.00 17.00 6.00 2.00 2.00

A-88

PLANTING DATE

CROP TYPE IS 50  
SEGMENTS = 229

230 231 234 23H

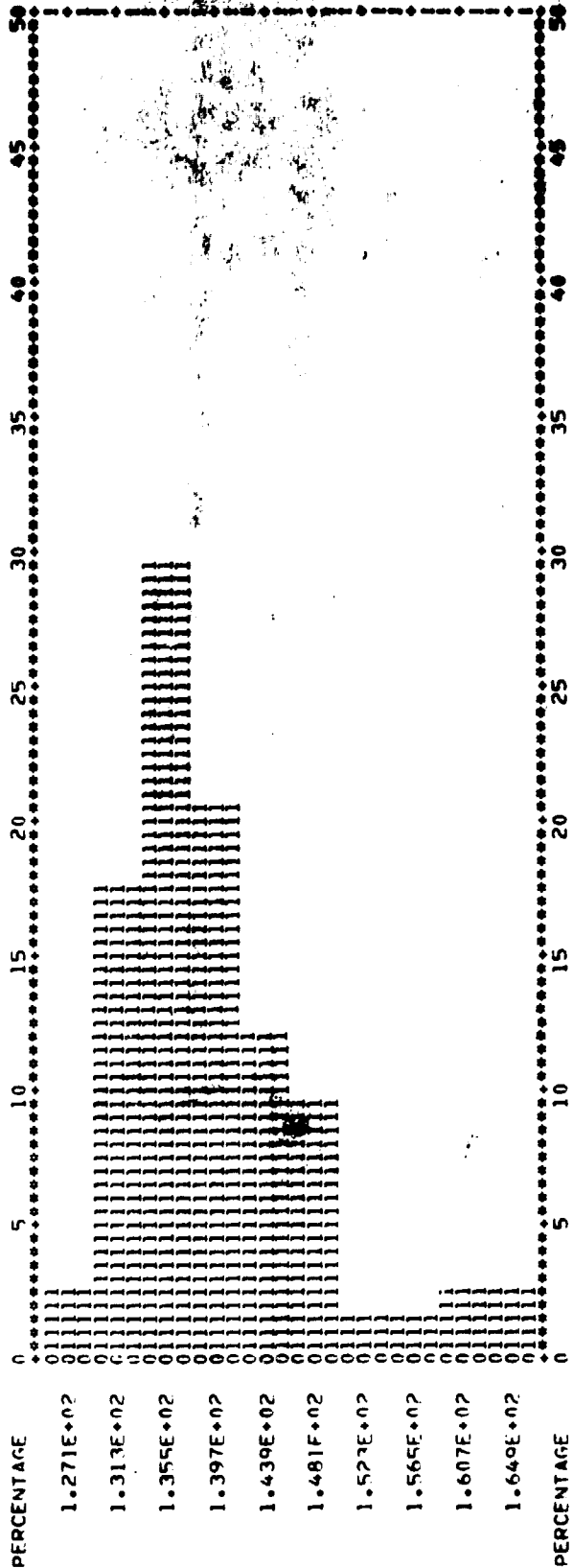
STFD = 4.20000172

CENTERPOINT OF INITIAL GROUP = 127.64376

CENTERPOINT OF FINAL GROUP = 164.899994

NUMBER OF OBSERVATIONS = 74

NUMBER OF GROUPS = 10



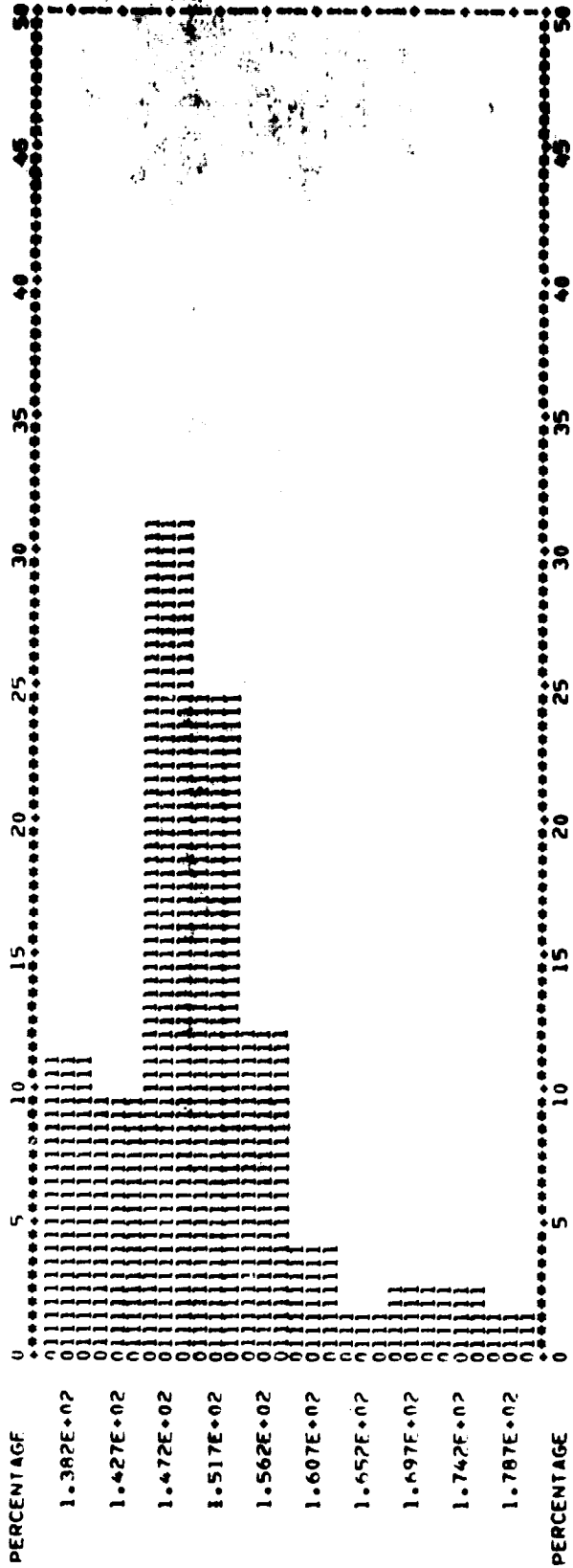
127.10 131.30 135.50 139.70 143.90 148.10 152.30 156.50 160.70 164.90

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OF POOR QUALITY



EMERGENCE DATE

CROP TYPE IS 50  
 SEGMENTS = 229 270 231 234 238 238 000095  
 CENTERPOINT OF INITIAL GROUP = 178.750000  
 CENTERPOINT OF FINAL GROUP = 178.750000  
 NUMBER OF OBSERVATIONS = 1074



BIN CONTENT  
 138.25 142.75 147.25 151.75 156.25 160.75 165.25 169.75 174.25 178.75  
 18.00 7.00 23.00 18.00 9.00 3.00 1.00 2.00 2.00 1.00

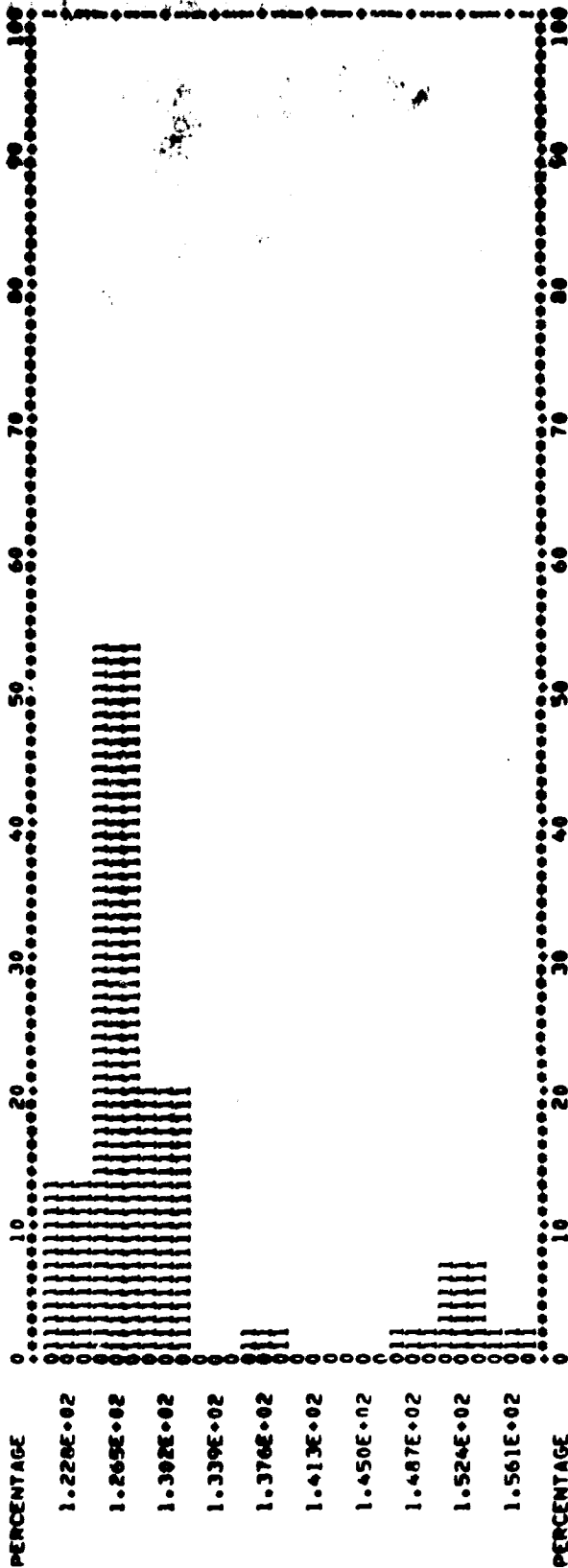
PENNSYLVANIA

~~A-91~~

114

PLANTING DATE

CROP TYPE IS CR  
 SEGMENTS = 319 320 322  
 STEP = 37000172  
 CENTERPOINT OF INITIAL GROUP = 122.84976  
 CENTERPOINT OF FINAL GROUP = 156.14994  
 NUMBER OF OBSERVATIONS = 45  
 NUMBER OF GROUPS = 10



BIN CONTENT 12.85 126.55 139.25 133.95 137.65 141.35 145.05 148.75 152.45 156.15

OF POINT COUNT

A-92

115

EMERGENCE DATE

CROP TYPE IS CR

SEGMENTS = 310

STEP = 320

CENTERPOINT OF INITIAL GROUP = 4.00000095

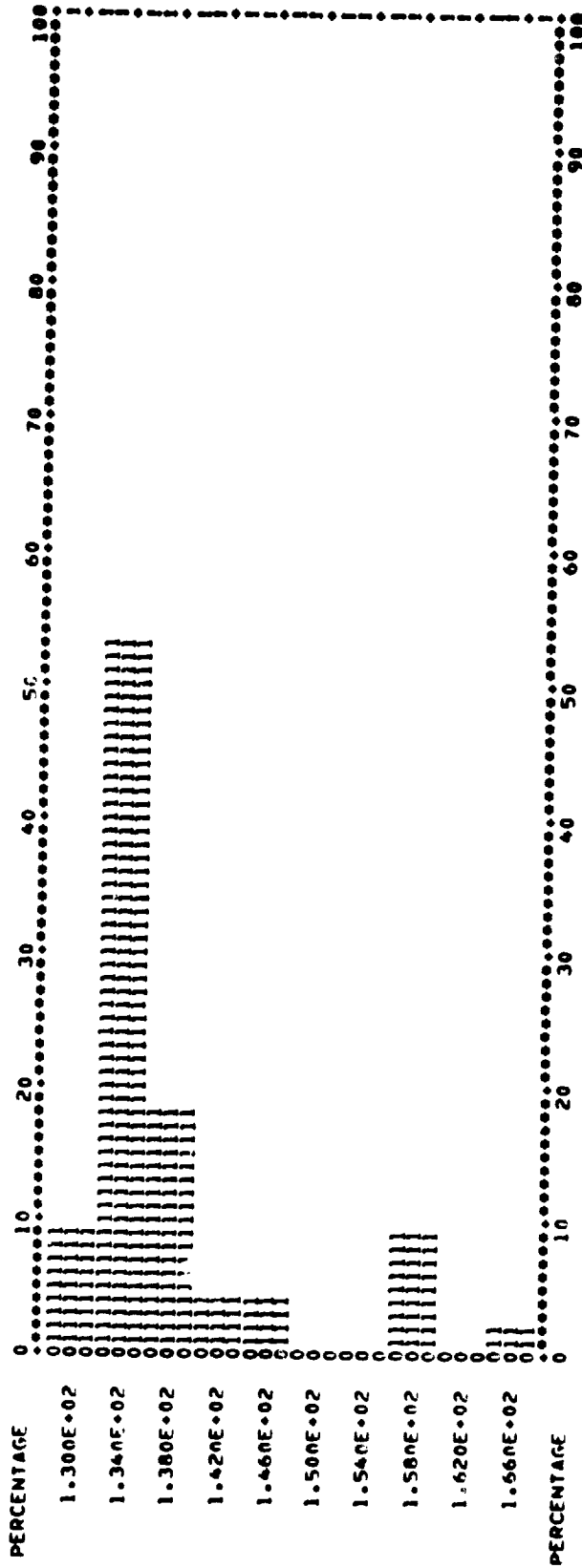
CENTERPOINT OF FINAL GROUP = 129.999985

CENTERPOINT OF INITIAL GROUP = 166.000000

CENTERPOINT OF FINAL GROUP = 10

NUMBER OF OBSERVATIONS = 45

NUMBER OF GROUPS = 10



BIN CONTENT 4.00 24.00 124.00 138.00 142.00 146.00 150.00 154.00 158.00 162.00 166.00

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/16

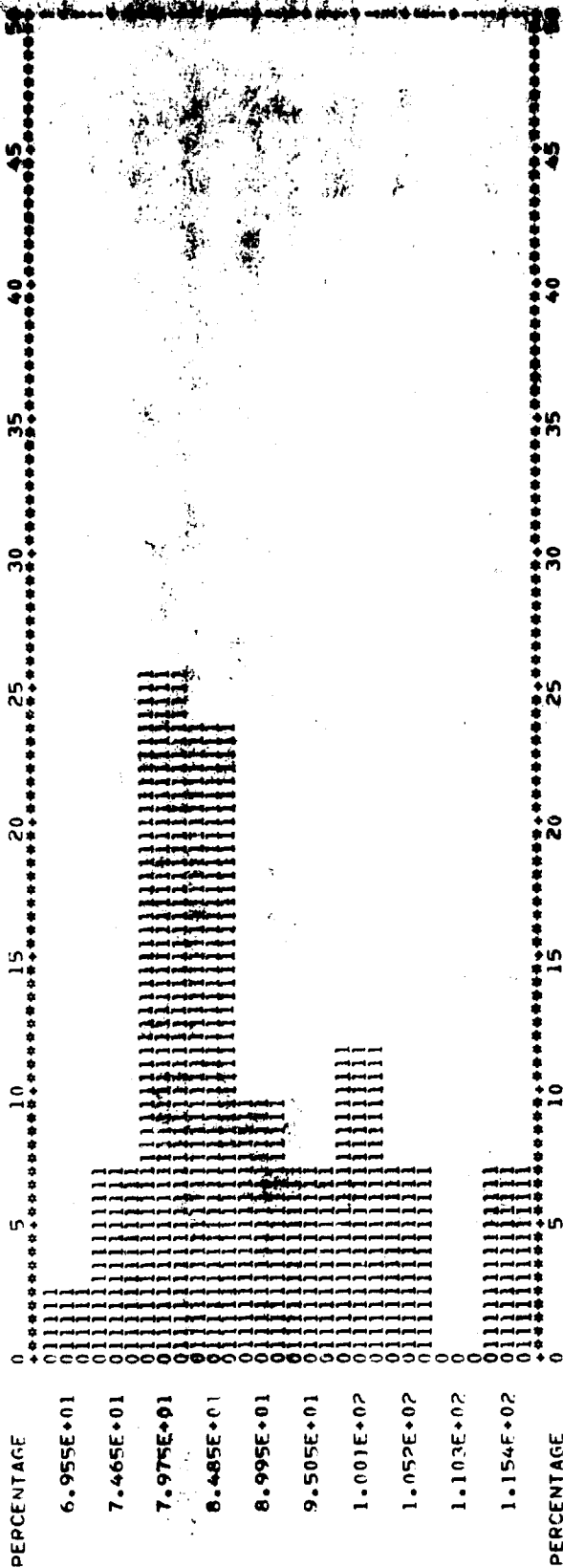
SOUTH CAROLINA

~~A-94~~

117

PLANTING DATE

CROP TYPE IS CR 337 338 339  
 SEGMENTS = 33A STEP = 5.10000229  
 CENTERPOINT OF INITIAL GROUP = 69.5699725  
 CENTERPOINT OF FINAL GROUP = 115.449997  
 NUMBER OF OBSERVATIONS = 43  
 NUMBER OF GROUPS = 10



BIN	CONTENT
69.55	1.00
74.65	3.00
79.75	11.00
84.85	10.00
89.95	4.00
95.05	3.00
100.15	5.00
105.25	3.00
110.35	0.0
115.45	3.00

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118

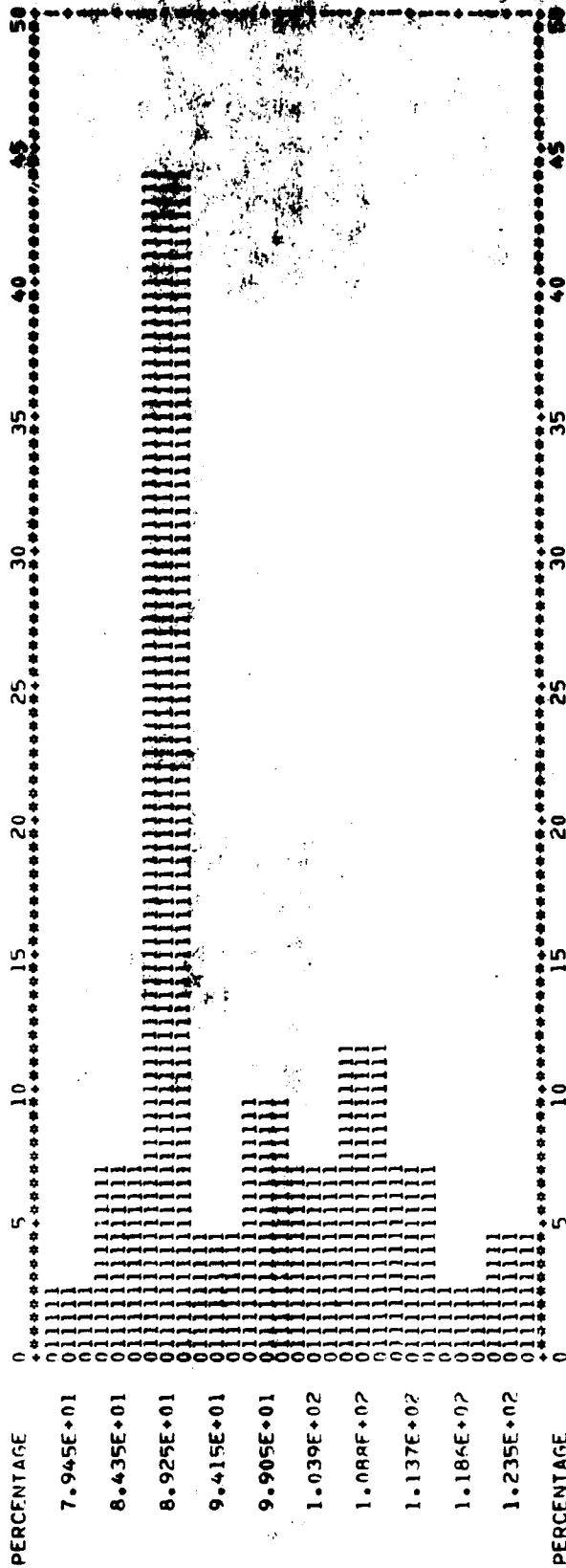
APR 75

EMERGENCE DATE

CROP TYPE IS CR  
SEGMENTS = 336

STFP = 339 4.900000057  
CENTERPOINT OF INITIAL GROUP = 73.4499817  
CENTERPOINT OF FINAL GROUP = 123.54998

NUMBER OF OBSERVATIONS = 43  
NUMBER OF GROUPS = 10



BIN CONTENT  
79.45 84.35 89.25 94.15 99.05 103.95 108.85 113.75 118.65 123.55  
1.00 3.00 19.00 2.00 4.00 3.00 5.00 3.00 1.00 2.00

A-96  
119

PLANTING DATE

CROP TYPE IS SO

SEGMENTS = 336

337 338 339

STFP = 4.10000229

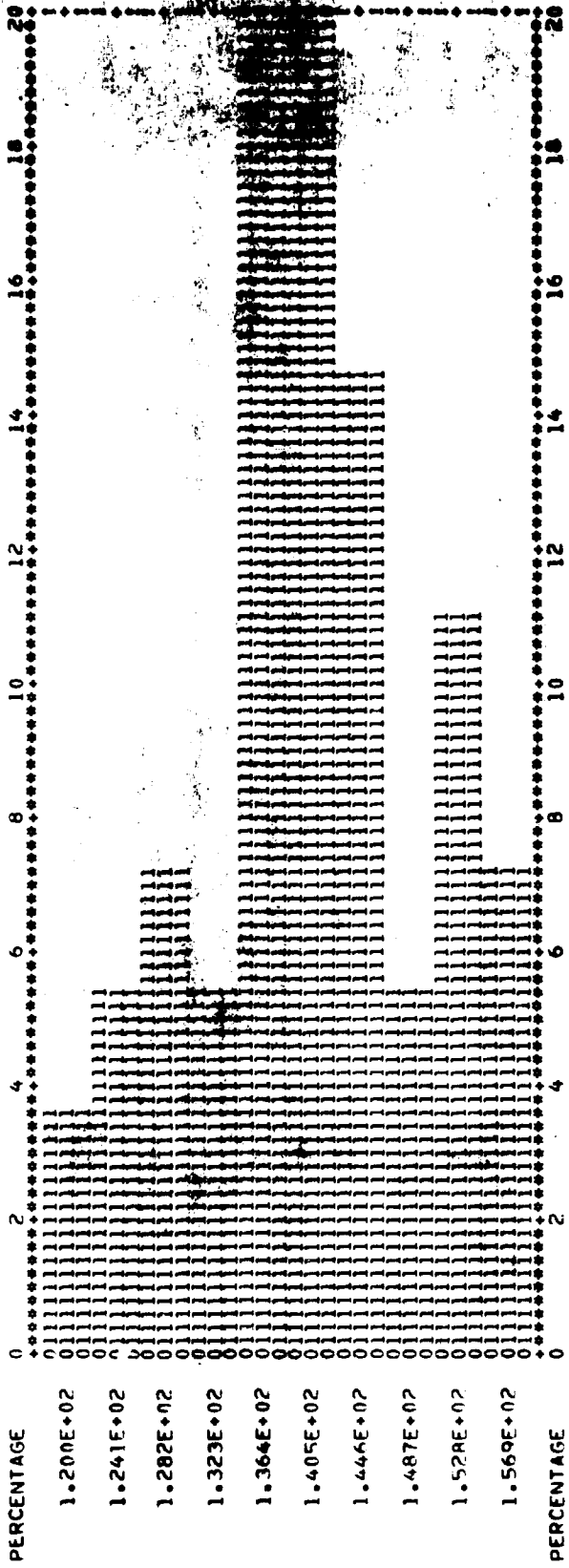
CENTERPOINT OF INITIAL GROUP =

170.049973

NUMBER OF OBSERVATIONS = 55

CENTERPOINT OF FINAL GROUP =

156.949997



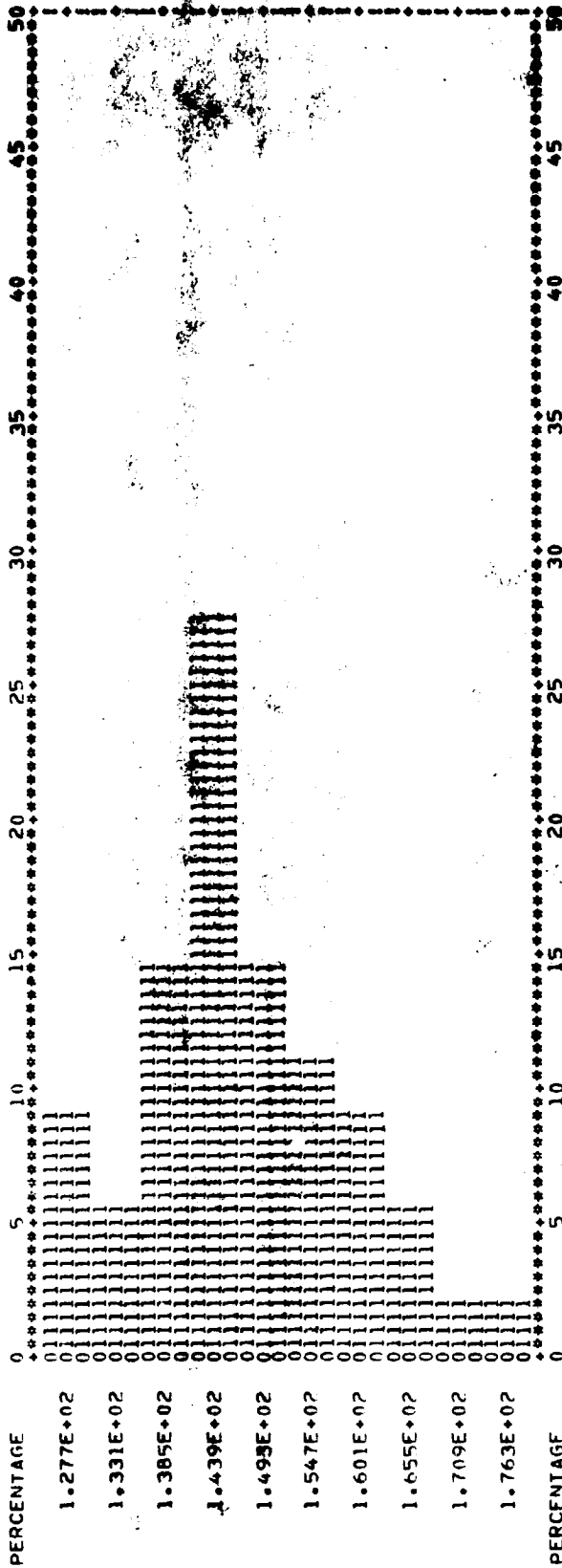
BIN	CONTENT
0	120.05
1	124.15
2	128.25
3	132.35
4	136.45
5	140.55
6	144.65
7	148.75
8	152.85
9	156.95

120  
A-97



EMERGENCE DATE

CROP TYPE IS 50  
 SEGMENTS = 336  
 STEP = 5.400000057  
 CENTERPOINT OF INITIAL GROUP = 127.7099988  
 CENTERPOINT OF FINAL GROUP = 176.2999988  
 NUMBER OF OBSERVATIONS = 10  
 NUMBER OF GROUPS = 55



RIN 127.70 133.10 138.50 143.90 149.30 154.70 160.10 165.50 170.90 176.30  
 CONTENT 5.00 3.00 8.00 15.00 8.00 6.00 5.00 3.00 1.00 1.00

TEXAS

A-99

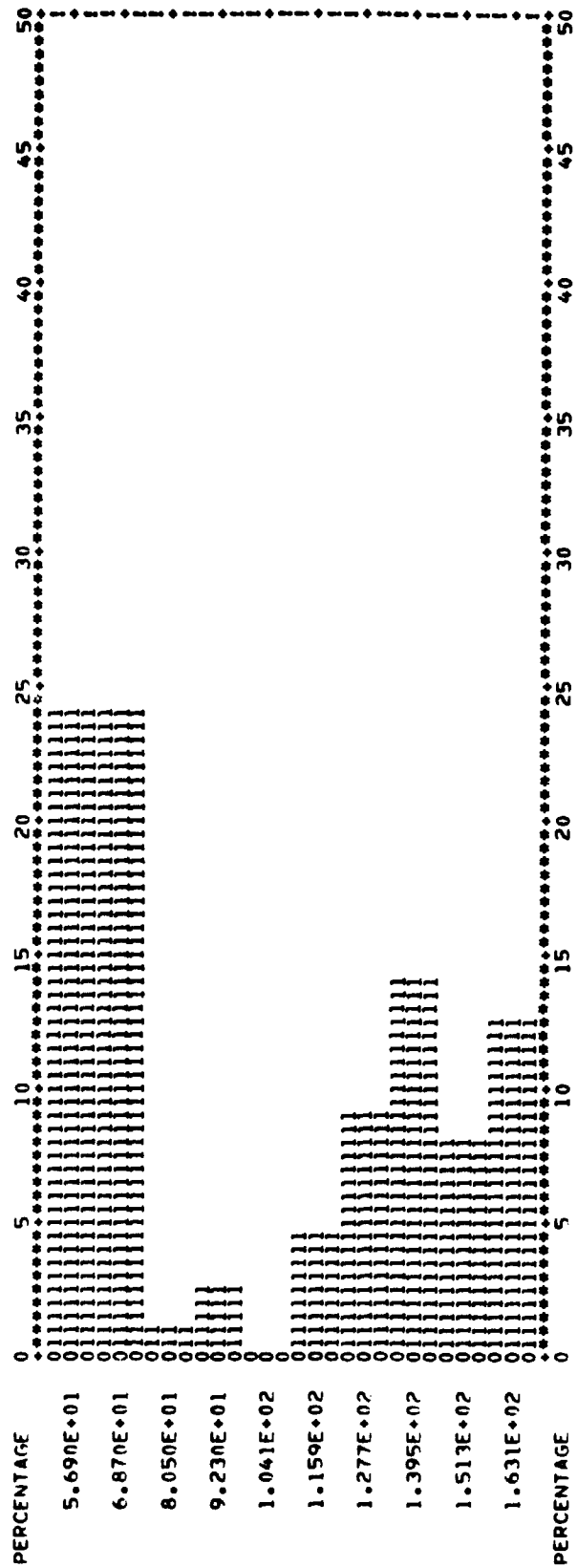
122

PLANTING DATE

CROP TYPE IS CT

SEGMENTS = 282 283 284  
STEP = 11.8000011 1377  
CENTERPOINT OF INITIAL GROUP = 56.8999786  
CENTERPOINT OF FINAL GROUP = 163.0999991

NUMBER OF OBSERVATIONS = 87  
NUMBER OF GROUPS = 10



BIN CONTENT 56.90 68.70 80.50 92.30 104.10 115.90 127.70 139.50 151.30 163.10  
21.00 21.00 1.00 2.00 0.0 4.00 8.00 12.00 7.00 11.00

A-100  
123

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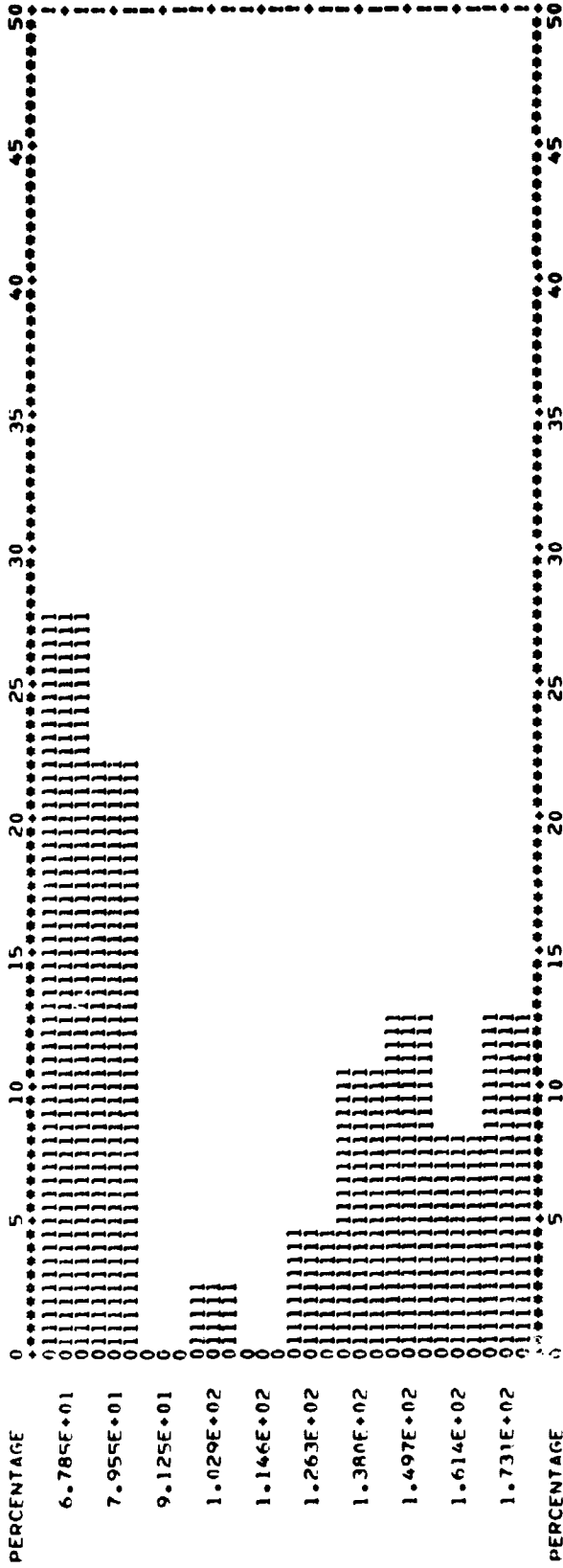
EMERGENCE DATE

CROP TYPE IS CT  
SEGMENTS =

STP = 11.7000017  
CENTERPOINT OF INITIAL GROUP = 67.4499756  
CENTERPOINT OF FINAL GROUP = 173.149994

282 283 284 290 292 1377

NUMBER OF OBSERVATIONS = 87  
NUMBER OF GROUPS = 10

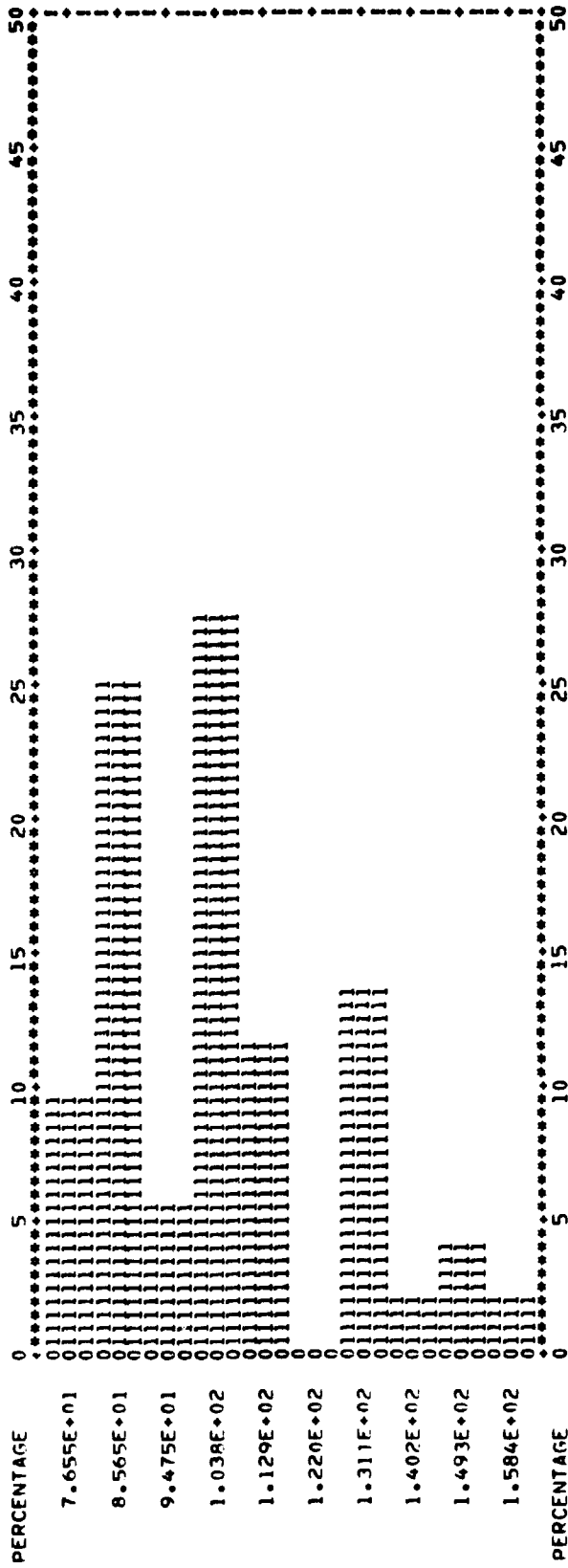


BIN CONTENT 67.85 79.55 91.25 102.95 114.65 126.35 138.05 149.75 161.45 173.15  
24.00 19.00 0.0 2.00 0.0 4.00 9.00 11.00 11.00 11.00

A-101  
101

PLANTING DATE

CROP TYPE IS RI 276 277 279 9 10000229 76.5499725 158.449997 105  
 SEGMENTS = STEP = CENTERPOINT OF INITIAL GROUP = CENTERPOINT OF FINAL GROUP = NUMBER OF OBSERVATIONS = NUMBER OF GROUPS =



BIN CONTENT 76.55 103.85 94.75 6.00 29.00 12.00 122.05 131.15 140.25 149.35 158.45

A-102  
125

EMERGENCE DATE

CROP TYPE IS RI

276 277 279

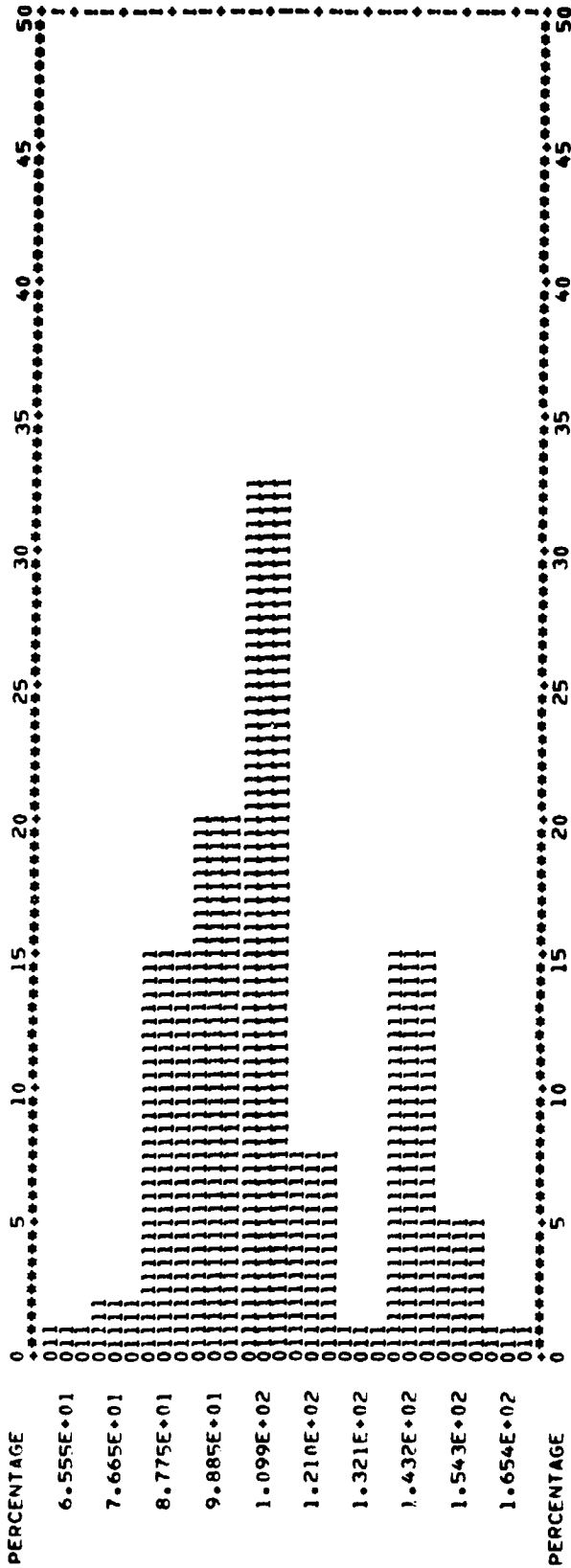
STEP = 11.100023

CENTERPOINT OF INITIAL GROUP = 65.5499725

CENTERPOINT OF FINAL GROUP = 165.449997

NUMBER OF OBSERVATIONS = 105

NUMBER OF GROUPS = 10

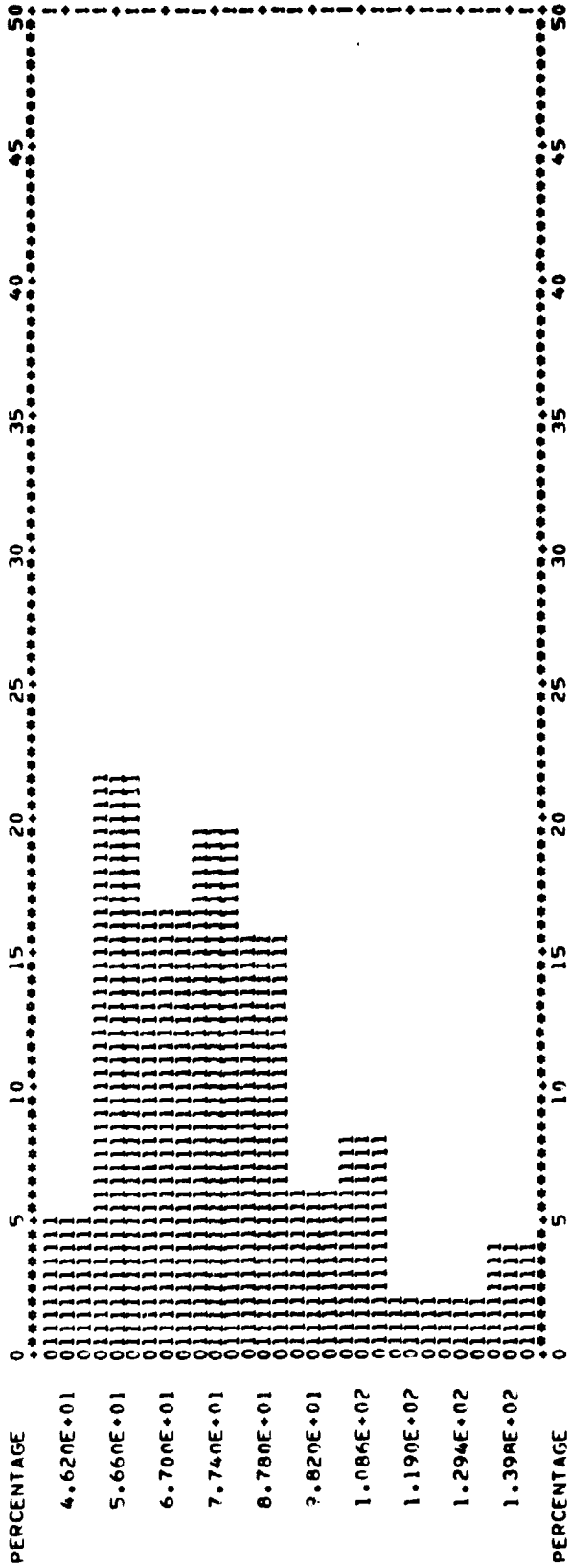


PLANTING DATE

CROP TYPE IS SR  
SEGMENTS = 275

283 284 286 292 1377  
 STEP = 10.4000006  
 CENTERPOINT OF INITIAL GROUP = 46.1999817  
 CENTERPOINT OF FINAL GROUP = 139.799988

NUMBER OF OBSERVATIONS = 102  
 NUMBER OF GROUPS = 10



BIN CONTENT  
 46.20 56.60 67.00 77.40 87.80 98.20 108.60 119.00 129.40 139.80  
 5.00 22.00 17.00 20.00 16.00 6.00 8.00 2.00 2.00 4.00

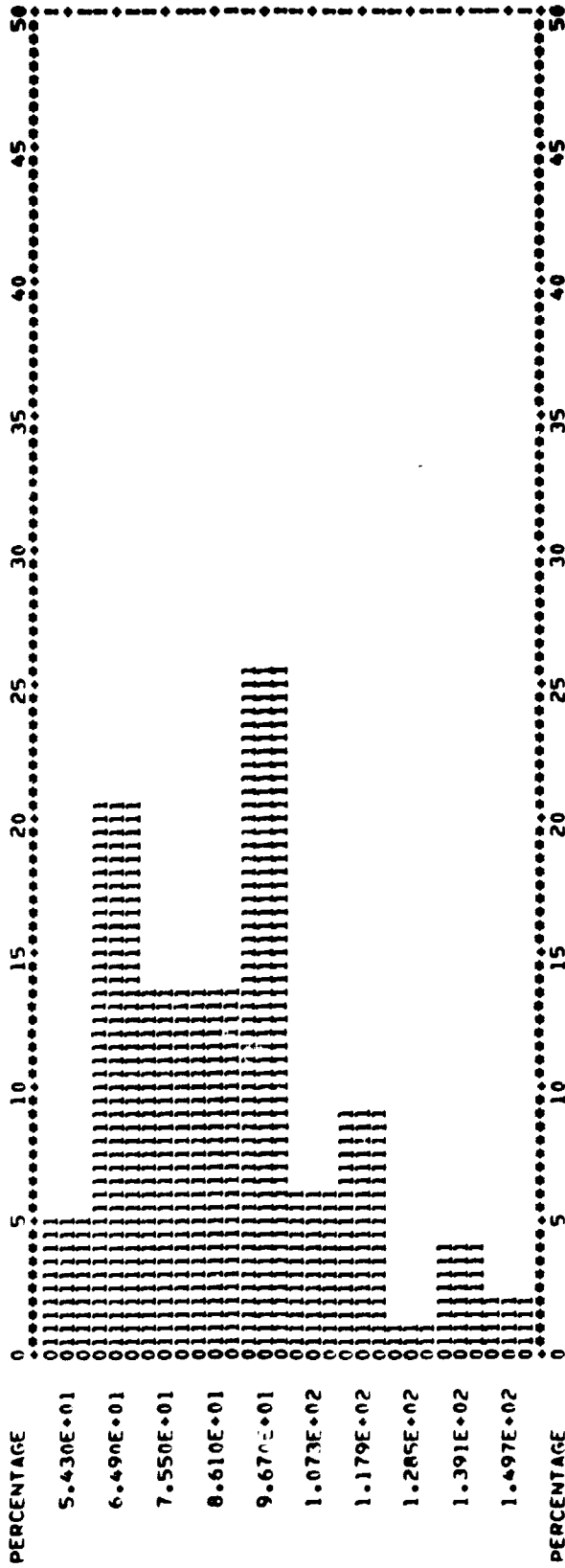
A-104  
127

EMERGENCE DATE

CROP TYPE IS SR  
SEGMENTS = 275

STEP = 283 284 286 292 1377  
CENTERPOINT OF INITIAL GROUP = 54.2999725  
CENTERPOINT OF FINAL GROUP = 149.699997

NUMBER OF OBSERVATIONS = 102  
NUMBER OF GROUPS = 10



A-105

125



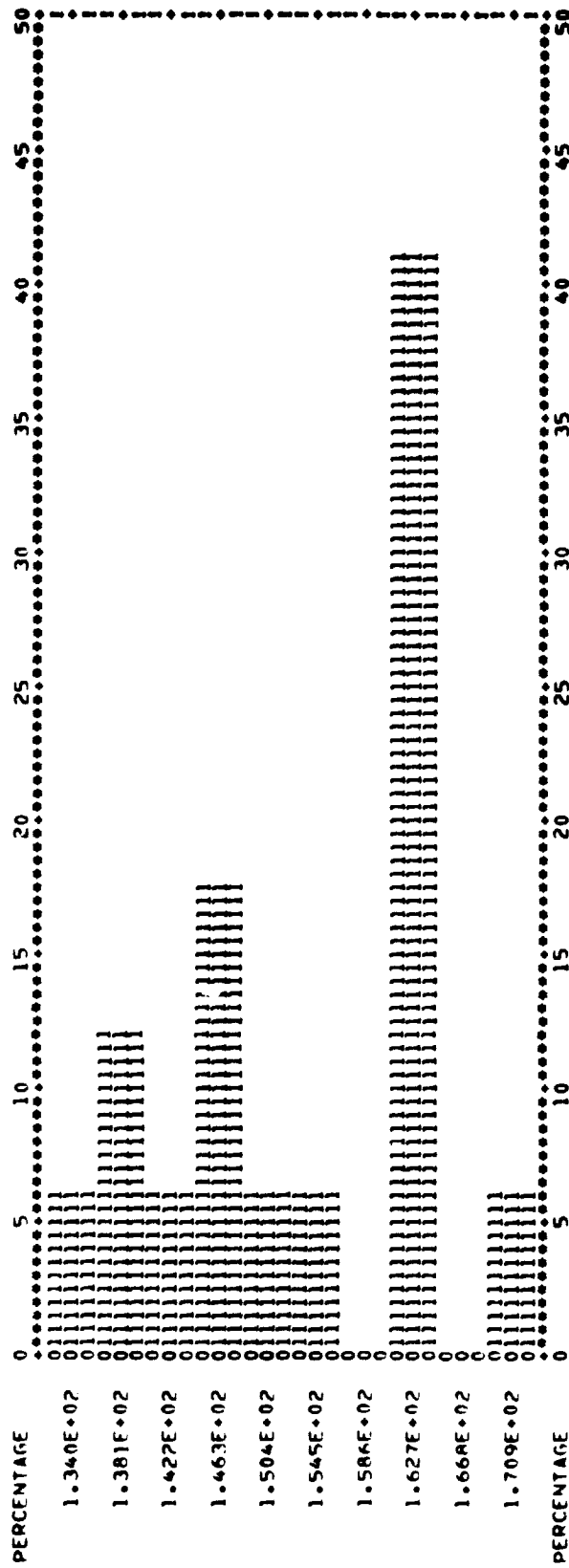
PLANTING DATE

CROP TYPE IS 50  
SEGMENTS = 276

29R

STEP = 4.10000229  
CENTERPOINT OF INITIAL GROUP = 134.049973  
CENTERPOINT OF FINAL GROUP = 170.949997

NUMBER OF OBSERVATIONS = 17  
NUMBER OF GROUPS = 10



BIN CONTENT 134.05 138.15 142.25 146.35 150.45 154.55 158.65 162.75 166.85 170.95  
1.00 2.00 1.00 3.00 1.00 1.00 0.0 0.0 1.00 1.00

EMERGENCE DATE

CROP TYPE IS 50  
SEGMENTS =

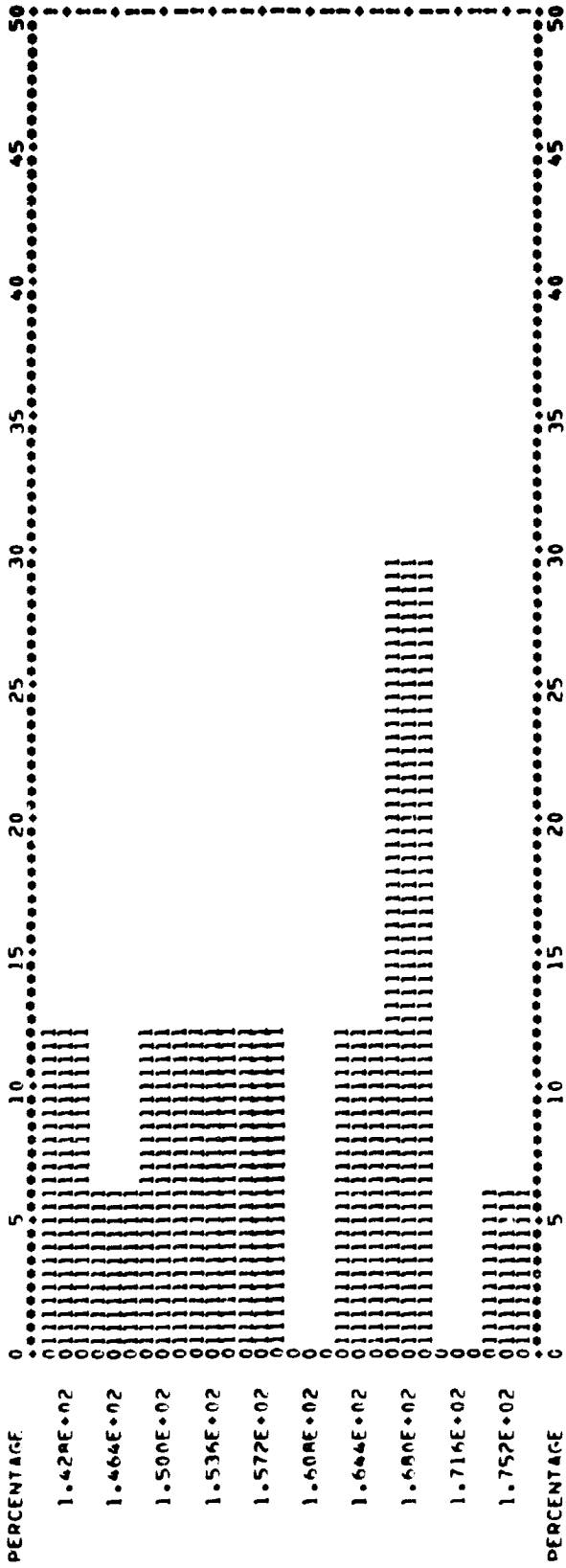
276

STEP = 3.60000229  
CENTERPOINT OF INITIAL GROUP =  
CENTERPOINT OF FINAL GROUP =

288

142.799973  
175.199997

NUMBER OF OBSERVATIONS = 17  
NUMBER OF GROUPS = 10



BIN	CONTENT	142.80	145.40	150.00	153.60	157.20	160.80	164.40	168.00	171.60	175.20
		2.00	1.00	2.00	2.00	2.00	0.0	2.00	5.00	0.0	1.00

APPENDIX B

SPEEDING RATE AND ROW WIDTH HISTOGRAMS

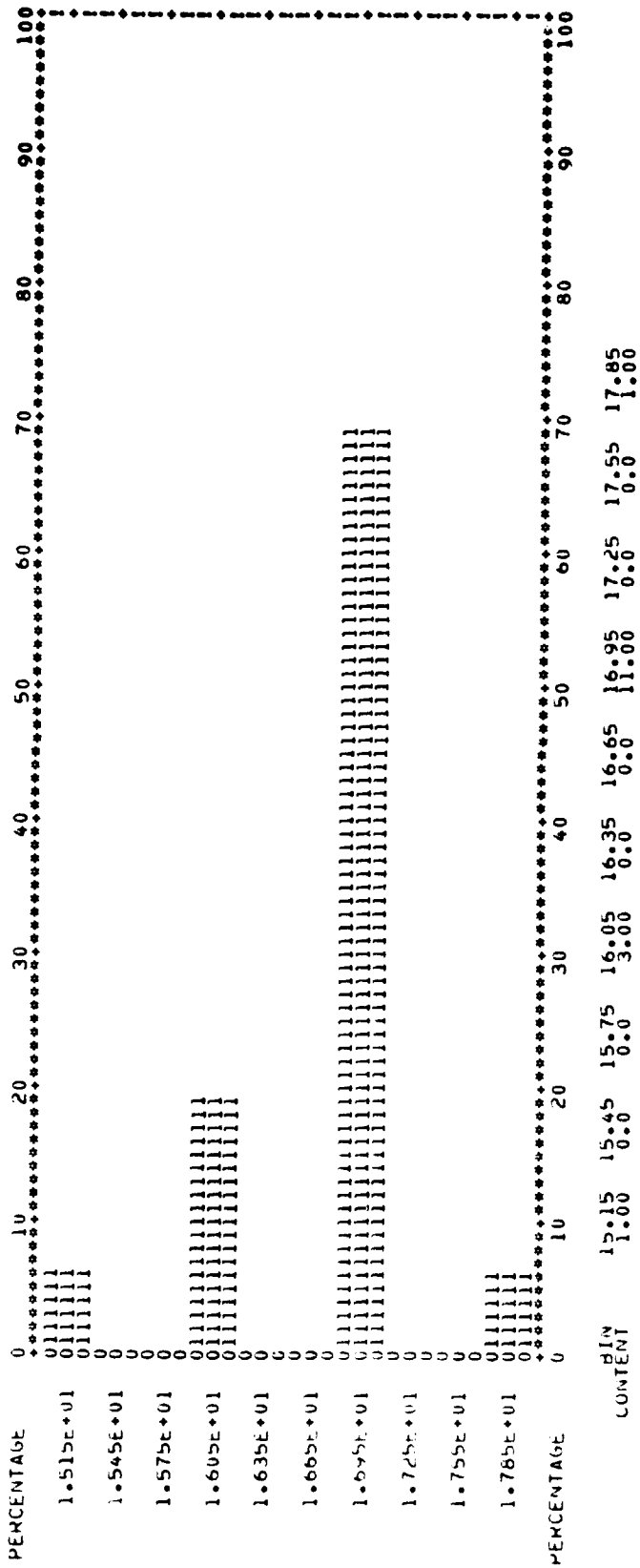
ALABAMA

~~B-2~~

132

SEEDING RATE - LB/ACRE

CROP TYPE IS CM  
 SEGMENTS = 288  
 STEP = 0.29999912  
 CENTERPOINT OF INITIAL GROUP = 15.149987  
 CENTERPOINT OF FINAL GROUP = 17.8499908  
 NUMBER OF OBSERVATIONS = 16  
 NUMBER OF GROUPS = 10



ORIGINAL PAGE IS  
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ROW WIDTH - INCHES

CROP TYPE IS CR

SEGMENTS = 288

JOB

STEP = 1.00000095

CENTERPOINT OF INITIAL GROUP =

26.4999847

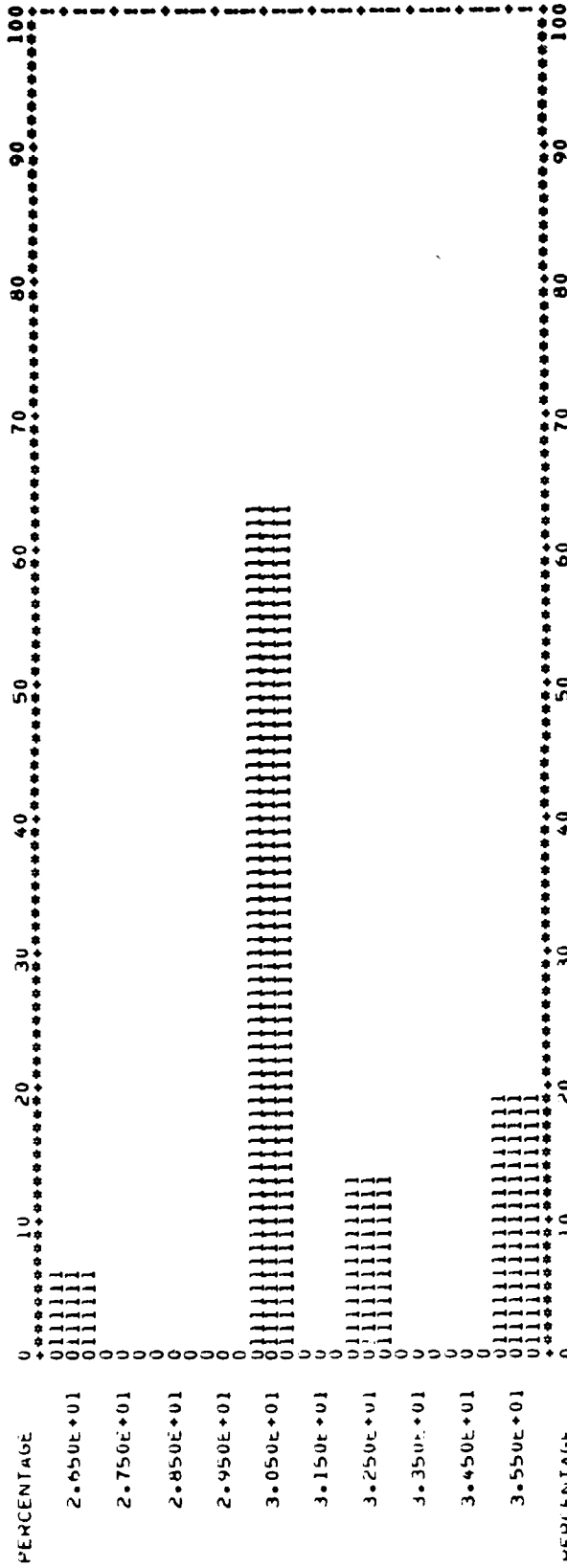
NUMBER OF OBSERVATIONS = 16

CENTERPOINT OF FINAL GROUP =

35.5000000

NUMBER OF GROUPS

10

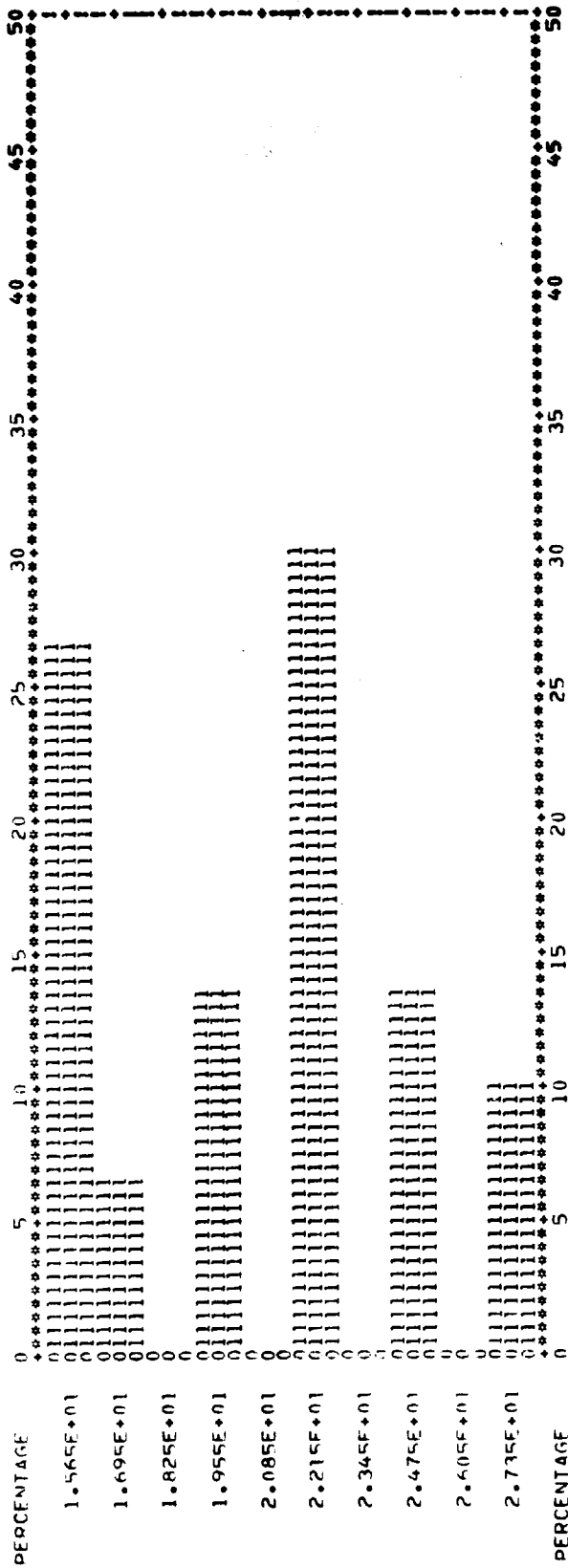


BIN	20.50	27.50	28.50	29.50	30.50	31.50	32.50	33.50	34.50	35.50
CONTENT	1.00	0.00	0.00	0.00	10.00	0.00	2.00	0.00	0.00	3.00

OFFERING RATE - 1/4/40PF

CROP TYPE IS CT

309 310  
STP = 1.299999H28  
CENTRE POINT OF INITIAL GROUP = 15.64999H7  
CENTRE POINT OF FINAL GROUP = 27.34999H4  
NUMBER OF OBSERVATIONS = 30  
NUMBER OF GROUPS = 10



8-5  
135

ROW WIDTH - INCHES

CROP TYPE IS CT

SEGMENTS =

309 310

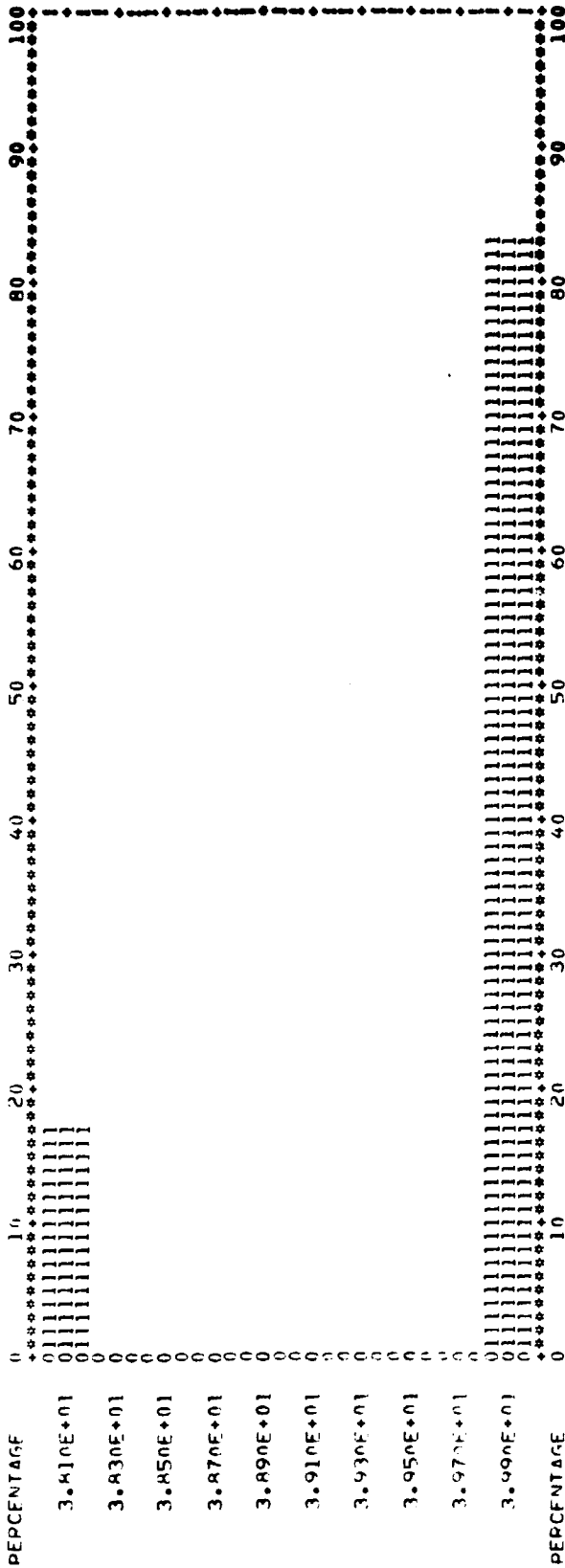
STEP = 0.20000201

CENTERPOINT OF INITIAL GROUP = 34.0999756

CENTERPOINT OF FINAL GROUP = 39.8999939

NUMBER OF OBSERVATIONS = 1030

NUMBER OF GROUPS



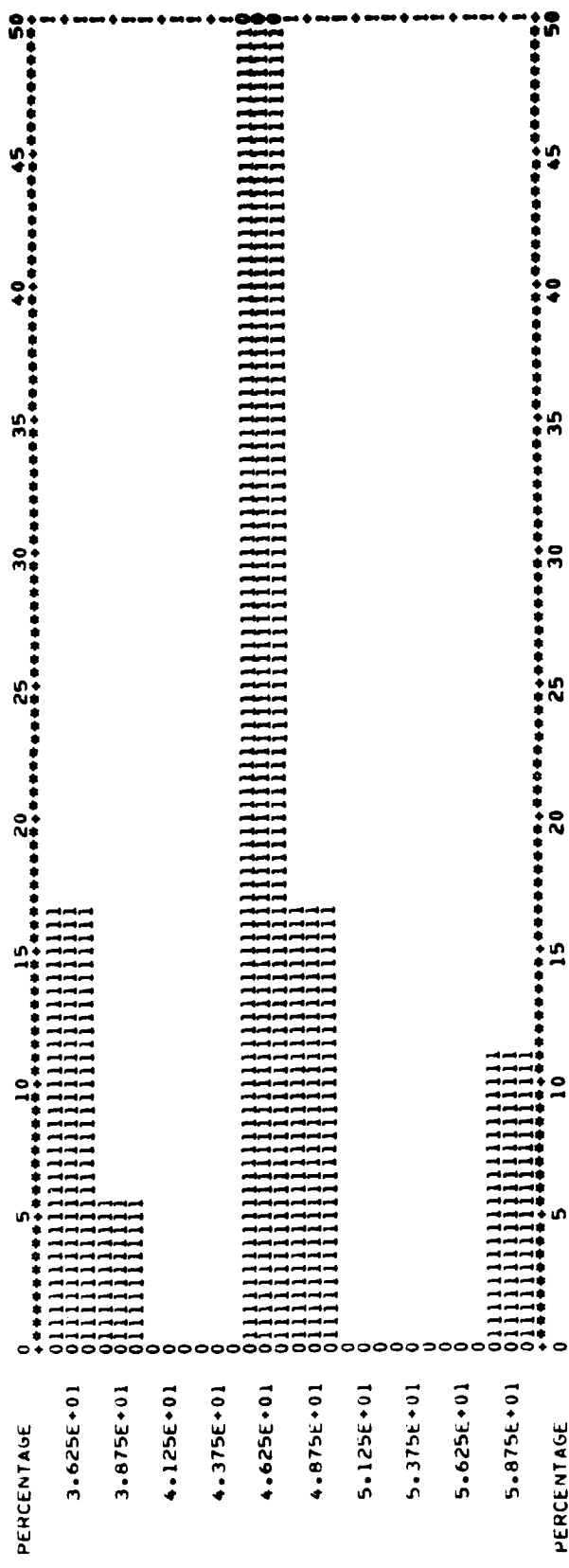
BIN	38.10	38.30	38.50	38.70	38.90	39.10	39.30	39.50	39.70	39.90
CONTENT	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00



SEEDING RATE - LB/ACRE

CROP TYPE IS 803  
SEGMENTS = 288 308

STEP = 2.50000045  
CENTER POINT OF INITIAL GROUP = 36.2499847  
CENTER POINT OF FINAL GROUP = 58.7500000  
NUMBER OF OBSERVATIONS = 18  
NUMBER OF GROUPS = 10



PERCENTAGE 0 5 10 15 20 25 30 35 40 45 50  
BIN CONTENT 36.25 38.75 41.25 43.75 46.25 48.75 51.25 53.75 56.25 58.75  
0.00 1.00 0.00 0.00 3.00 0.00 0.00 0.00 0.00 2.00

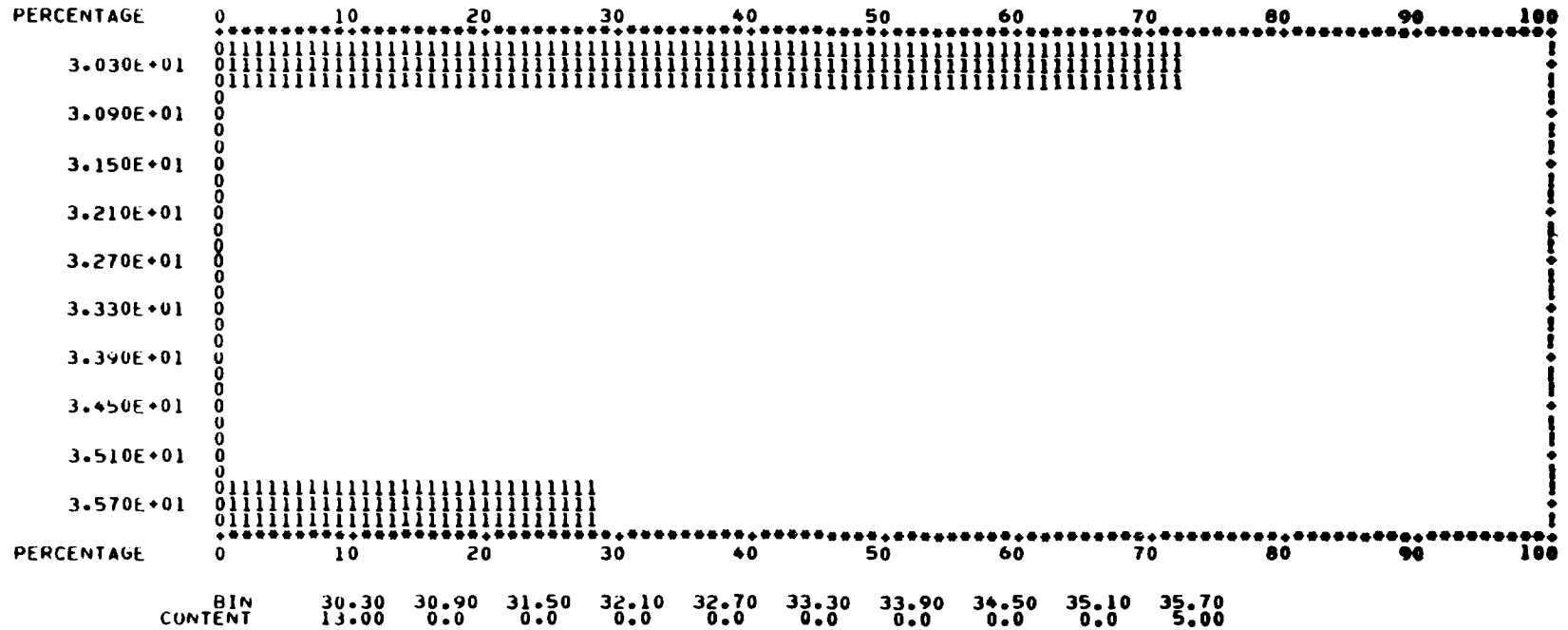
137  
OF POOR QUALITY

ROW WIDTH - INCHES

CROP TYPE IS 50  
SEGMENTS = 288 308

STEP = 0.0000271  
CENTERPOINT OF INITIAL GROUP = 30.2999725  
CENTERPOINT OF FINAL GROUP = 35.6999969

NUMBER OF OBSERVATIONS = 18  
NUMBER OF GROUPS = 10



135  
8-8

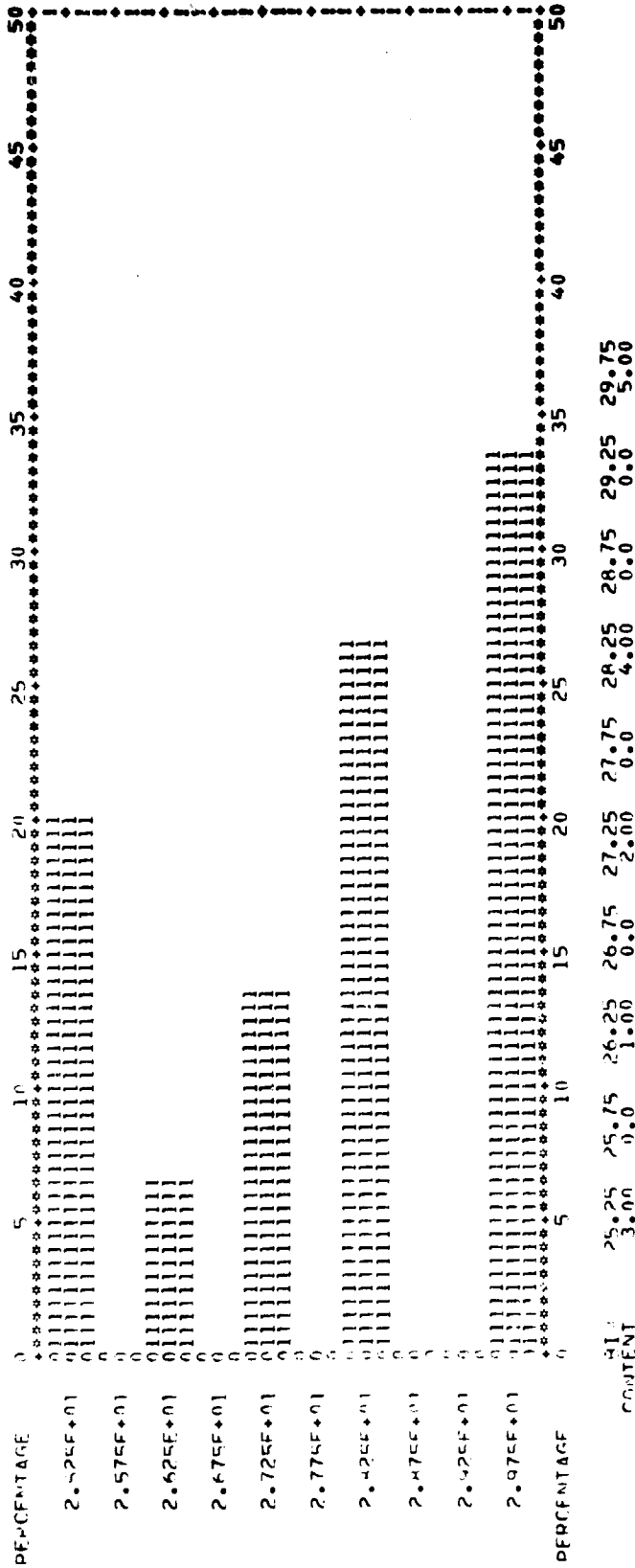
ARKANSAS

~~B-9~~

139

SEEDING RATE - 1 RYACRE

CROP TYPE IS CT 133 301 02-0000147 306  
 SEGMENTS = 15  
 CENTRE POINT OF INITIAL GROUP = 25.2499847  
 CENTRE POINT OF FINAL GROUP = 29.7500000  
 NUMBER OF OBSERVATIONS = 15  
 NUMBER OF GROUPS = 10



ORIGINAL RECORD OF POOL

ROW WIDTH - INCHES

CROP TYPE IS CT 103 301 304  
 SEGMENTS = 301 304  
 PERCENTAGE OF INITIAL GROUP = 37.9999947  
 PERCENTAGE OF FINAL GROUP = 34.0000000  
 NUMBER OF OBSERVATIONS = 15  
 NUMBER OF GROUPS = 10

PERCENTAGE	0	10	20	30	40	50	60	70	80	90	100
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
3.400E+01	0	0	0	0	0	0	0	0	0	0	0
PERCENTAGE	0	10	20	30	40	50	60	70	80	90	100

CONTENT 38.00 34.00 34.00 38.00 38.00 38.00 38.00 38.00 38.00 38.00 38.00

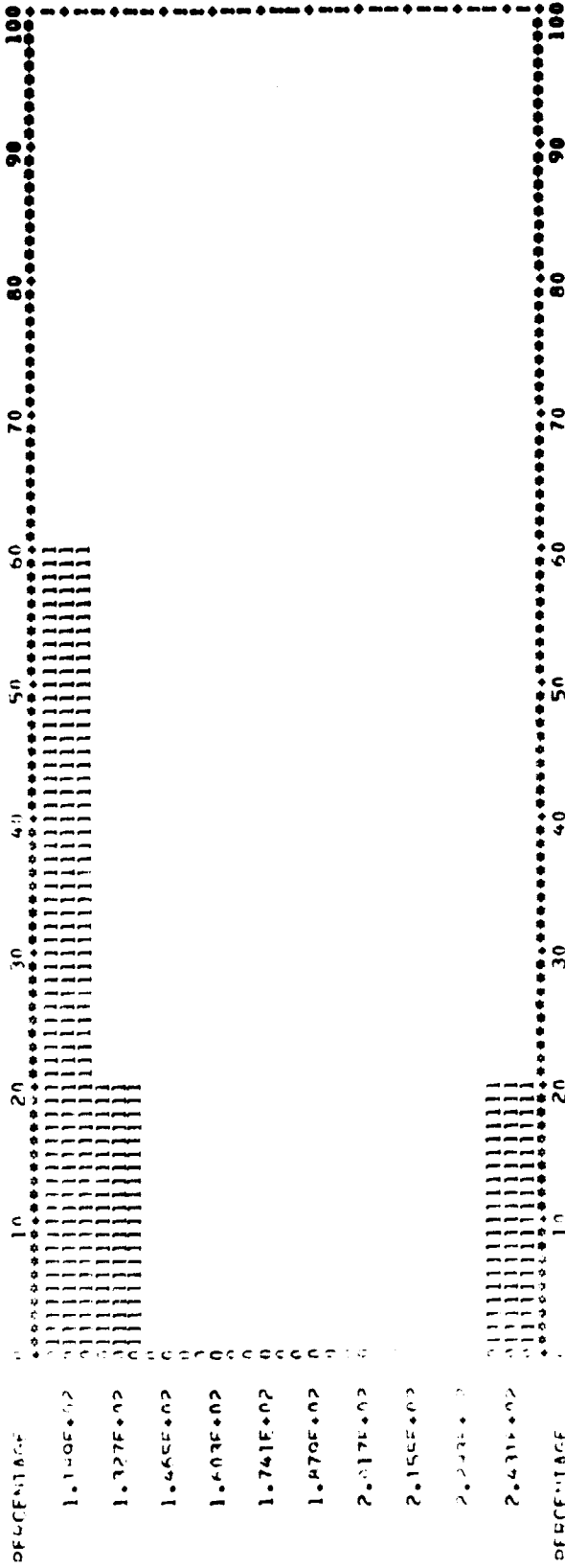
CONTENT 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

CONTENT 38.00 38.00 38.00 38.00 38.00 38.00 38.00 38.00 38.00 38.00 38.00

SEEDING RATE - LBS/ACRE

CROP TYPE IS W1  
SEGMENTS = 103.104  
STEP = 13.4000011  
CENTREPOINT OF INITIAL GROUP = 114.4444444  
CENTREPOINT OF FINAL GROUP = 243.0000001

NUMBER OF OBSERVATIONS = 15  
NUMBER OF GROUPS = 10



GROUP 114.90 142.70 146.50 160.30 174.10 187.90 201.70 215.50 229.30 243.10  
COUNT 4.00 3.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

DATA WIDTH = 100000

COORD TYPE IC 11

SEGMENTS = 103

104

COORD TYPE IC 11

305

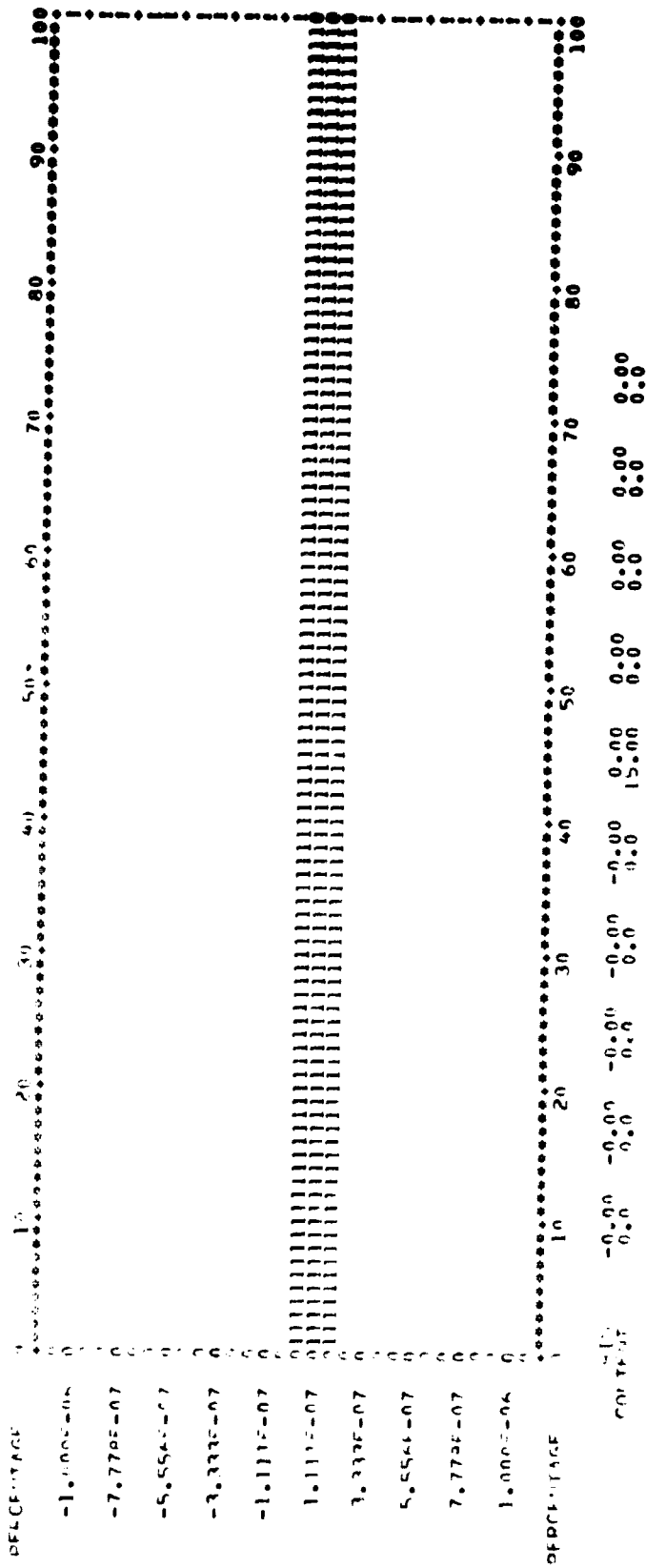
COORD TYPE IC 11

COORD TYPE IC 11

COORD TYPE IC 11

NUMBER OF OBSERVATIONS = 15

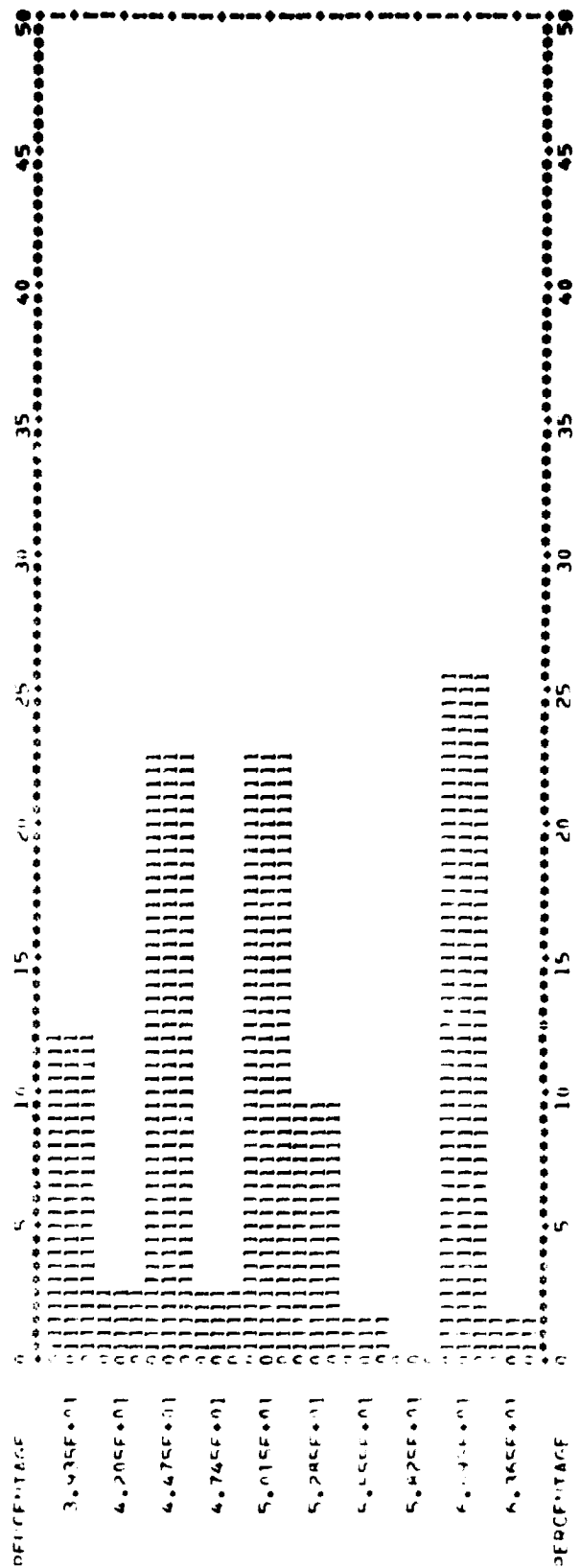
NUMBER OF GROUPS = 10



SEEDING RATE - 1-1/2ACRE

COND. TYPE IS SO  
 SEGMENTS = 300 104 104 301 302 303 304 305  
 STEP = 270000172  
 CENTERPOINT OF INITIAL GROUP = 43.40000000  
 CENTERPOINT OF FINAL GROUP = 63.40000000

NUMBER OF OBSERVATIONS = 75  
 NUMBER OF GROUPS = 10

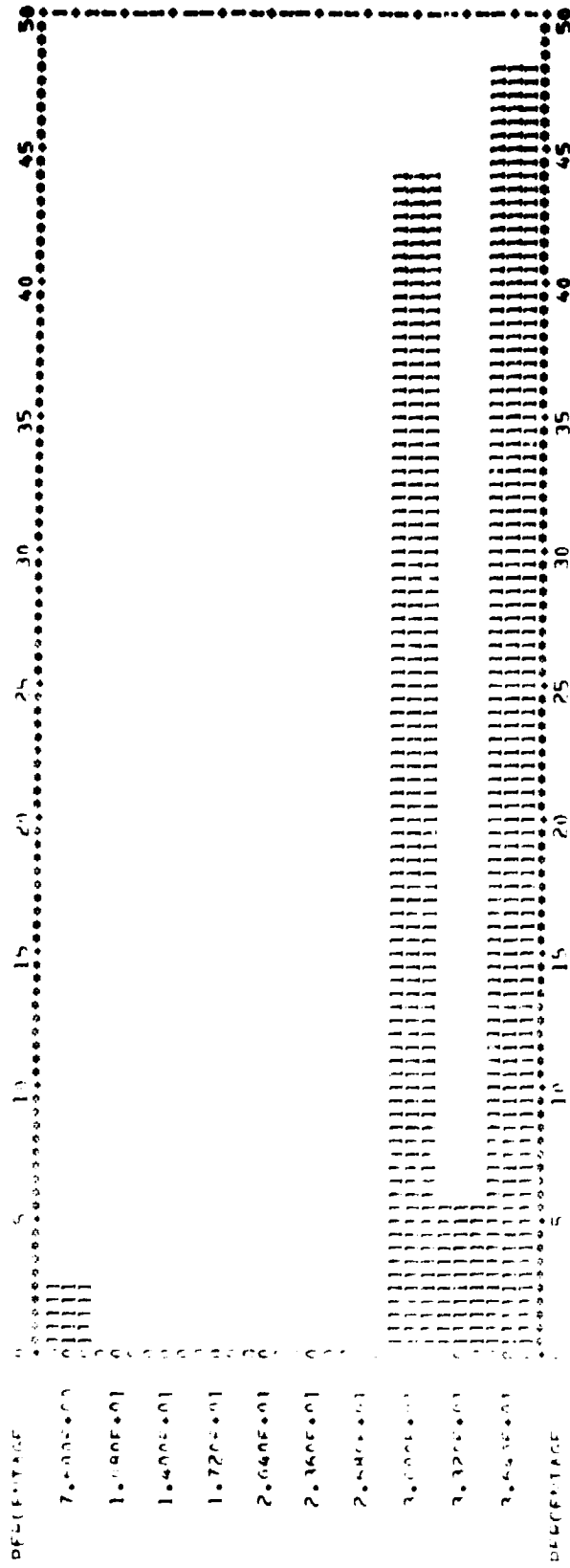


CONTENT 39.35 42.05 44.75 47.45 50.15 52.85 55.55 58.25 60.95 63.65  
 9.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00



ROW WIDTH - TICKETS

CRPD TYPE IS 50  
 SEGMENTS = 100  
 103.124 301 300 303 304 305  
 CENTER POINT OF INITIAL RANGE = 7.500000000  
 CENTER POINT OF FINAL RANGE = 36.000000000  
 NUMBER OF OBSERVATIONS = 75  
 NUMBER OF GROUPS = 10



COUNT 7.50 10.00 14.00 17.20 20.00 23.60 26.80 30.00 33.20 36.40  
 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

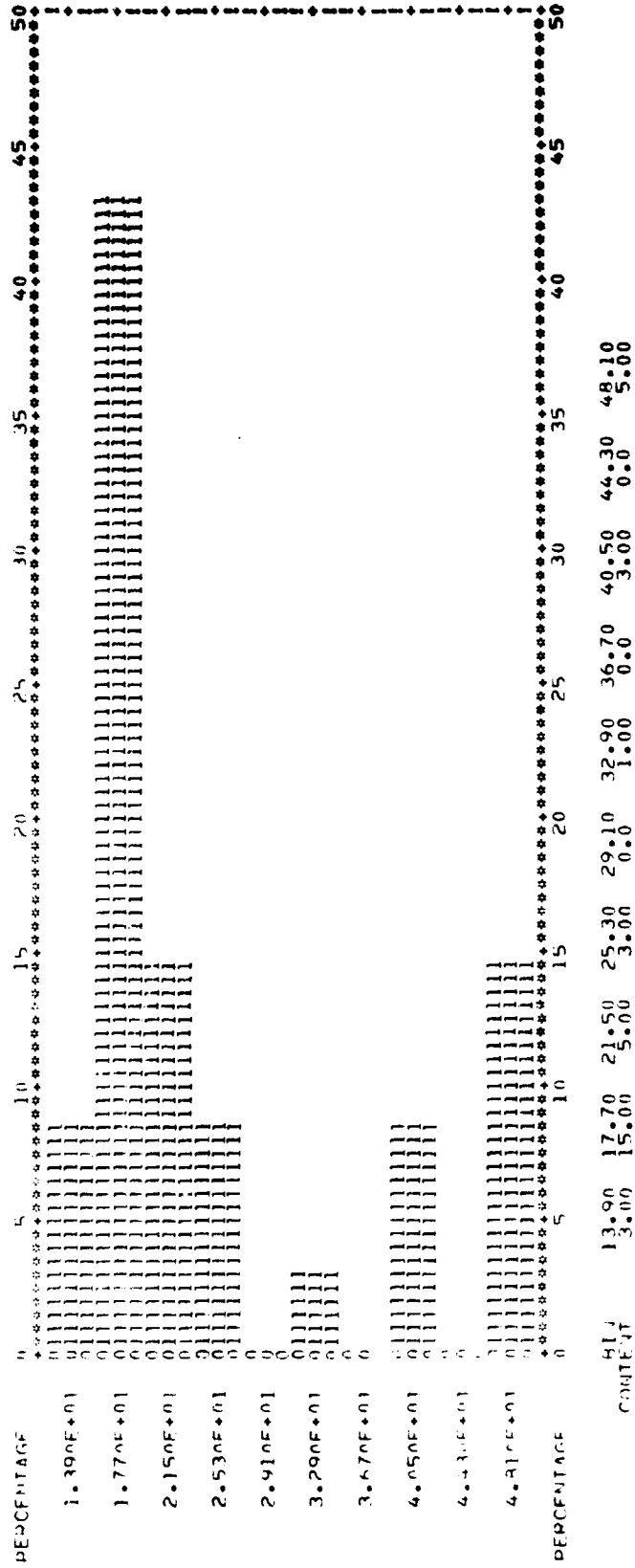
CALIFORNIA

B-76

146

SEEDING RATE - 14/ACRE

CROP TYPE IS CT 261 263 278  
SEGMENTS = 3.79999733  
CENTREPOINT OF TOTAL GROUP = 14.0000000  
CENTREPOINT OF FINAL GROUP = 44.0000000  
NUMBER OF OBSERVATIONS = 35  
NUMBER OF GROUPS = 10



B-17  
143

ROW WIDTH - INCHES

CROP TYPE IS CT

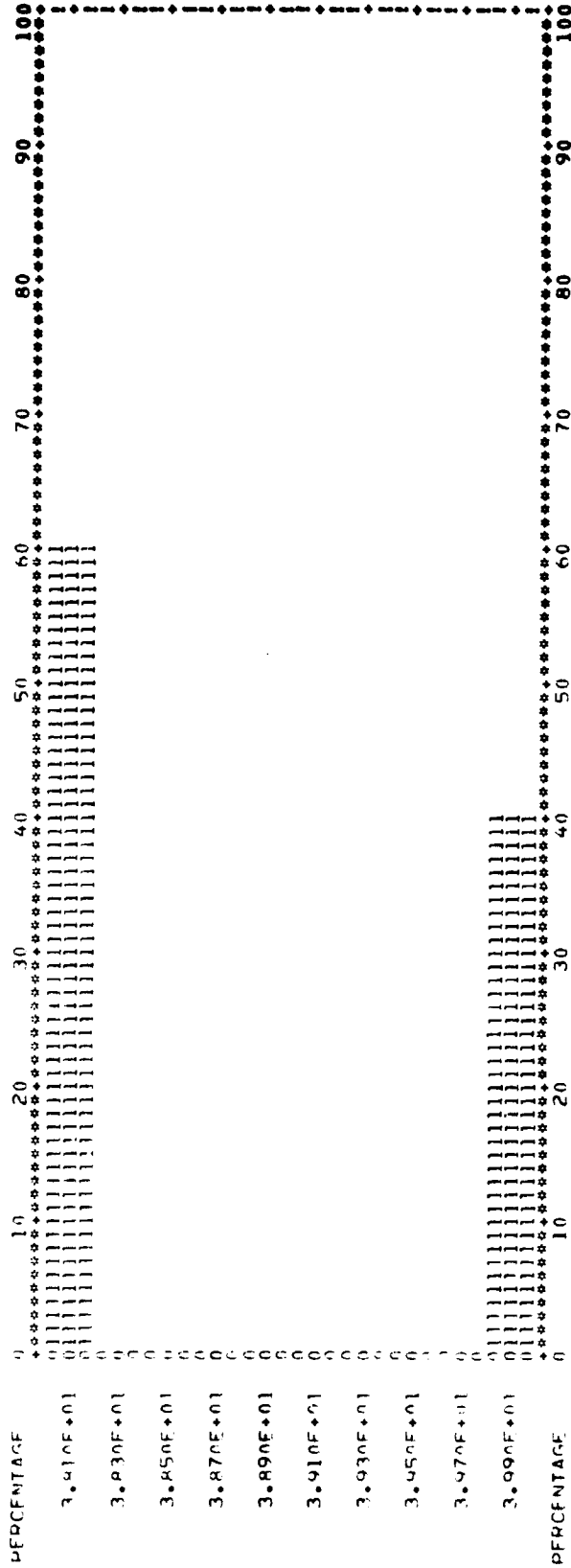
241 263 272

STEP = 0.20000201

CENTERPOINT OF INITIAL GROUP = 38.0999756

CENTERPOINT OF FINAL GROUP = 39.8999939

NUMBER OF OBSERVATIONS = 35  
NUMBER OF GROUPS = 10



HIN

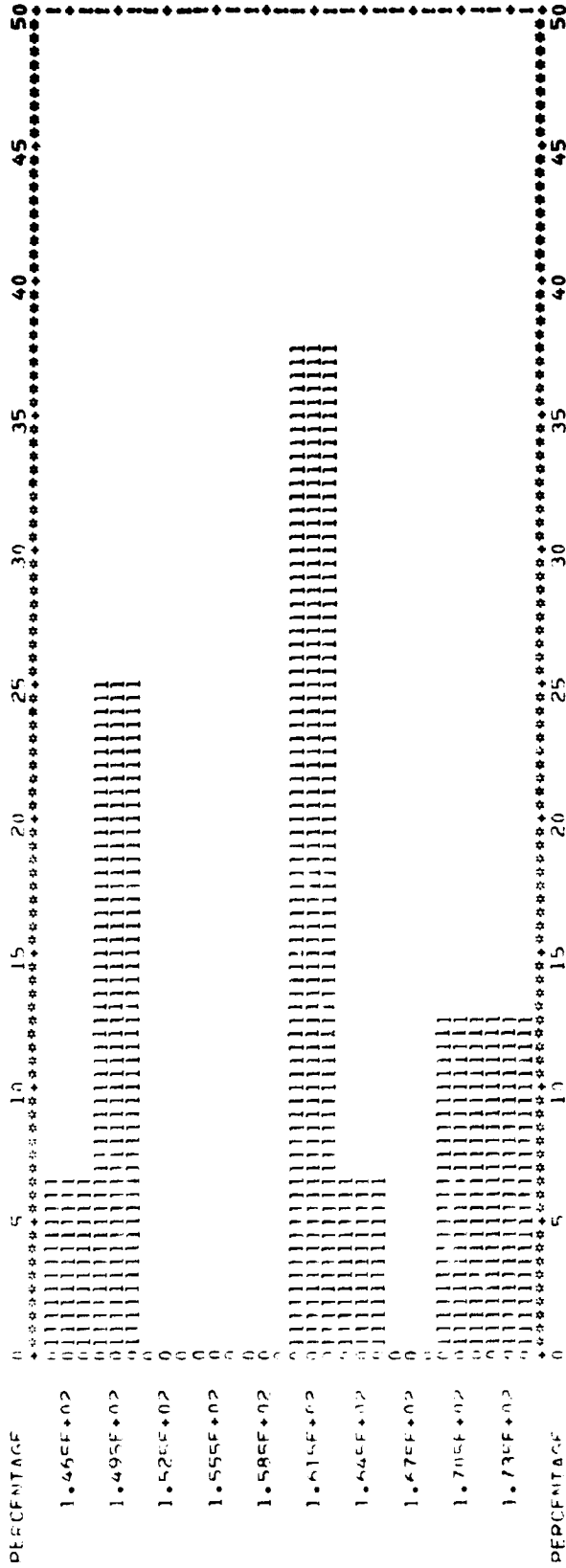
CONTENT 38.10 38.30 38.50 38.70 38.90 39.10 39.30 39.50 39.70 39.90

B-18

145

SEEDING RATE - 14/ACRE

CROP TYPE IS ST  
 SEGMENTS = 240  
 STEP = 3.00000000  
 CENTERPOINT OF INITIAL GROUP = 173.500000  
 CENTERPOINT OF FINAL GROUP = 170.500000  
 NUMBER OF OBSERVATIONS = 16  
 NUMBER OF GROUPS = 10



CONFIDENTIAL  
 146.50 149.50 152.50 155.50 158.50 161.50 164.50 167.50 170.50 173.50  
 1.00 4.00 0.0 0.0 0.0 6.00 1.00 0.0 2.00 2.00

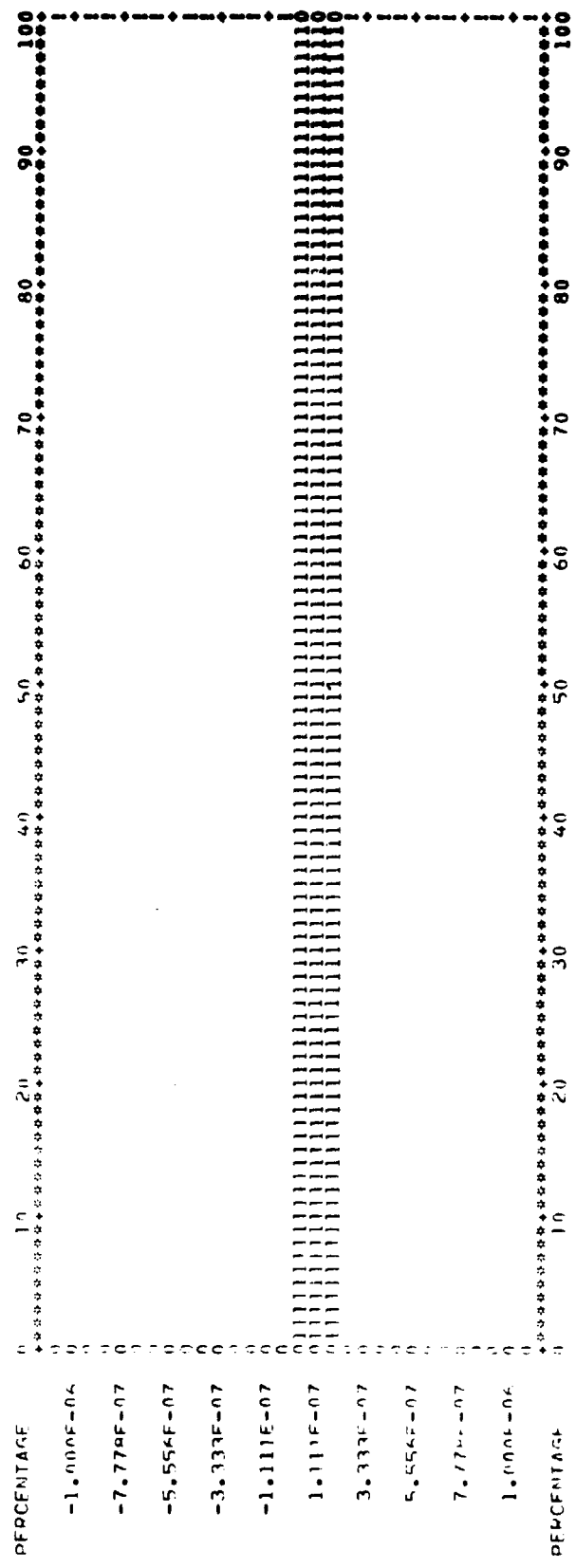
B-19  
 149

ROW WIDTH - INCHES

CROP TYPE IS PI 261  
SEGMENTS = 260

STEP = 0.00000022  
CENTREPOINT OF INITIAL GROUP = -0.00000100  
CENTREPOINT OF FINAL GROUP = 0.00000100

NUMBER OF OBSERVATIONS = 16  
NUMBER OF GROUPS = 10



CONTENT -0.00 0.00 -0.00 0.00 -0.00 0.00 0.00 0.00 0.00 0.00  
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

GEORGIA

~~B-21~~  
151

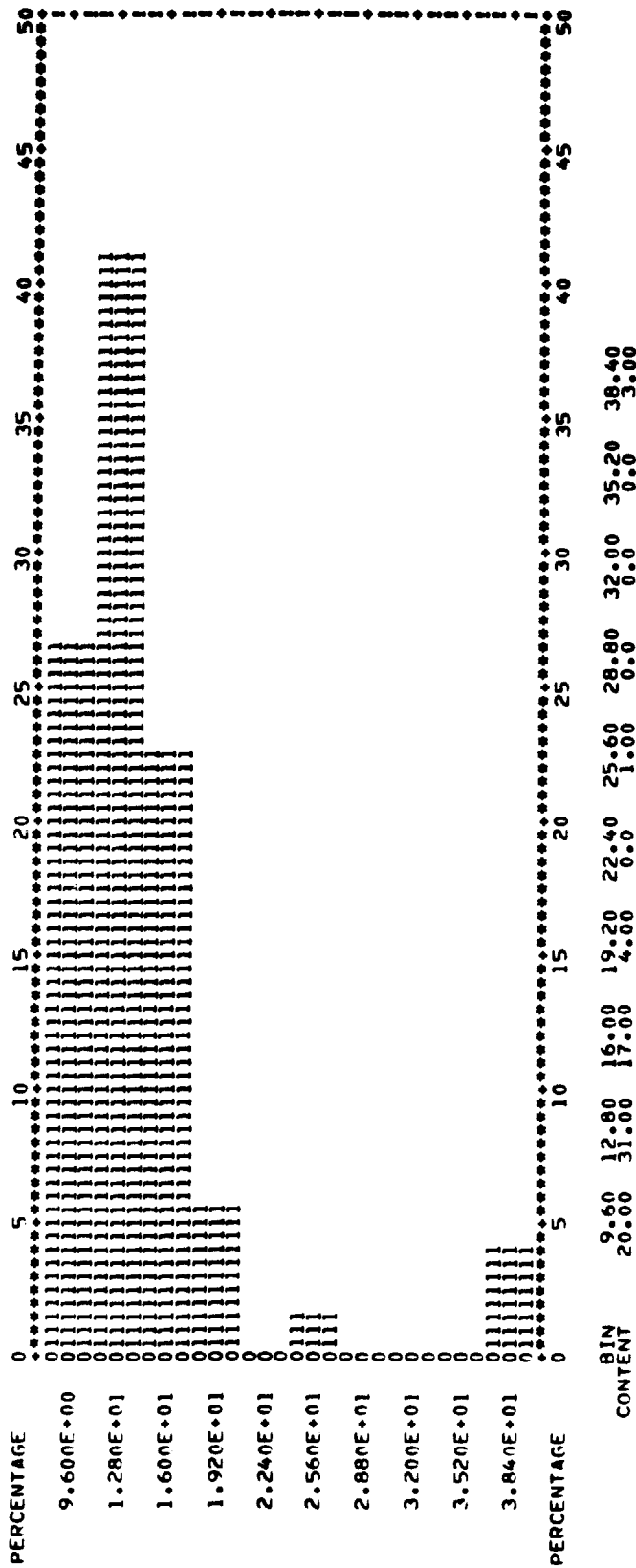
SEEDING RATE - LB/ACRE

CROP TYPE IS CR  
SEGMENTS = 31

312 330 333 334  
STEP = 3.19999790  
CENTERPOINT OF INITIAL GROUP =  
CENTERPOINT OF FINAL GROUP =

9.59999847  
38.39999939

NUMBER OF OBSERVATIONS = 76  
NUMBER OF GROUPS = 10

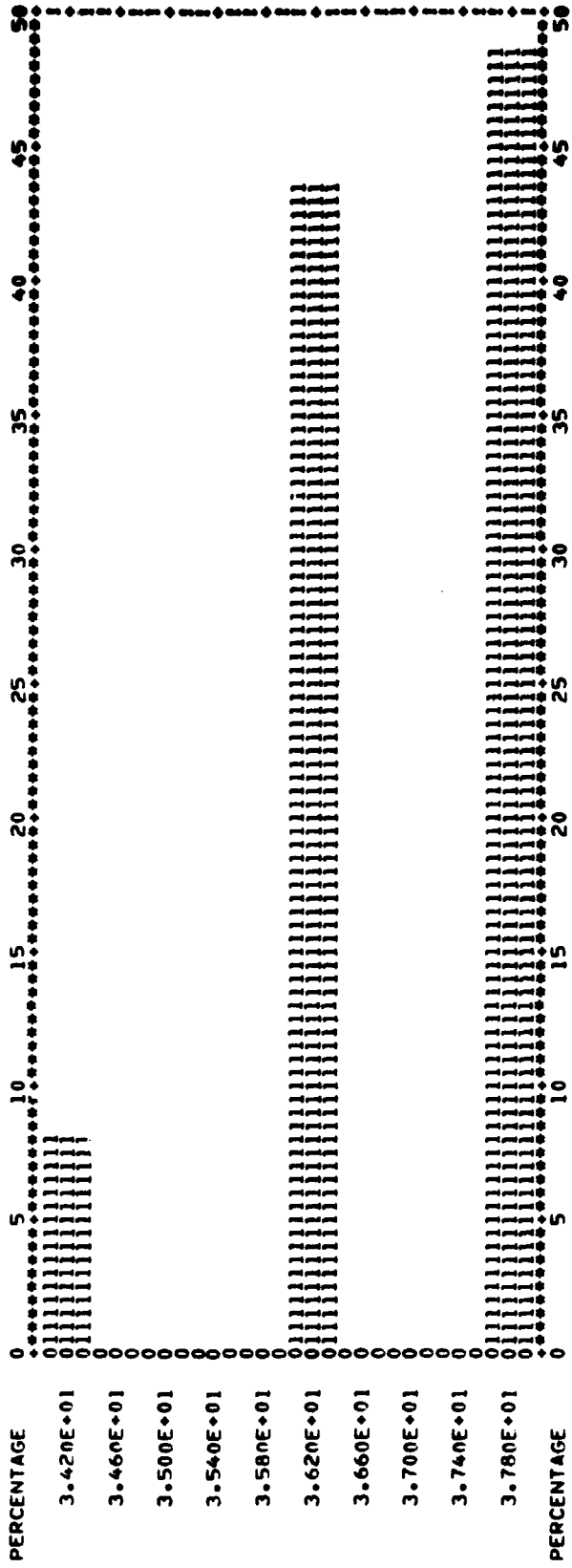


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OF POOR QUALITY



ROW WIDTH - INCHES

CROP TYPE IS CR  
 SEGMENTS = 311 312 330 333 334  
 STEP = 0.40000063  
 CENTERPOINT OF INITIAL GROUP = 34.1999817  
 CENTERPOINT OF FINAL GROUP = 37.7999878  
 NUMBER OF OBSERVATIONS = 76  
 NUMBER OF GROUPS = 10



PERCENTAGE

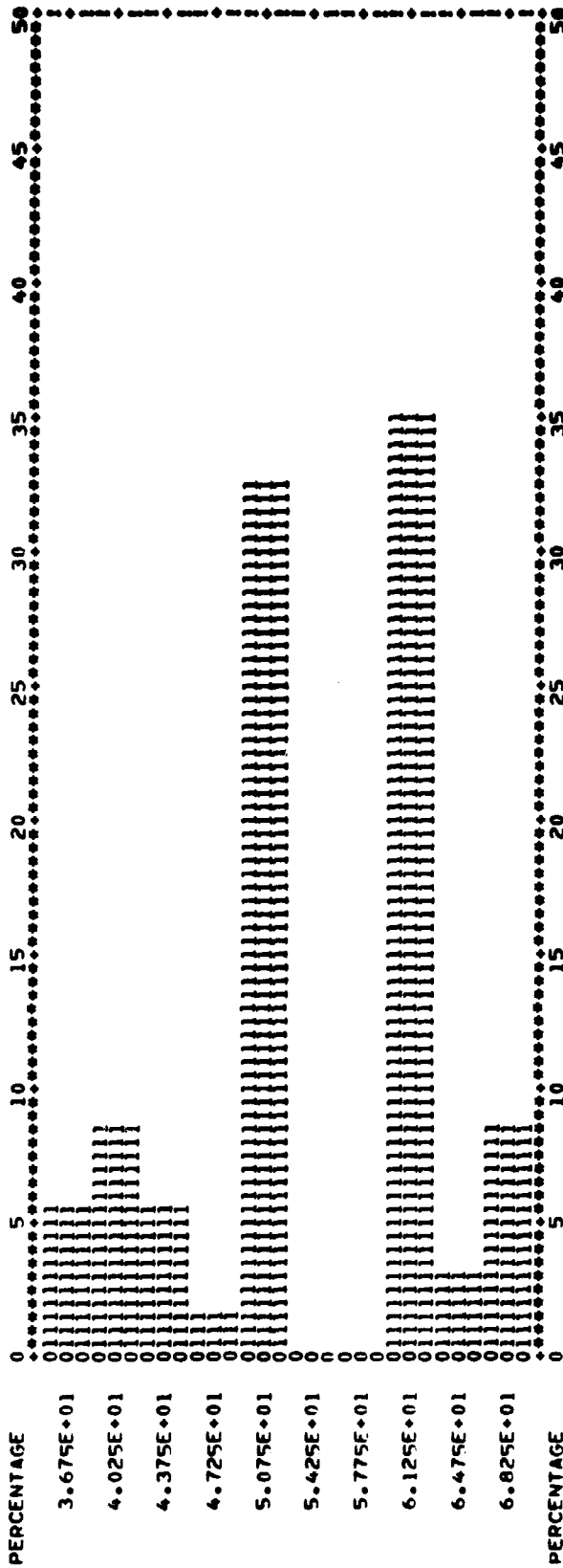
3.420E+01  
 3.460E+01  
 3.500E+01  
 3.540E+01  
 3.580E+01  
 3.620E+01  
 3.660E+01  
 3.700E+01  
 3.740E+01  
 3.780E+01

PERCENTAGE

BIN CONTENT  
 34.20 34.60 35.00 35.40 35.80 36.20 36.60 37.00 37.40 37.80  
 6.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

SEEDING RATE - LB/ACRE

CROP TYPE IS SO  
 SEGMENTS = 311 312 330 333 334 336  
 CENTERPOINT OF INITIAL GROUP = 36.7499847  
 CENTERPOINT OF FINAL GROUP = 68.2500000  
 NUMBER OF OBSERVATIONS = 71  
 NUMBER OF GROUPS = 10



B-24  
 154

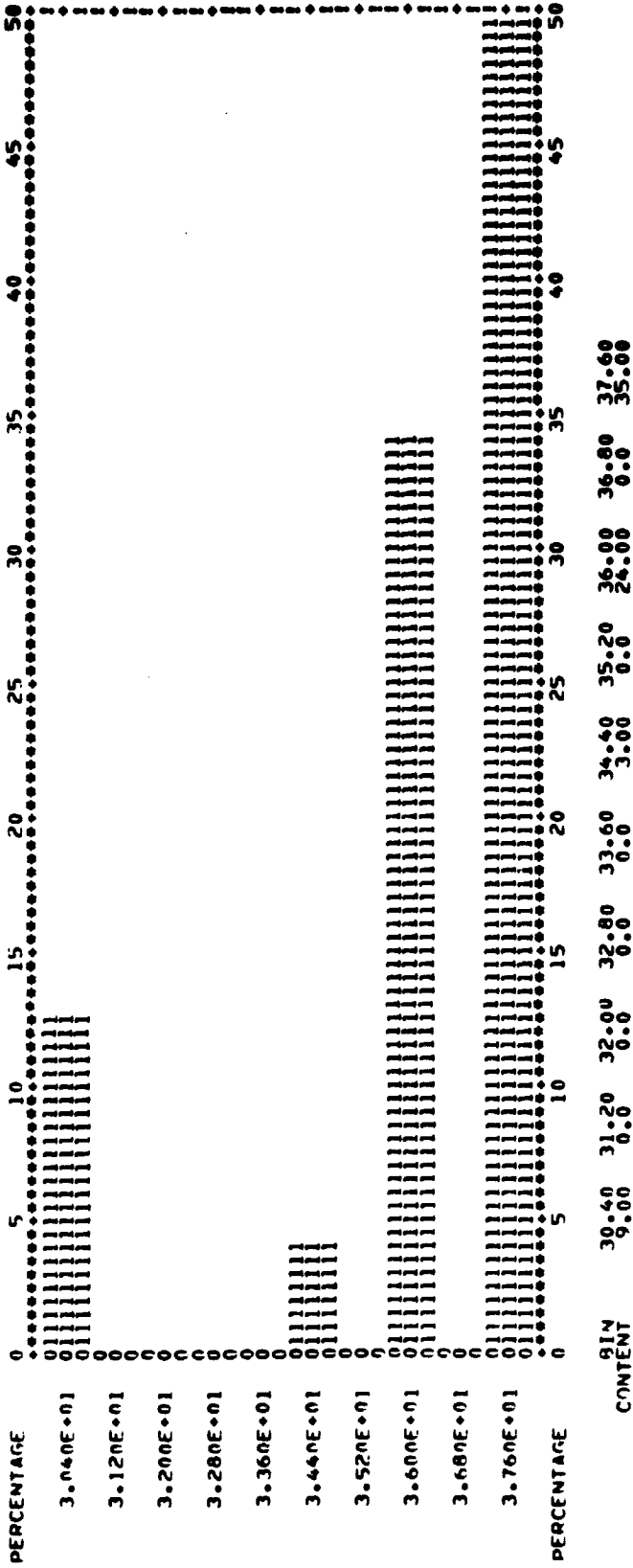
ROW WIDTH - INCHES

CROP TYPE IS SO  
SEGMENTS = 311

312 330 333 334  
STEP = 0.0000122  
CENTERPOINT OF INITIAL GROUP =  
CENTERPOINT OF FINAL GROUP =

30.3499786  
37.5999908

NUMBER OF OBSERVATIONS = 71  
NUMBER OF GROUPS = 10



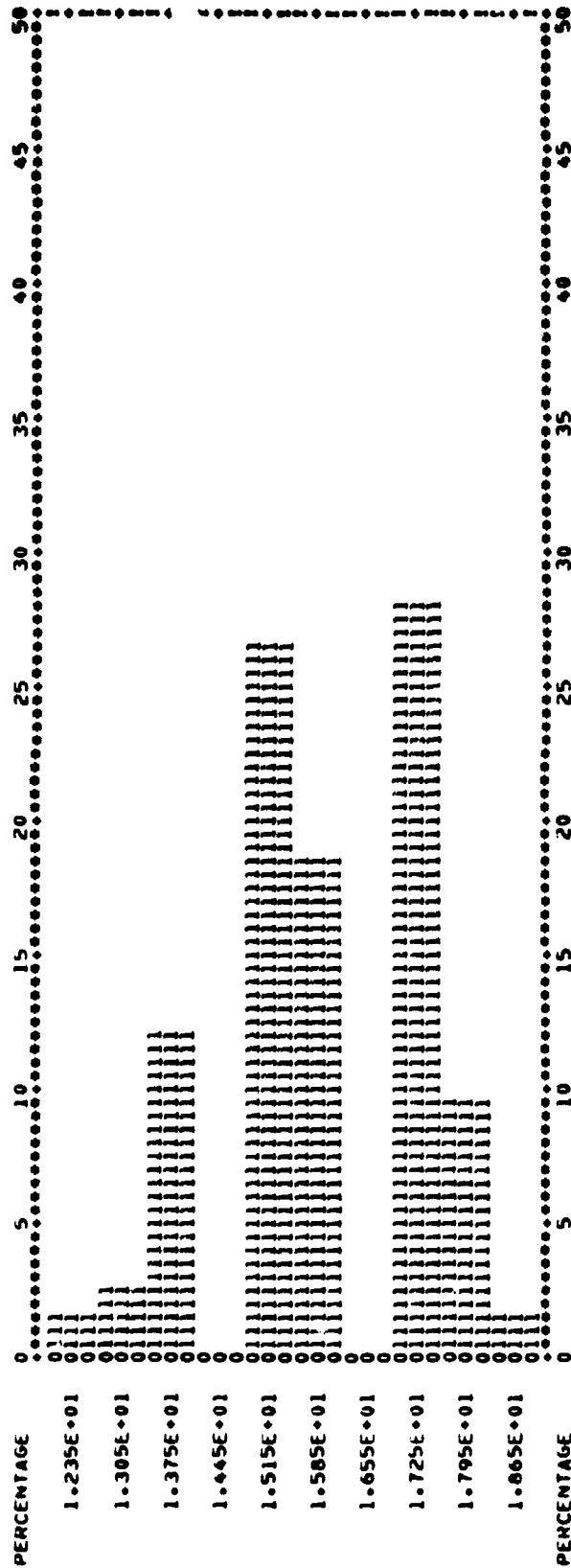
155

ILLINOIS

B-26  
156

SEEDING RATE - LB/ACRE

CROP TYPE IS CR 107 114 805 824 828  
 SEGMENTS = 107 STEP = 0.69999945  
 CENTERPOINT OF INITIAL GROUP = 12.3499985 NUMBER OF OBSERVATIONS = 75  
 CENTERPOINT OF FINAL GROUP = 18.6999939 NUMBER OF GROUPS = 10

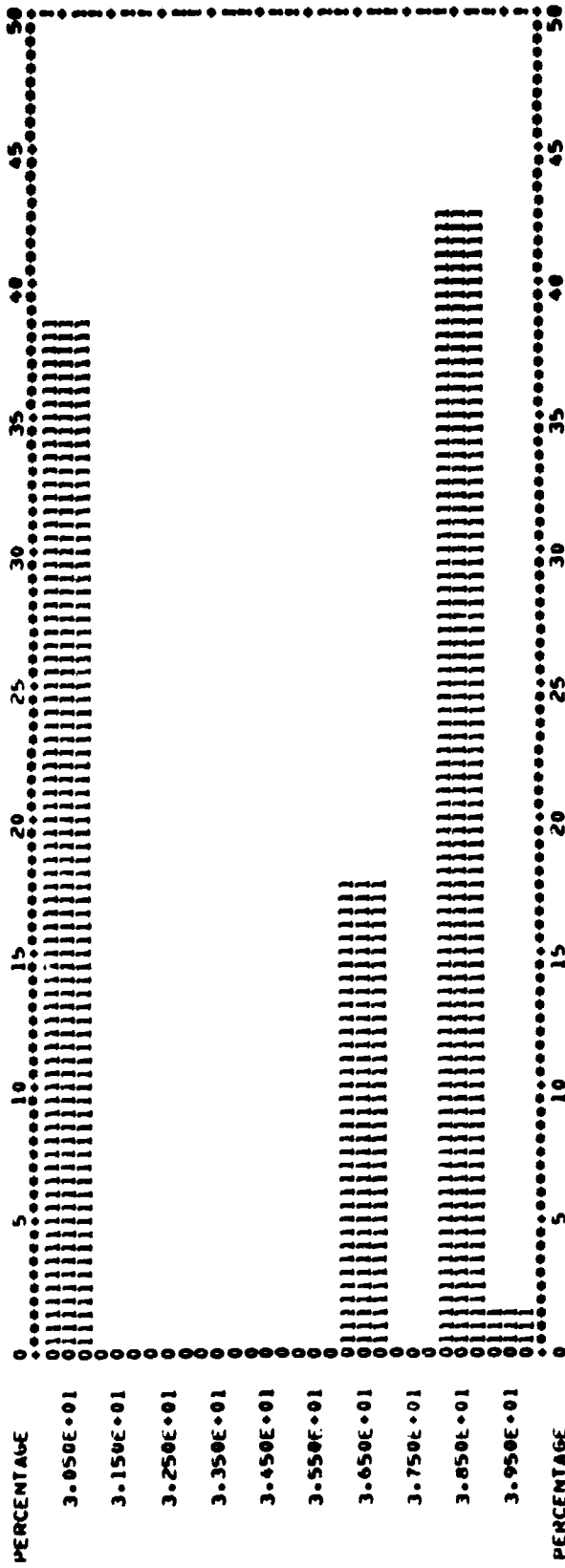


B-27  
157

ROW WIDTH - INCHES

CHOP TYPE IS CR  
SEGMENTS = 107

114 005 424 428  
STEP = 1.00000095  
CENTERPOINT OF INITIAL GROUP = 30.499847  
CENTERPOINT OF FINAL GROUP = 39.500000  
NUMBER OF OBSERVATIONS = 75  
NUMBER OF GROUPS = 10

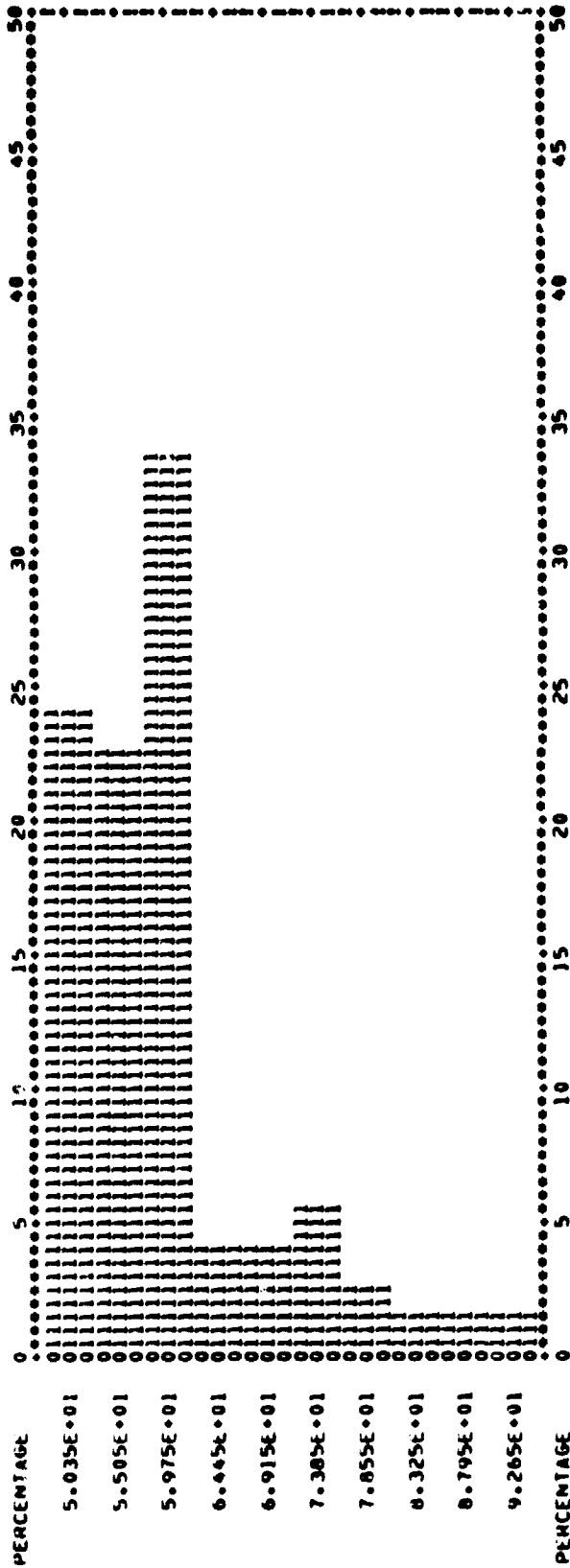


BIN	30.50	31.50	32.50	33.50	34.50	35.50	36.50	37.50	38.50	39.50
CONTENT	29.00	0.00	0.00	0.00	0.00	0.00	13.00	0.00	32.00	1.00

~~B-28~~  
155

SEEDING RATE - LB/ACRE

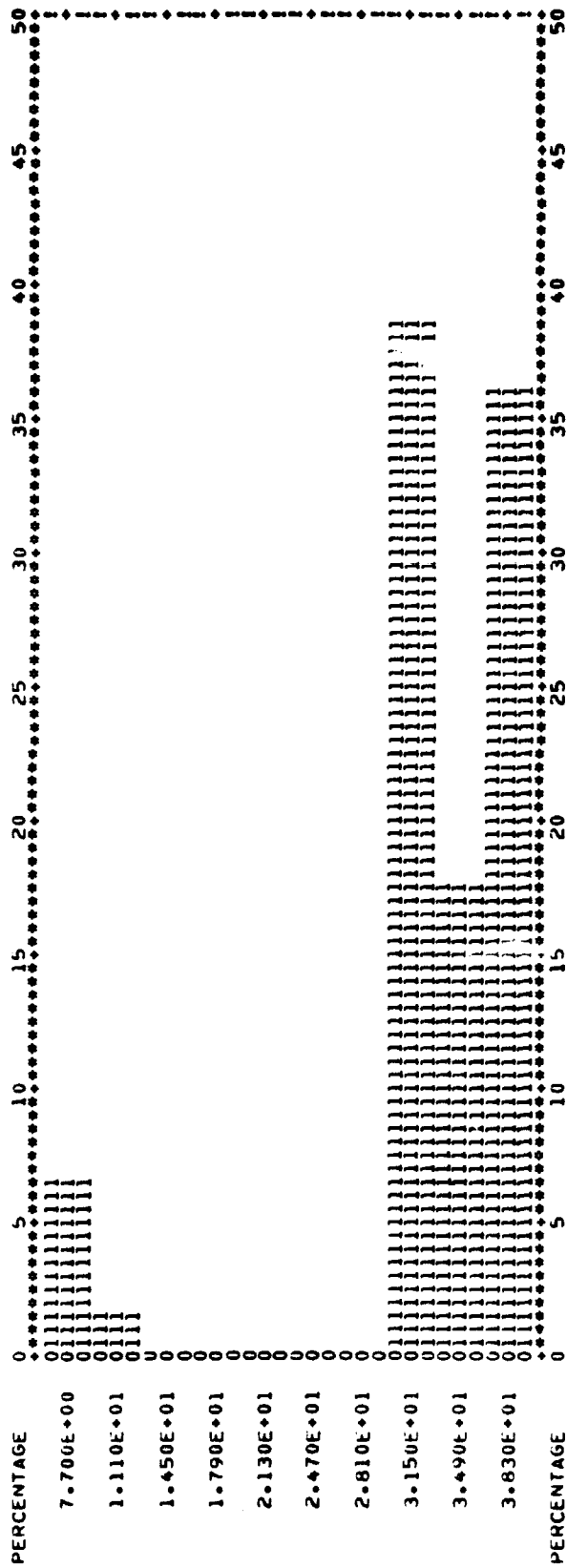
GROUP TYPE IS SU  
 SEGMENTS = 107 119 805 024 02R 02R 00172  
 STEP = 0.70000172  
 CENTERPOINT OF INITIAL GROUP = 50.3499750  
 CENTERPOINT OF FINAL GROUP = 92.649939  
 NUMBER OF OBSERVATIONS = 75  
 NUMBER OF GROUPS = 10



PERCENTAGE	50.35	55.05	59.75	64.45	69.15	73.85	78.55	83.25	87.95	92.65
CONTENT	18.00	17.00	25.00	3.00	3.00	4.00	2.00	1.00	1.00	1.00

HOW WIDTH - INCHES

CROP TYPE IS SU  
SEGMENTS = 107 114 805 824 828  
STEP = 3.39999676  
CENTERPOINT OF INITIAL GROUP = 7.69999886 NUMBER OF OBSERVATIONS = 75  
CENTERPOINT OF FINAL GROUP = 38.2999878 NUMBER OF GROUPS = 10



BIN CONTENT 7.70 11.10 14.50 17.90 21.30 24.70 28.10 31.50 34.90 38.30  
5.00 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00



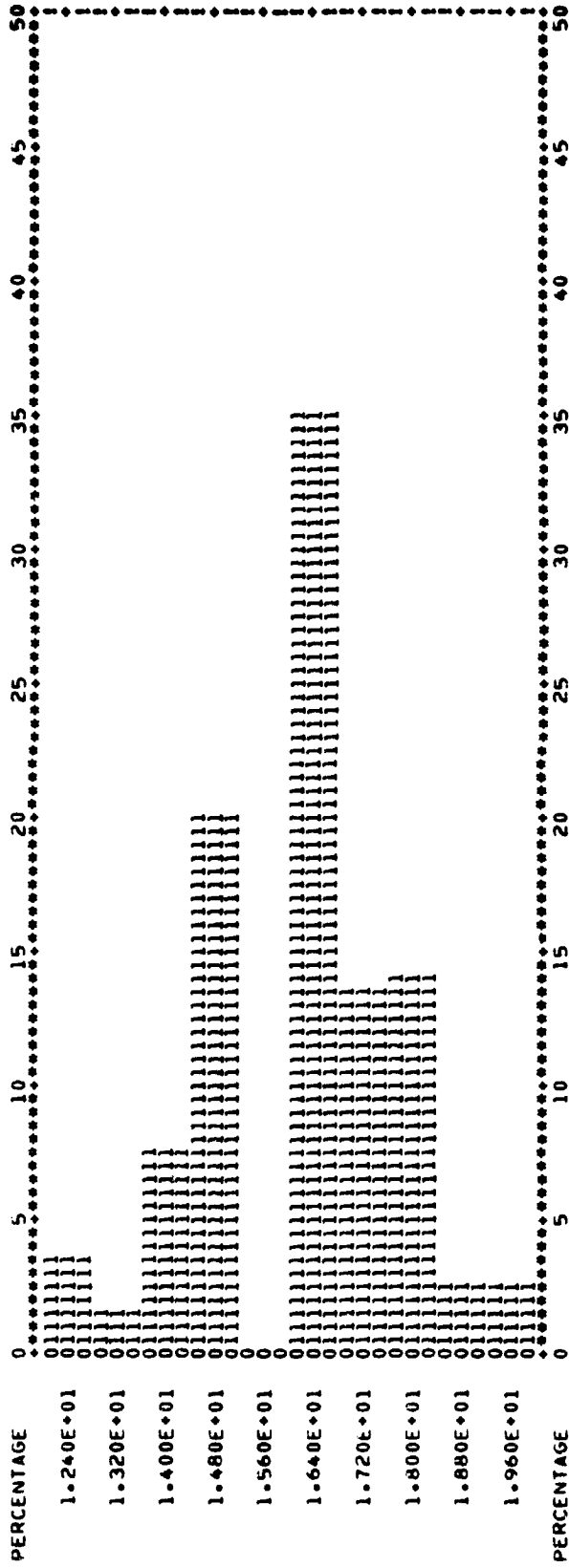
INDIANA

~~B-31~~

161

SEEDING RATE - LB/ACRE

CROP TYPE IS CR 127 133 833 837 843 851 856  
 SEGMENTS = 123  
 STEP = 0.79999912  
 CENTERPOINT OF INITIAL GROUP = 12.3999987  
 CENTERPOINT OF FINAL GROUP = 19.5999908  
 NUMBER OF OBSERVATIONS = 120  
 NUMBER OF GROUPS = 10

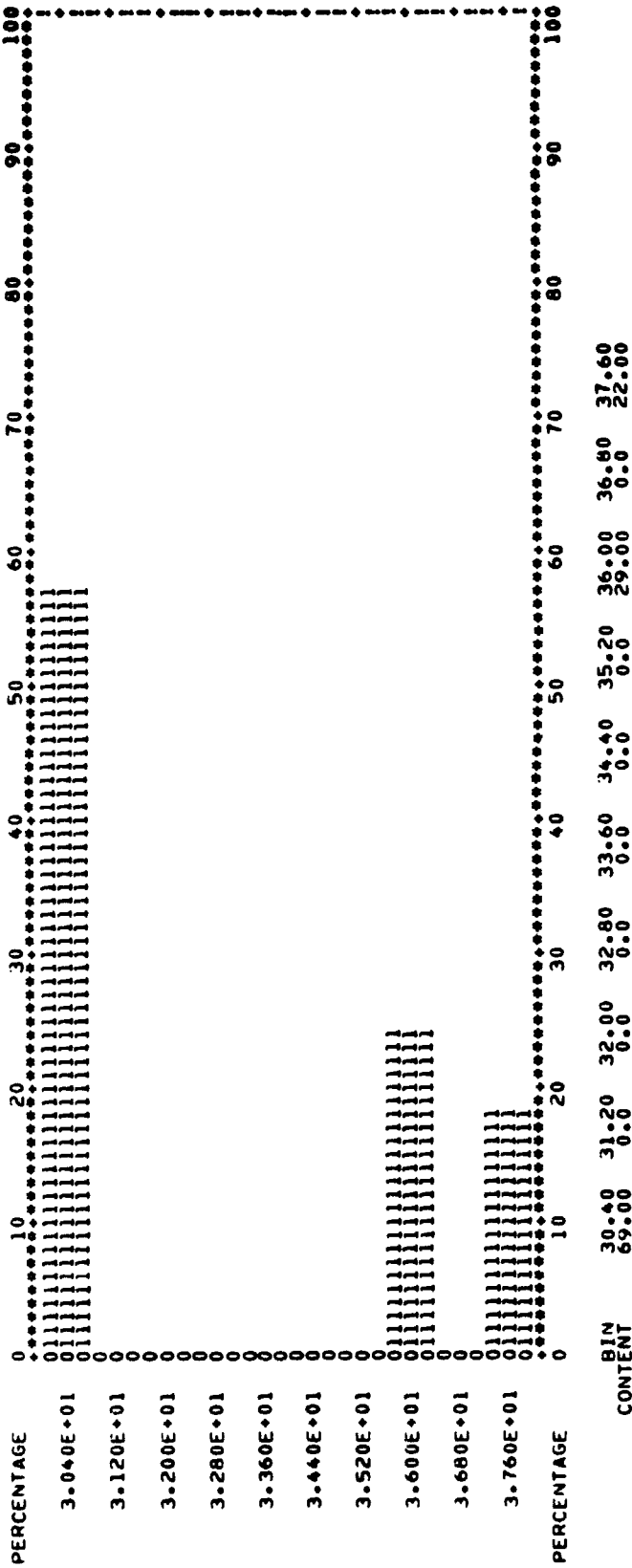


BIN CONTENT 12.40 13.20 14.00 14.80 15.60 16.40 17.20 18.00 18.80 19.60  
 4.00 9.00 24.00 42.00 16.00 17.00 3.00

B 32  
 16.2

ROW WIDTH - INCHES

CROP TYPE IS CR  
 SEGMENTS = 123 127 133 833 837 843 851 856  
 STEP = 0.8000072  
 CENTERPOINT OF INITIAL GROUP = 30.3999786  
 CENTERPOINT OF FINAL GROUP = 37.5999908  
 NUMBER OF OBSERVATIONS = 120  
 NUMBER OF GROUPS = 10



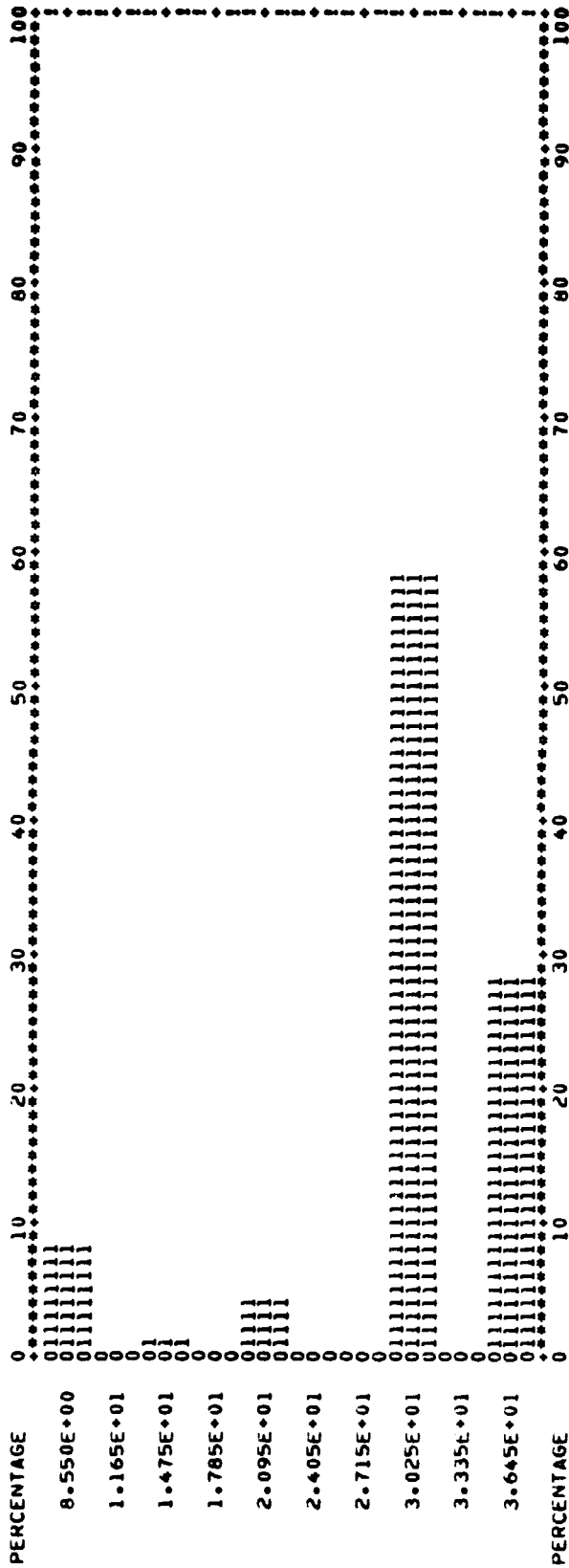
SEEDING RATE - LB/ACRE

CROP TYPE IS 50  
 SEGMENTS = 123 127 133 833 837 843 851 856  
 STEP = 5.00000095  
 CENTERPOINT OF INITIAL GROUP = 42.4999847 NUMBER OF OBSERVATIONS = 120  
 CENTERPOINT OF FINAL GROUP = 87.5000000 NUMBER OF GROUPS = 10



ROW WIDTH - INCHES

CHOP TYPE IS S0  
 SEGMENTS = 123 127 133 833 837 843 851 856  
 STEP = 309999847  
 CENTERPOINT OF INITIAL GROUP = 8.54999828  
 CENTERPOINT OF FINAL GROUP = 36.4499969  
 NUMBER OF OBSERVATIONS = 120  
 NUMBER OF GROUPS = 10



B-35  
 165

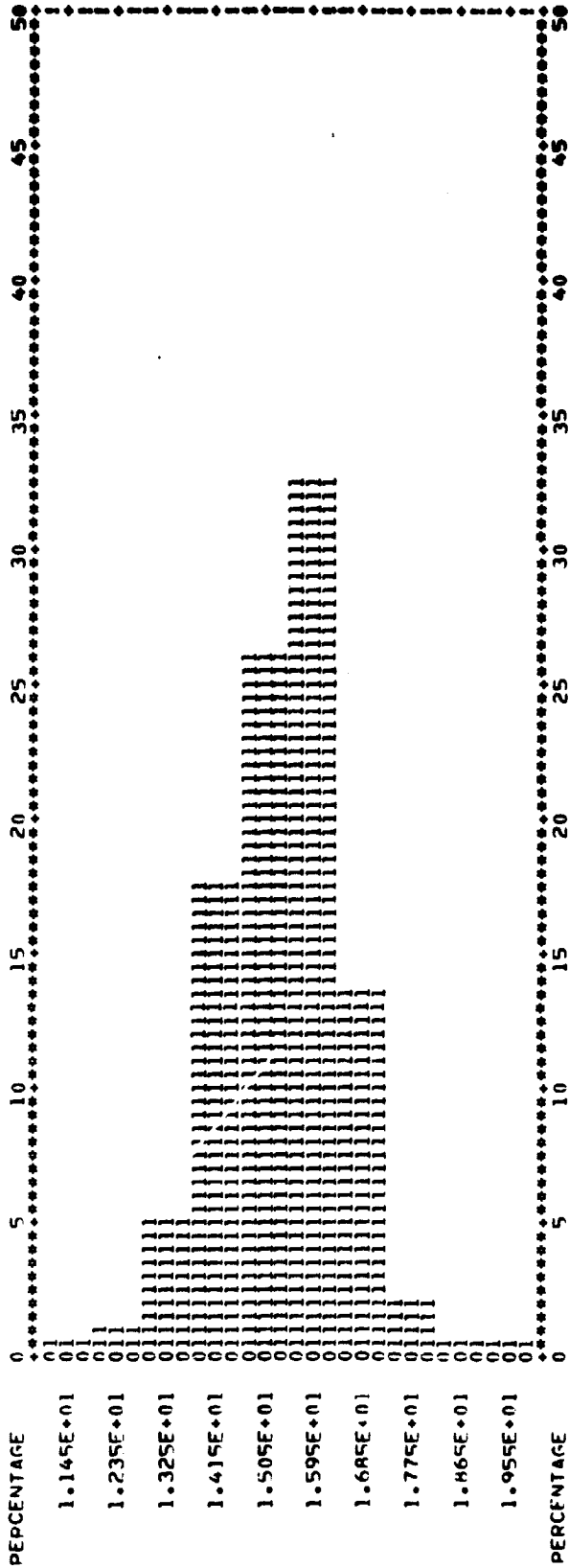
IOWA

~~B-36~~

166

SEEDING RATE - LR/ACRE

CROP TYPE IS CR  
 SEGMENTS = 135 144 145 401 804 RA3 RA4 492 893  
 STFP = 0.82999872  
 CENTERPOINT OF INITIAL GROUP = 11.4499989  
 CENTERPOINT OF FINAL GROUP = 19.5499978  
 NUMBER OF OBSERVATIONS = 160  
 NUMBER OF GROUPS = 10



PERCENTAGE 0 5 10 15 20 25 30 35 40 45 50

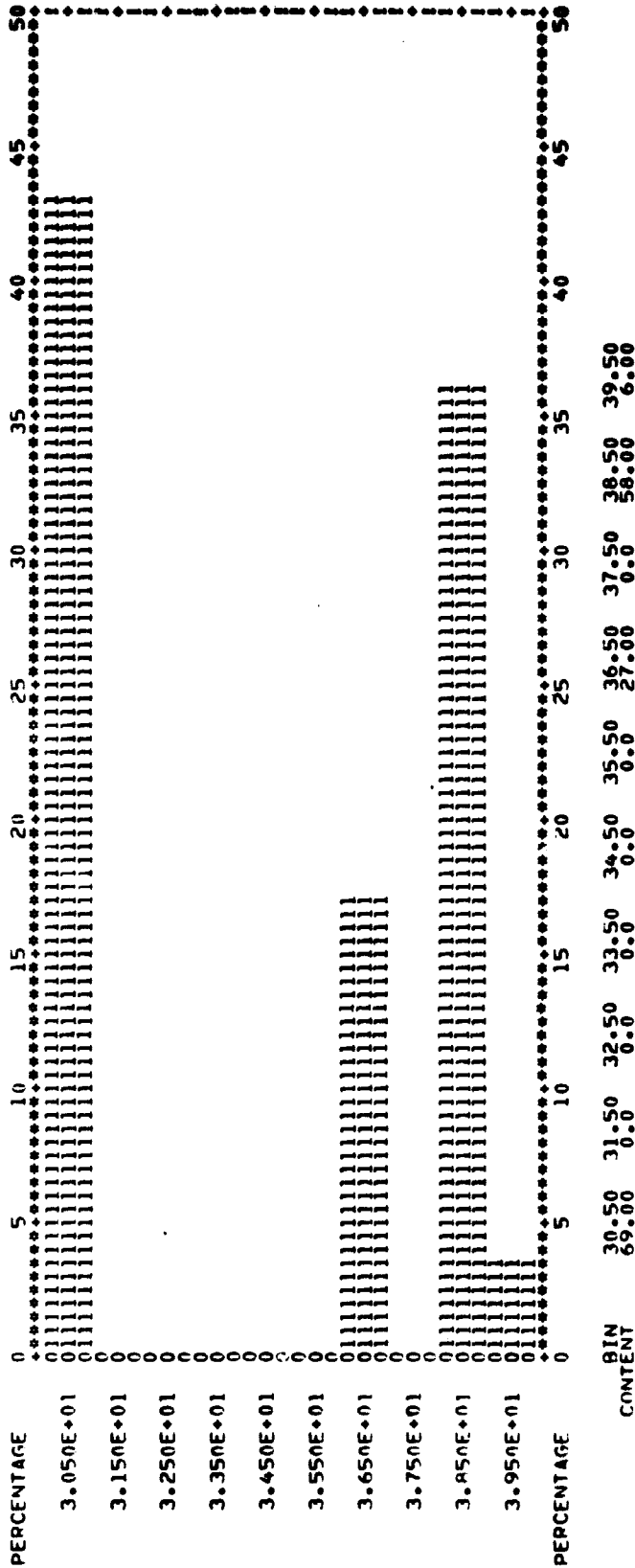
CONTENT 11.45 12.35 13.25 14.15 15.05 16.65 17.75 18.65 19.55

8-37  
107

ROW WIDTH - INCHES

CROP TYPE IS CR  
SEGMENTS = 135 144 145 801 804 883 886 892 893  
STEP = 1.00000095  
CENTERPOINT OF INITIAL GROUP = 30.4999847  
CENTERPOINT OF FINAL GROUP = 39.5000000

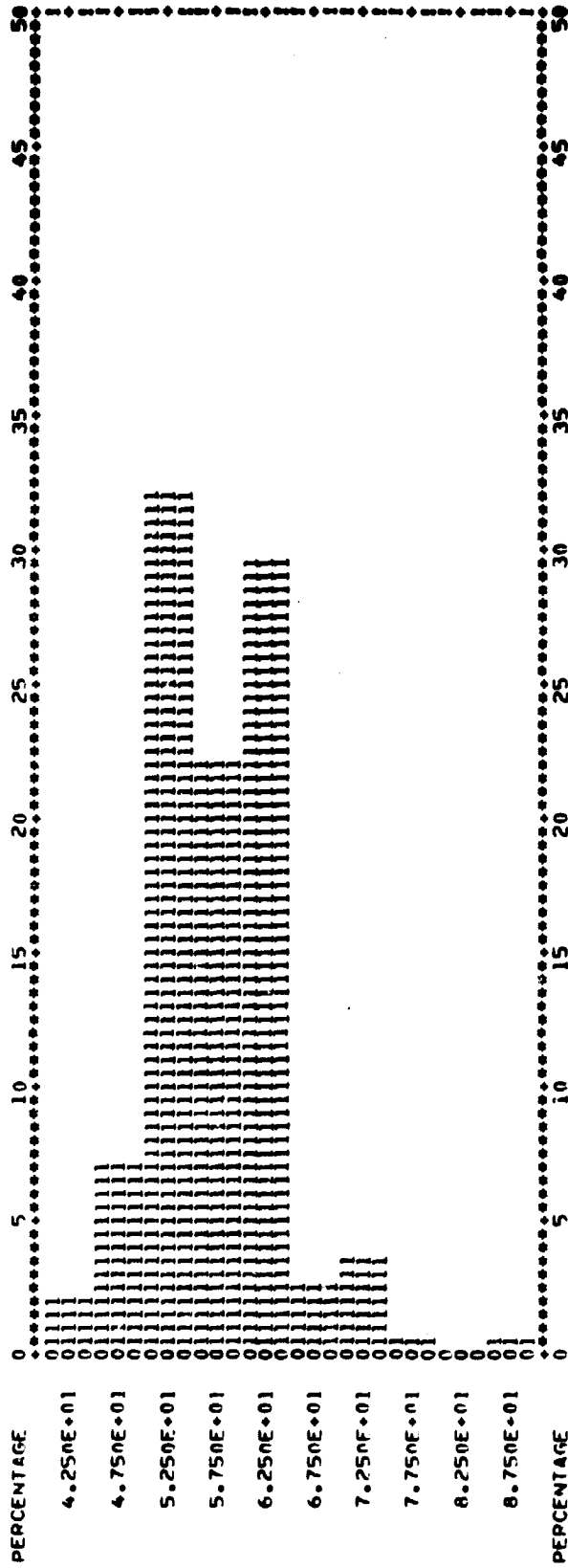
NUMBER OF OBSERVATIONS = 160  
NUMBER OF GROUPS = 10





SEEDING RATE - 18/ACRE

CROP TYPE IS 50  
 SEGMENTS = 138 144 145 901 904 903 896 892 893  
 STEP = 5.00000095  
 CENTERPOINT OF INITIAL GROUP = 42.499847  
 CENTERPOINT OF FINAL GROUP = 87.500000  
 NUMBER OF OBSERVATIONS = 153  
 NUMBER OF GROUPS = 10



PERCENTAGE 0 5 10 15 20 25 30 35 40 45 50

BIN CONTENT 42.50 47.50 52.50 57.50 62.50 67.50 72.50 77.50 82.50 87.50  
 3.00 11.00 49.00 34.00 45.00 4.00 5.00 1.00 0.0 1.00

ROW WIDTH - INCHES

CROP TYPE IS SO

SEGMENTS = 135

144 145 801 804 883 886 802 893

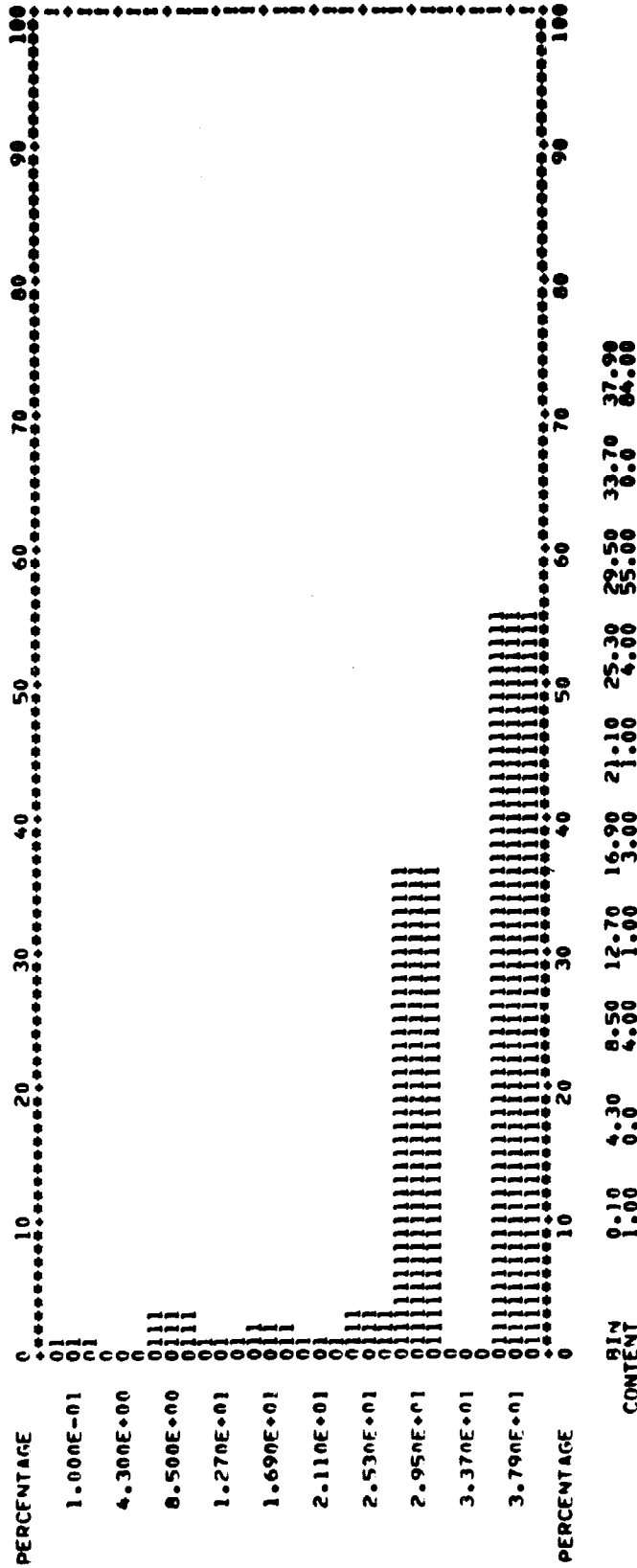
STEP = 4.19999790

CENTERPOINT OF INITIAL GROUP = 0.99999841

CENTERPOINT OF FINAL GROUP = 37.8999939

NUMBER OF OBSERVATIONS = 153

NUMBER OF GROUPS = 10



LOUISIANA

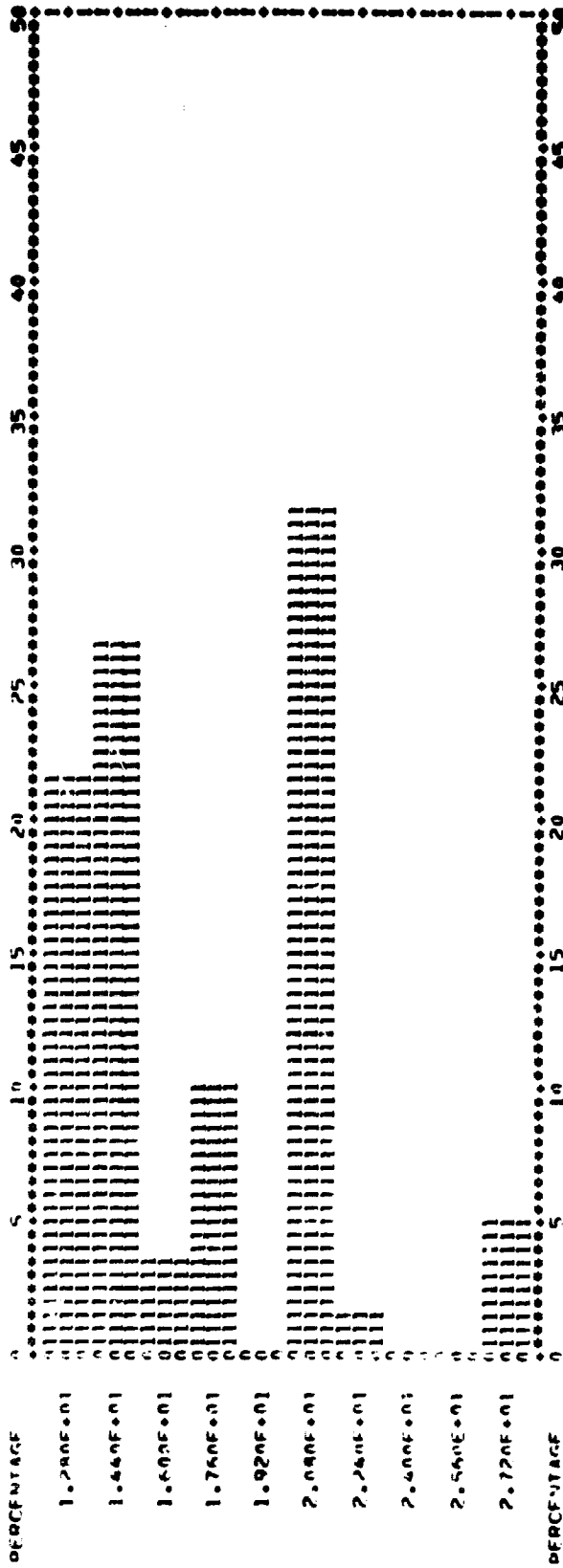
B-41  
171

SEEDING RATE - LW/ACRE

GROUP TYPE IS CI  
 SEGMENTS = 17

SEED = 269 270 271 272 273  
 1.5493244 274 275  
 CENTERPOINT OF INITIAL GROUP = 12.7999943  
 CENTERPOINT OF FINAL GROUP = 27.1999969

NUMBER OF OBSERVATIONS = 60  
 NUMBER OF GROUPS = 10



CONTENT 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00 22.00 23.00 24.00 25.00 26.00 27.00  
 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

ROW WIDTH = 114CHRS

GROUP TYPE IS CT

PERCENTAGE = 1%

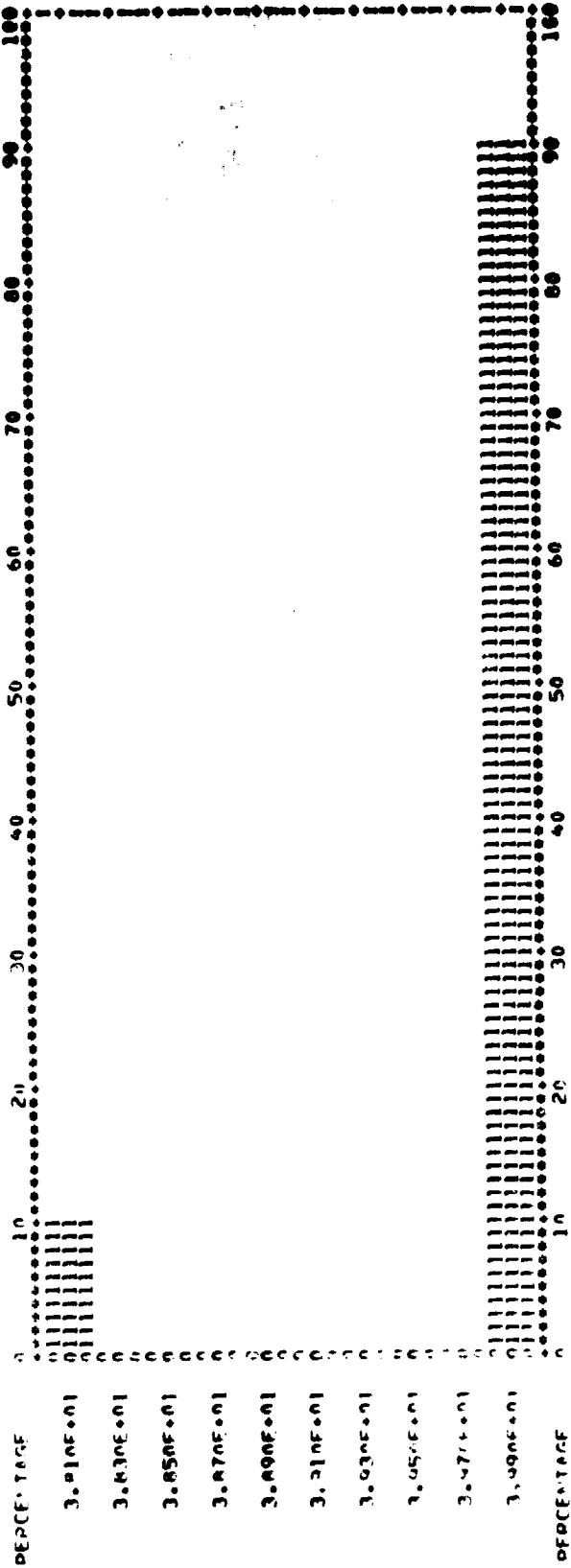
249 271 271 271 274

PERCENTAGE OF INITIAL GROUP = 34.9999750

PERCENTAGE OF FINAL GROUP = 39.9999934

NUMBER OF OBSERVATIONS = 60

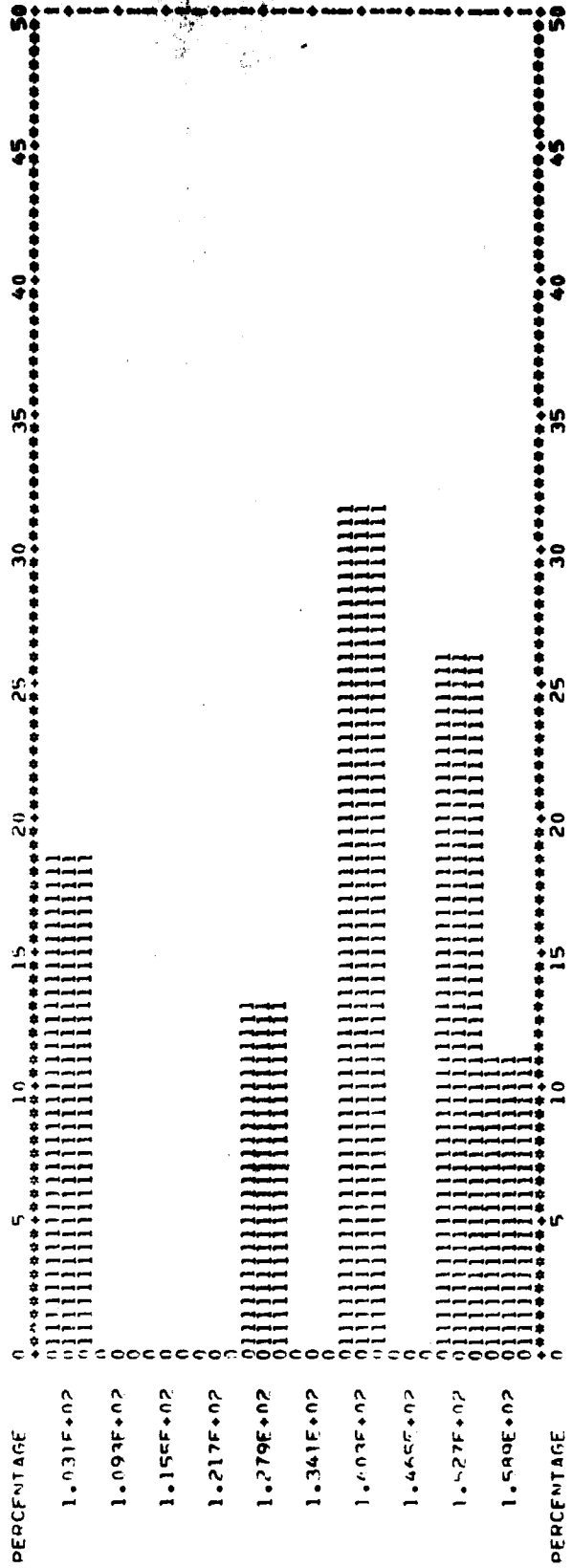
NUMBER OF GROUPS = 10



GROUP	PERCENTAGE	INITIAL	FINAL	INITIAL	FINAL
1	39.10	38.50	39.70	39.50	39.90
2	6.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00

SEEDING RATE - L/ACRE

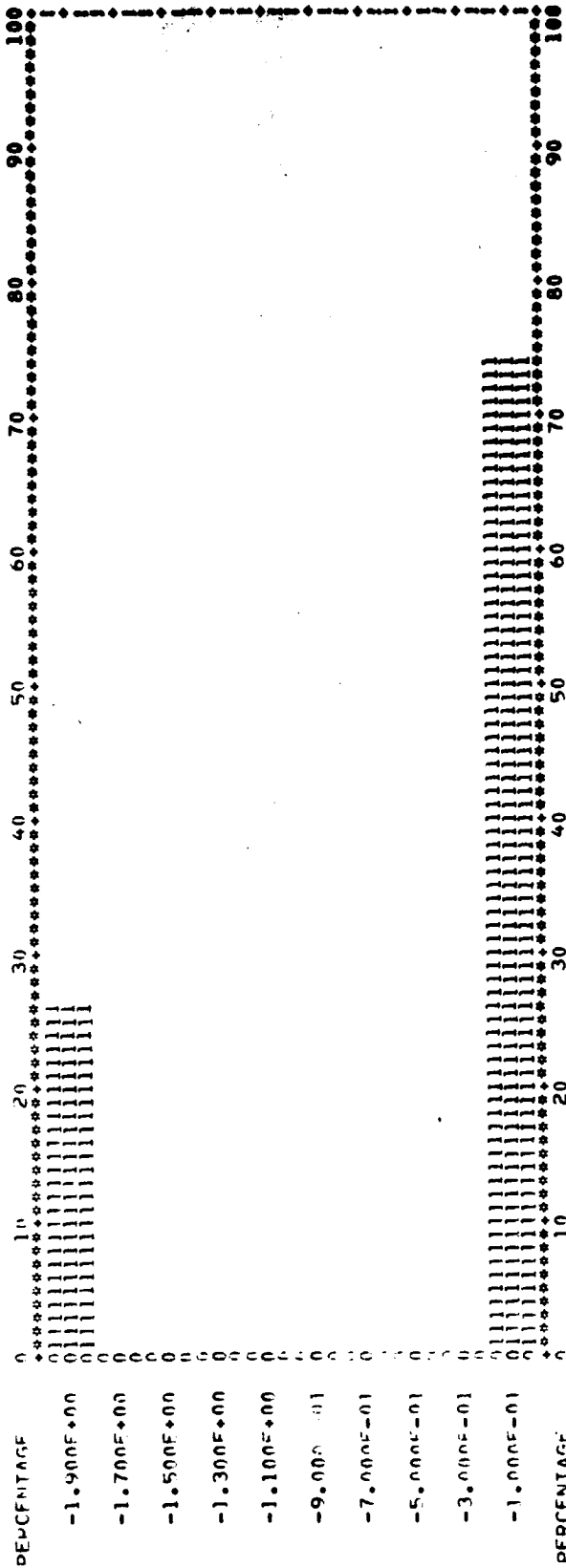
CROP TYPE IS RI  
 SEGMENTS = 174 266 267 268  
 STEP = 620000172  
 CENTERPOINT OF INITIAL GROUP = 103.099976  
 CENTERPOINT OF FINAL GROUP = 158.899994  
 NUMBER OF OBSERVATIONS = 54  
 NUMBER OF GROUPS = 10



CONTENT RIN 103.10 109.30 115.50 121.70 127.90 134.10 140.30 146.50 152.70 158.90  
 10.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

ROW WIDTH - 100000

GROUP TYPE IS PI  
SEGMENTS = 174 246 267 268 0.20000011  
CENTERPOINT OF INITIAL GROUP = -1.90000057 NUMBER OF OBSERVATIONS = 54  
CENTERPOINT OF FINAL GROUP = -0.09999895 NUMBER OF GROUPS = 10



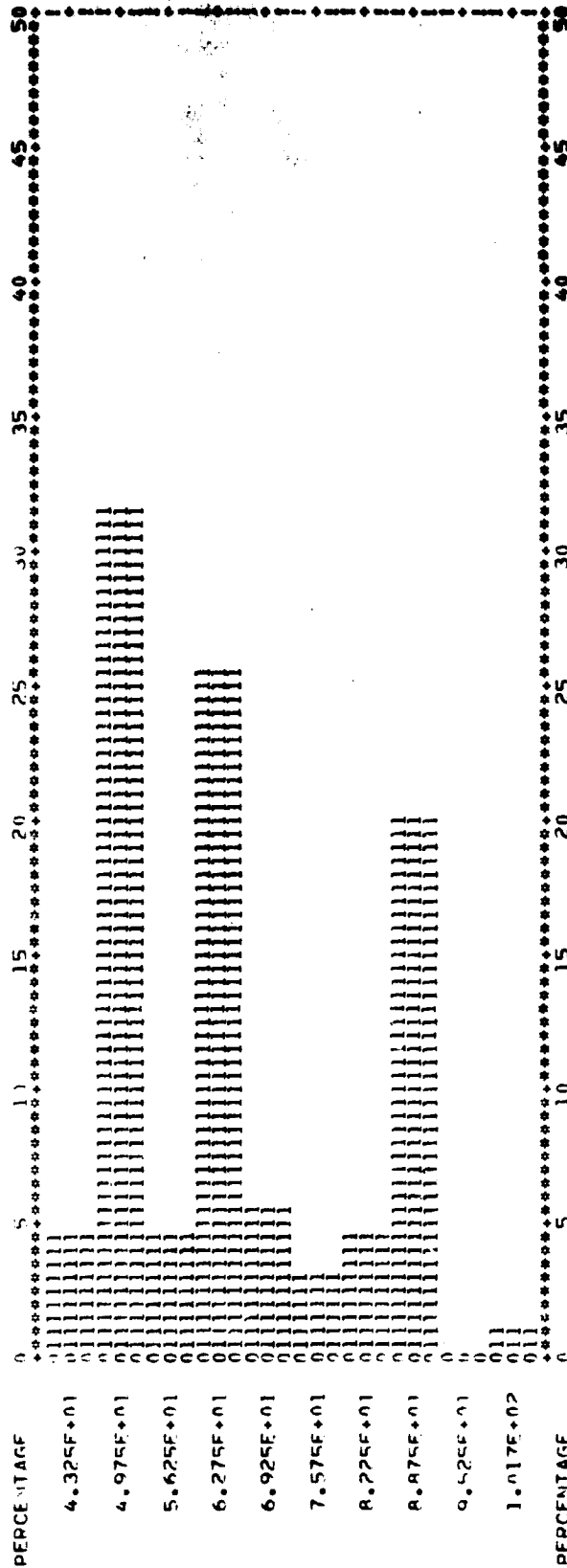
CONTENT	HIN	-1.90	-1.70	-1.50	-1.30	-1.10	-0.90	-0.70	-0.50	-0.30	-0.10
		14.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.00

B-46

SEEDING RATE - 1 H/ACRE

CROP TYPE IS SO  
SEGMENTS = 174 266 267 268 269 270 271 272 273  
STEP = 50000000  
CENTROPOINT OF INITIAL GROUP = 43.2499447  
CENTROPOINT OF FINAL GROUP = 101.7500000

NUMBER OF OBSERVATIONS = 130  
NUMBER OF GROUPS = 10



CONTENT 43.25 49.75 56.25 62.75 69.25 75.75 82.25 88.75 95.25 101.75  
6.00 41.00 6.00 33.00 7.00 4.00 6.00 26.00 0.00 1.00

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OF POOR QUALITY

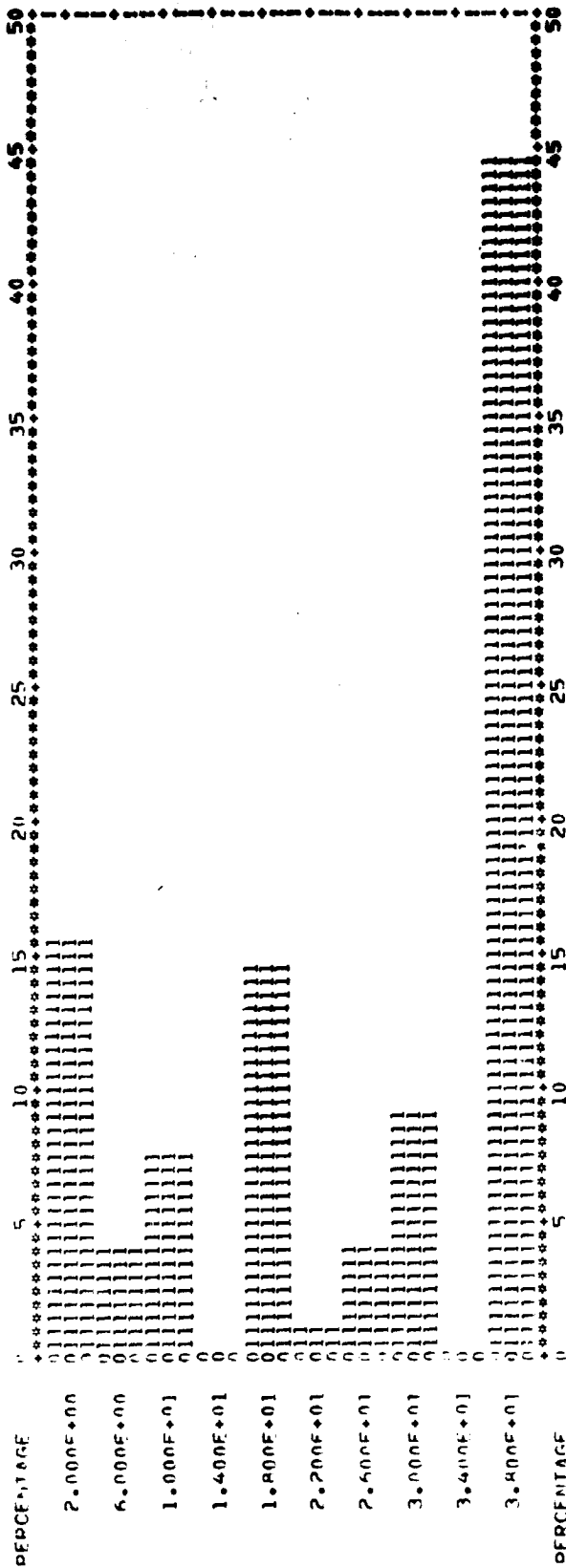
B-46

176



ROW WIDTH - INCHES

CROP TYPE IS 50  
CFGWENTC = 174 266 267 268 269 270 271 272 273  
CENTROPOINT OF INITIAL GROUP = 1.99999905  
CENTROPOINT OF FINAL GROUP = 38.00000000  
NUMBER OF OBSERVATIONS = 130  
NUMBER OF GROUPS = 10



CONTENT 2.00 5.00 10.00 14.00 18.00 22.00 26.00 30.00 34.00 38.00  
20.00 5.00 10.00 0.0 19.00 1.00 5.00 12.00 0.0 58.00

MINNESOTA

~~B-48~~

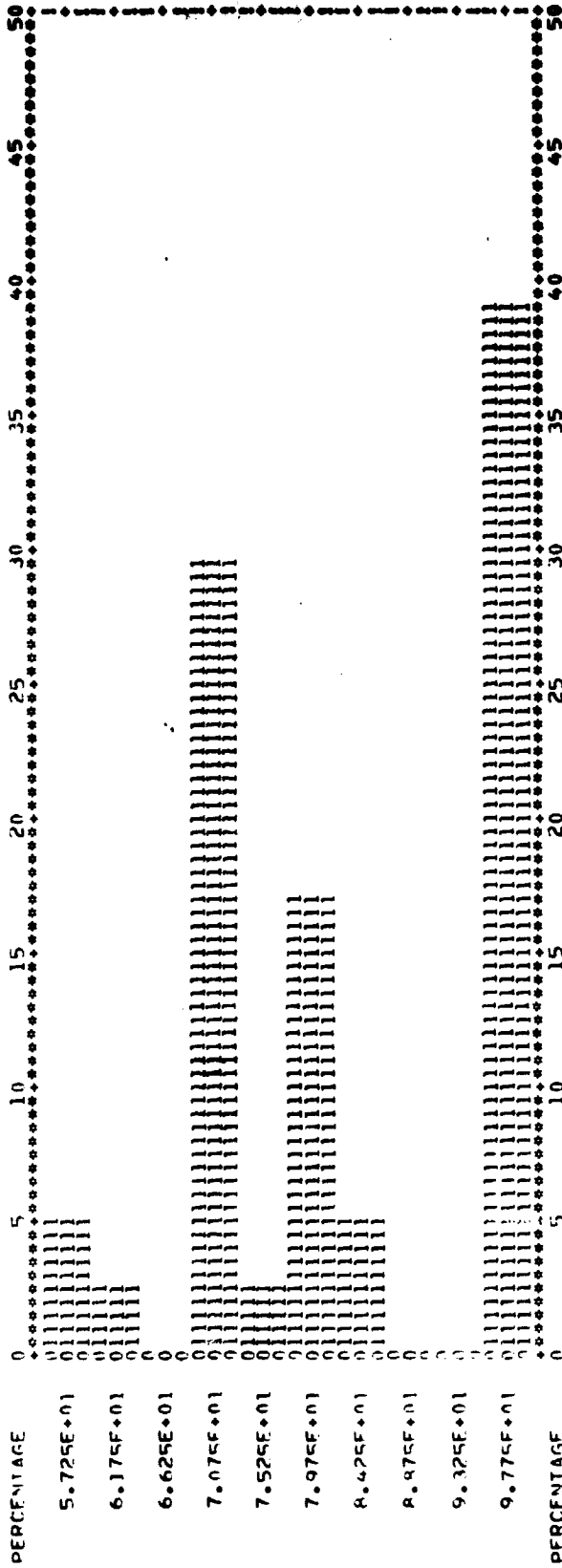
178

SEEDING RATE - 1 R/ACRE

CROP TYPE IS RP

SEGMENTS = 1514 151R 1566 1825 1835  
SEED = 450000005  
CENTERPOINT OF INITIAL GROUP = 57.2444847  
CENTERPOINT OF FINAL GROUP = 97.7500000

NUMBER OF OBSERVATIONS = 41  
NUMBER OF GROUPS = 10



PERCENTAGE 0 5 10 15 20 25 30 35 40 45 50

CONTENT 57.25 61.75 66.25 70.75 75.25 79.75 84.25 88.75 93.25 97.75

ROW WIDTH - INCHES

CROP TYPE IS 90

1514 1514 1566 1825 1835

STEPS = 0.10000026

CENTERPOINT OF INITIAL GROUP =

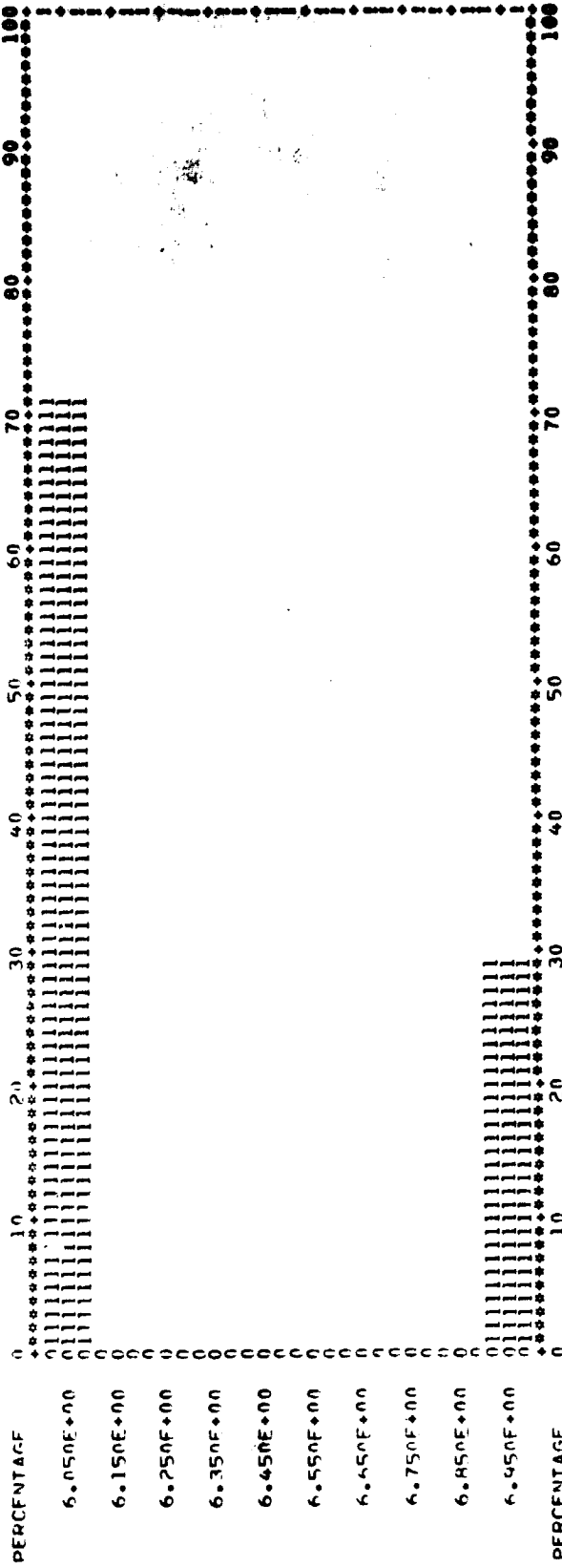
6.04999829

NUMBER OF OBSERVATIONS = 41

10

6.95000076

CENTERPOINT OF FINAL GROUP =



CONTENT 6.05 6.15 6.25 6.35 6.45 6.55 6.65 6.75 6.85 6.95

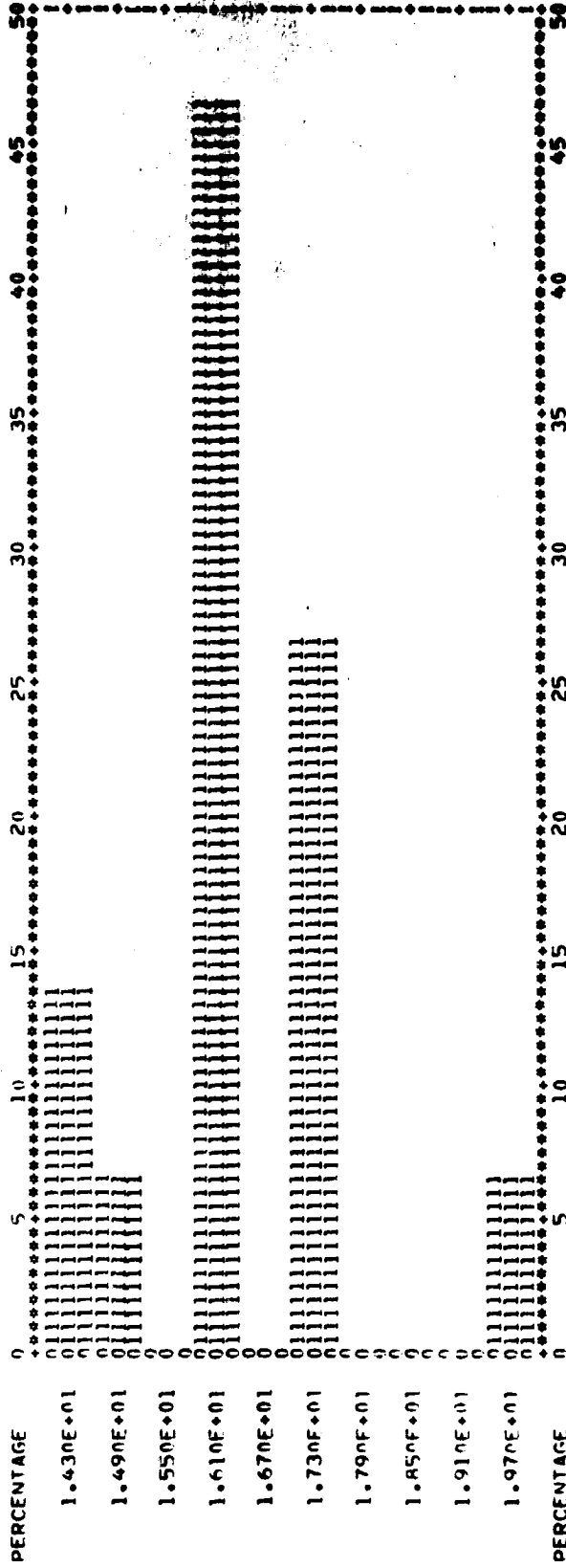
SEEDING RATE - LB/ACRE

CROP TYPE IS CR  
SEGMENTS = 315

STEP = 0.59999985  
CENTERPOINT OF INITIAL GROUP =  
CENTERPOINT OF FINAL GROUP =

14.2999983  
19.6999969

NUMBER OF OBSERVATIONS = 15  
NUMBER OF GROUPS = 10



BIN CONTENT 14.30 1.00 14.90 0.00 15.50 0.00 16.10 7.00 16.70 0.00 17.30 4.00 17.90 0.00 18.50 0.00 19.10 0.00 19.70 1.00

ROW WIDTH - INCHES

CROP TYPE IS CR

SEGMENTS = 315

STEP = 0.00000132

CENTERPOINT OF INITIAL GROUP =

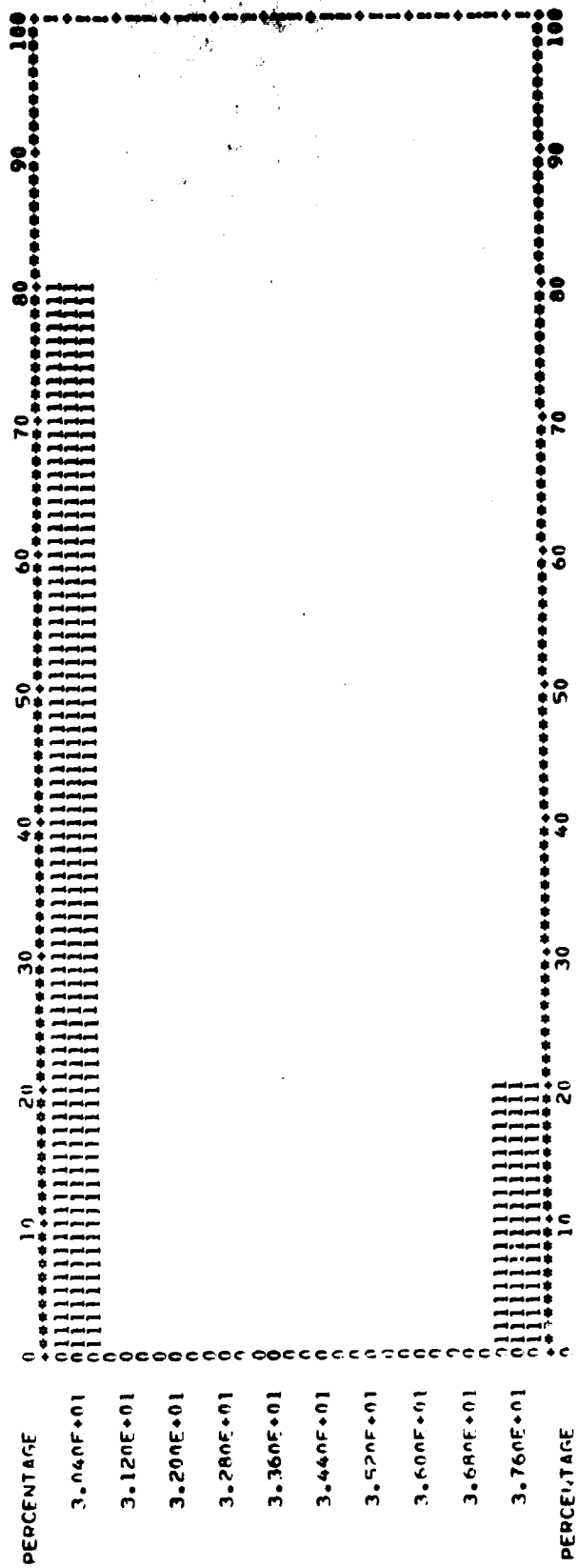
30.3999786

NUMBER OF OBSERVATIONS = 15

CENTERPOINT OF FINAL GROUP =

37.5999908

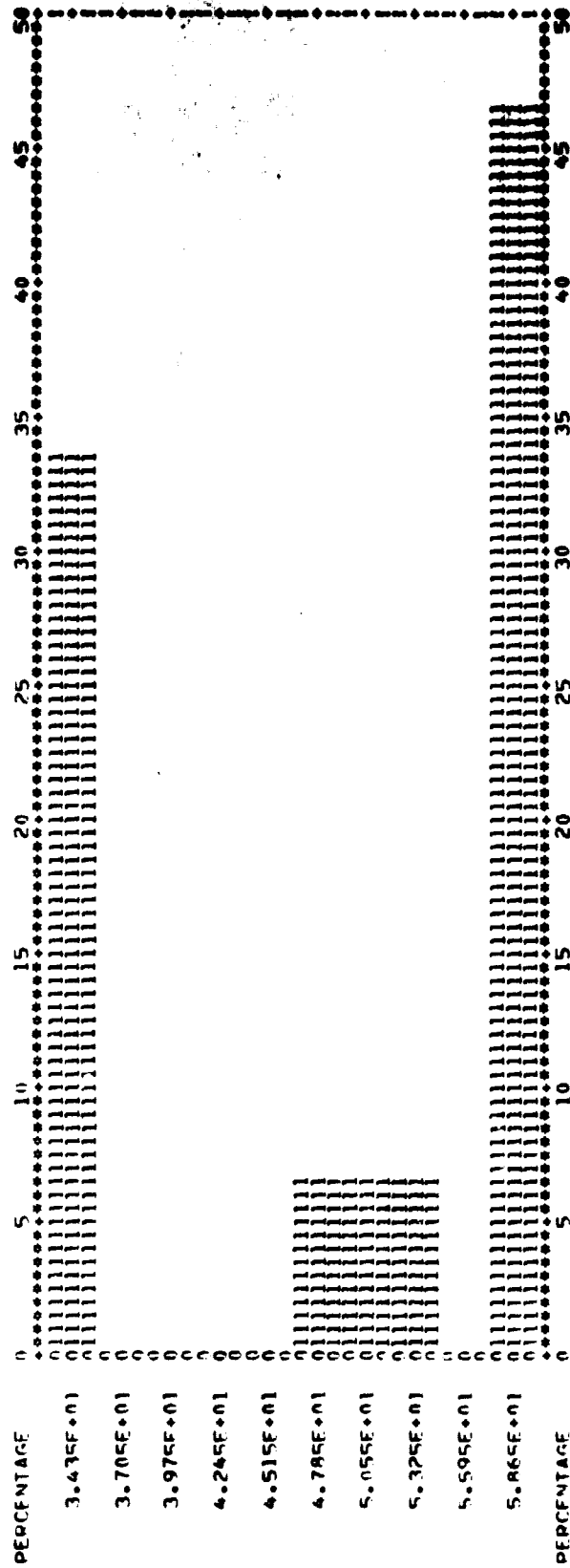
NUMBER OF GROUPS = 10



SEEDING RATE - 1R/ACRE

CROP TYPE IS 50  
SEGMENTS = 315

STEP = 2.70000172  
CENTERPOINT OF INITIAL GROUP = 34.3499756  
CENTERPOINT OF FINAL GROUP = 58.5499939  
NUMBER OF OBSERVATIONS = 15  
NUMBER OF GROUPS = 10



MIN CONTENT 34.35 37.05 39.75 42.45 45.15 47.85 50.55 53.25 55.95 58.65  
5.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 0.00 7.00

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OF POOR QUALITY

ROW WIDTH - INCHES

CROP TYPE IS SO

SEGMENTS = 31

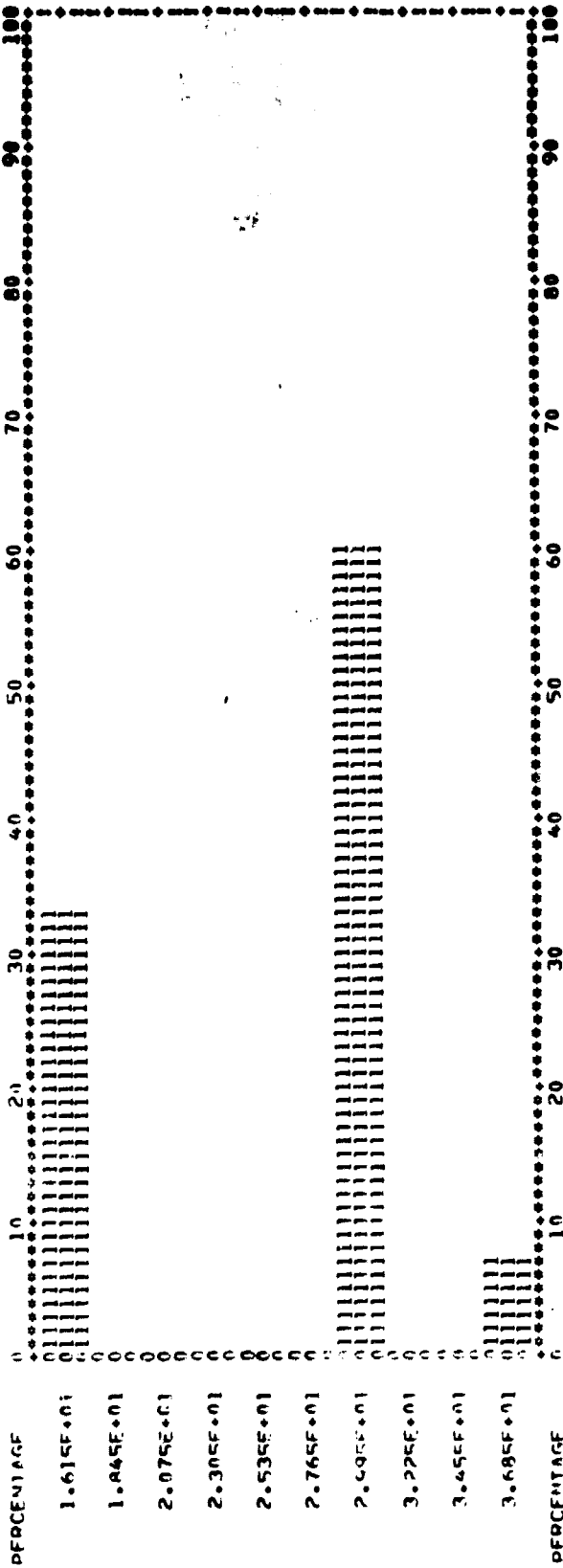
STEP = 2.30000114

CENTERPOINT OF INITIAL GROUP = 16.1490784

CENTERPOINT OF FINAL GROUP = 36.8499008

NUMBER OF OBSERVATIONS = 15

NUMBER OF GROUPS = 10



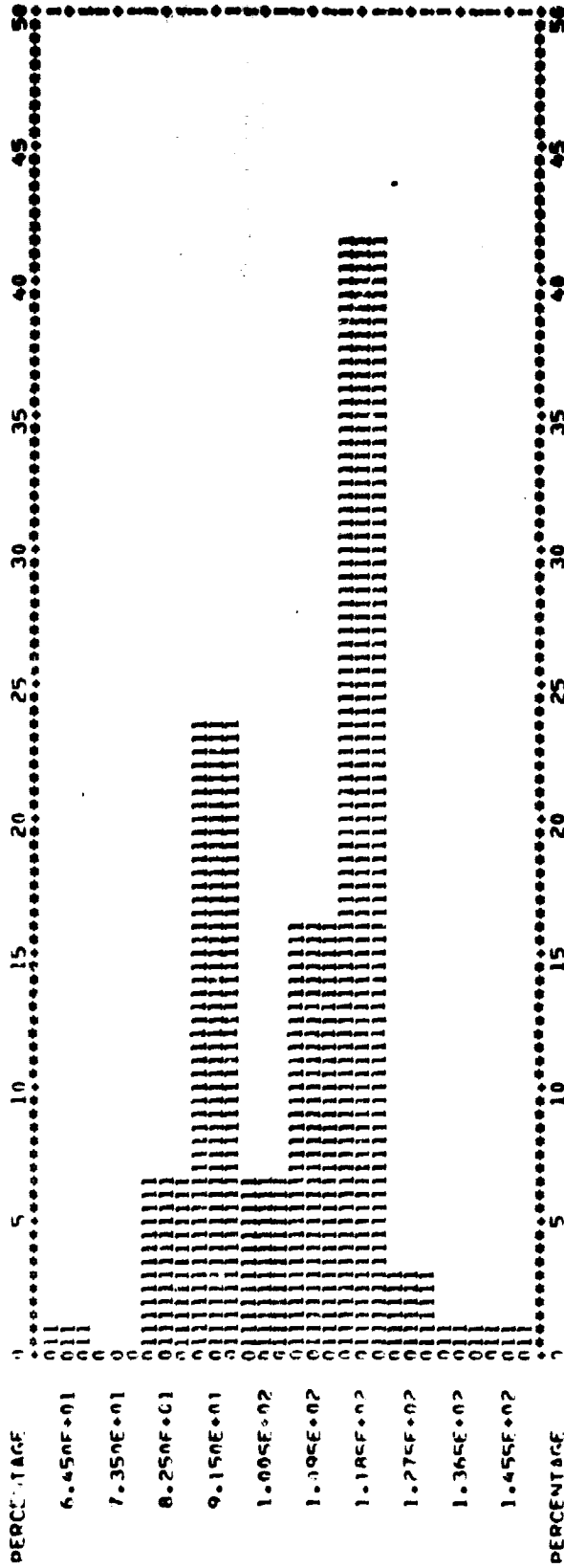
CONTENT	16.15	17.45	20.75	23.05	25.35	27.65	29.95	32.25	34.55	36.85
CONTENT	5.00	0.0	0.0	0.0	0.0	0.0	9.00	0.0	0.0	1.00



SEEDING RATE - 1 R/ACRE

CROP TYPE IS SW  
 SEGMENTS = 1760 1516 1514 1564 1425 1435 1442  
 CTRF IS 4.00000000  
 CENTER POINT OF INITIAL GROUP = 64.5999847  
 CENTER POINT OF FINAL GROUP = 145.5000000

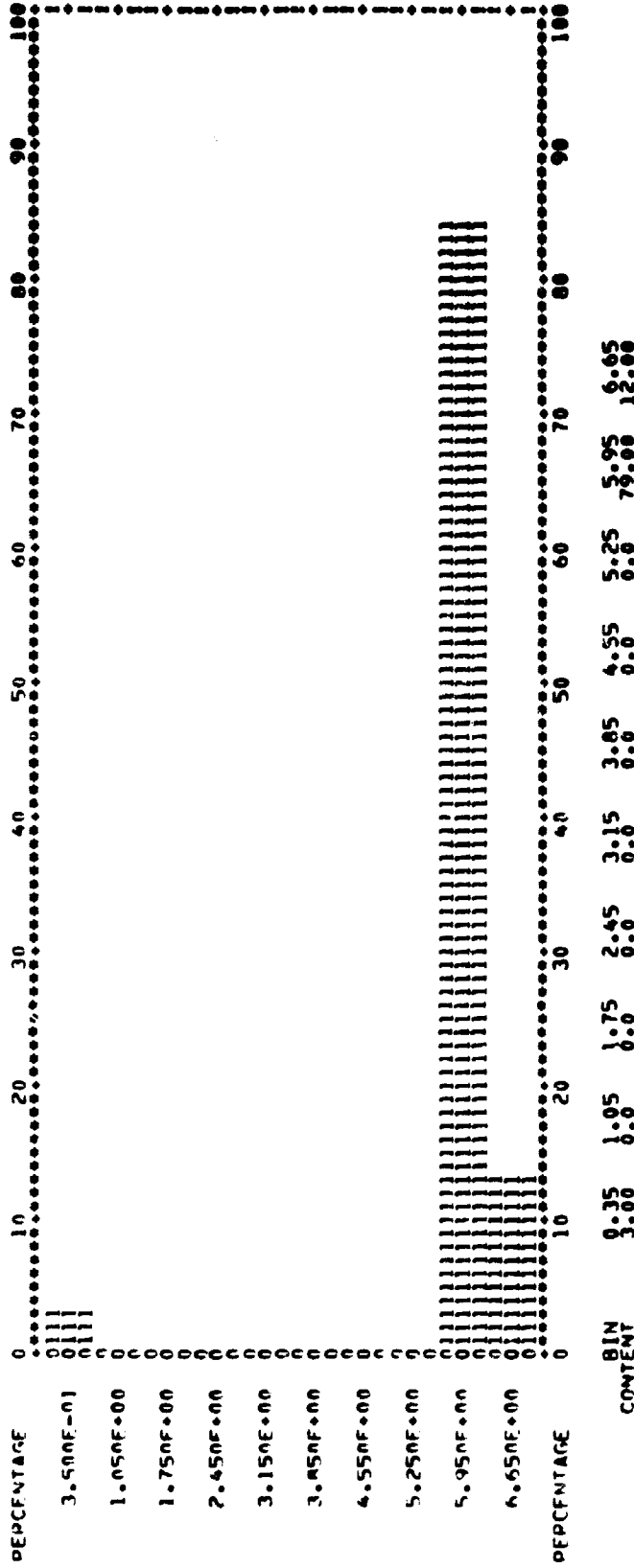
NUMBER OF OBSERVATIONS = 94  
 NUMBER OF GROUPS = 10



ROW WIDTH - INCHES

CROP TYPE IS SW  
SEGMENTS = 1300 1514 1518 1566 1825 1835 1842  
STEP = 0.7000011  
CENTERPOINT OF INITIAL GROUP = 0.3400895  
CENTERPOINT OF FINAL GROUP = 6.6500057

NUMBER OF OBSERVATIONS = 94  
NUMBER OF GROUPS = 10



MISSISSIPPI

~~B-57~~

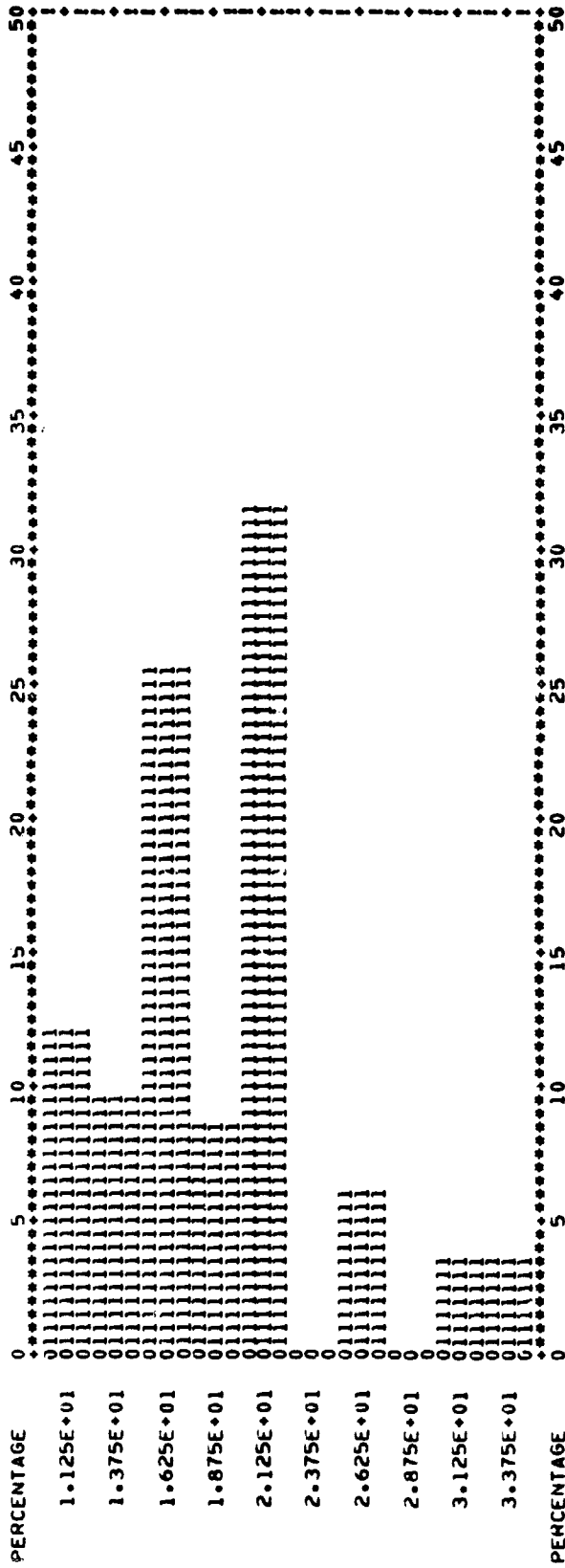
157

SEEDING RATE - LB/ACRE

CROP TYPE IS CT  
SEGMENTS = 187

STEP = 195 196 198 200 297 298  
CENTERPOINT OF INITIAL GROUP = 11.2499990  
CENTERPOINT OF FINAL GROUP = 33.7500000

NUMBER OF OBSERVATIONS = 83  
NUMBER OF GROUPS = 10



MIN CONTENT 11.25 13.75 16.25 18.75 21.25 23.75 26.25 28.75 31.25 33.75  
MAX CONTENT 10.00 21.00 7.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

B 58  
15%

C-3

ROW WIDTH - INCHES

CHOP TYPE IS CT  
SEGMENTS = 187

195 196 198 200 297 298

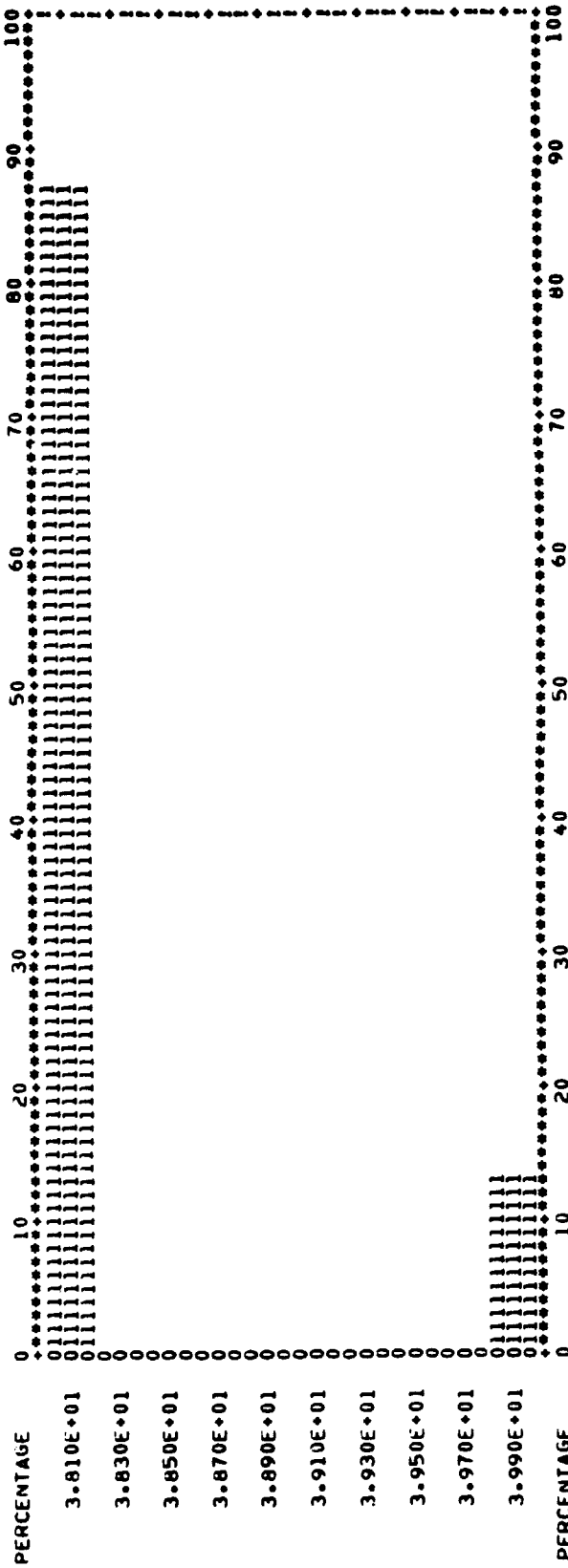
STEP = 0.200000201

CENTERPOINT OF INITIAL GROUP = 38.9999756

CENTERPOINT OF FINAL GROUP = 39.8999939

NUMBER OF OBSERVATIONS = 83

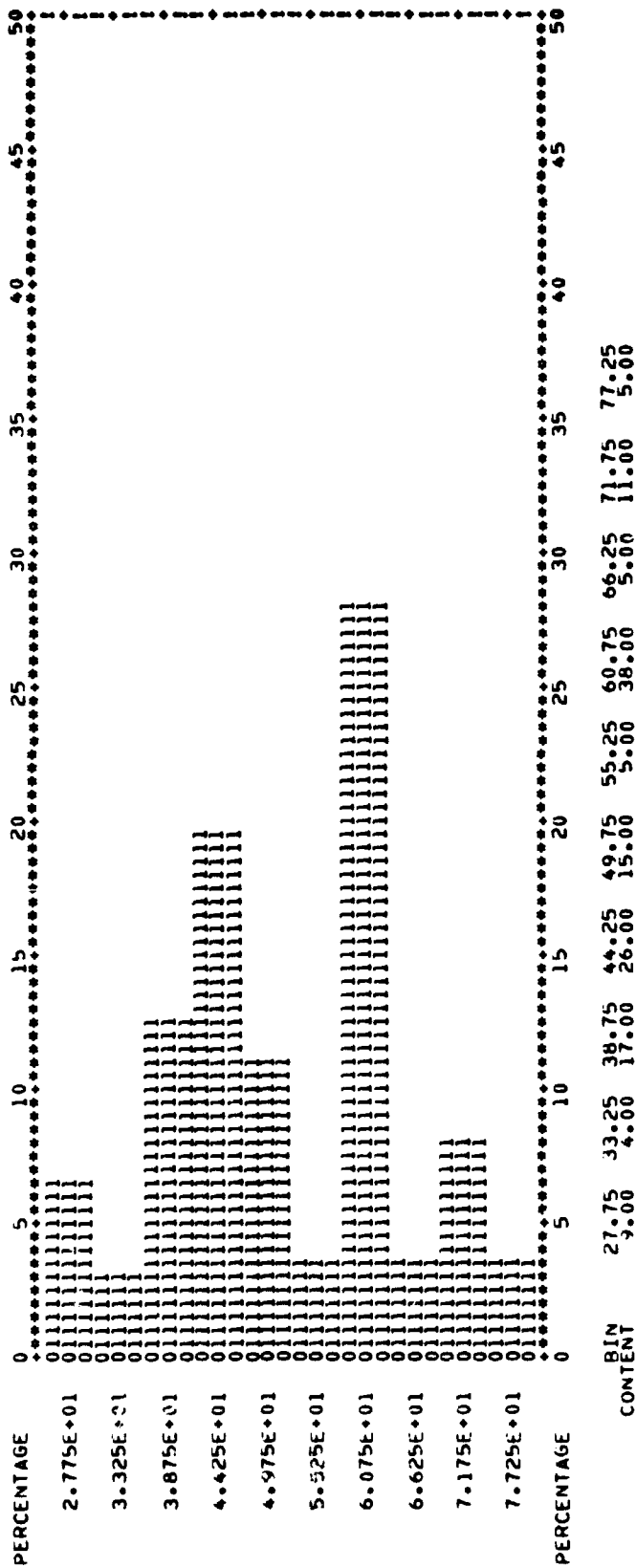
NUMBER OF GROUPS = 10



BIN CONTENT 38.10 38.30 38.50 38.70 38.90 39.10 39.30 39.50 39.70 39.90  
72.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 11.00

SEEDING RATE - LB/ACRE

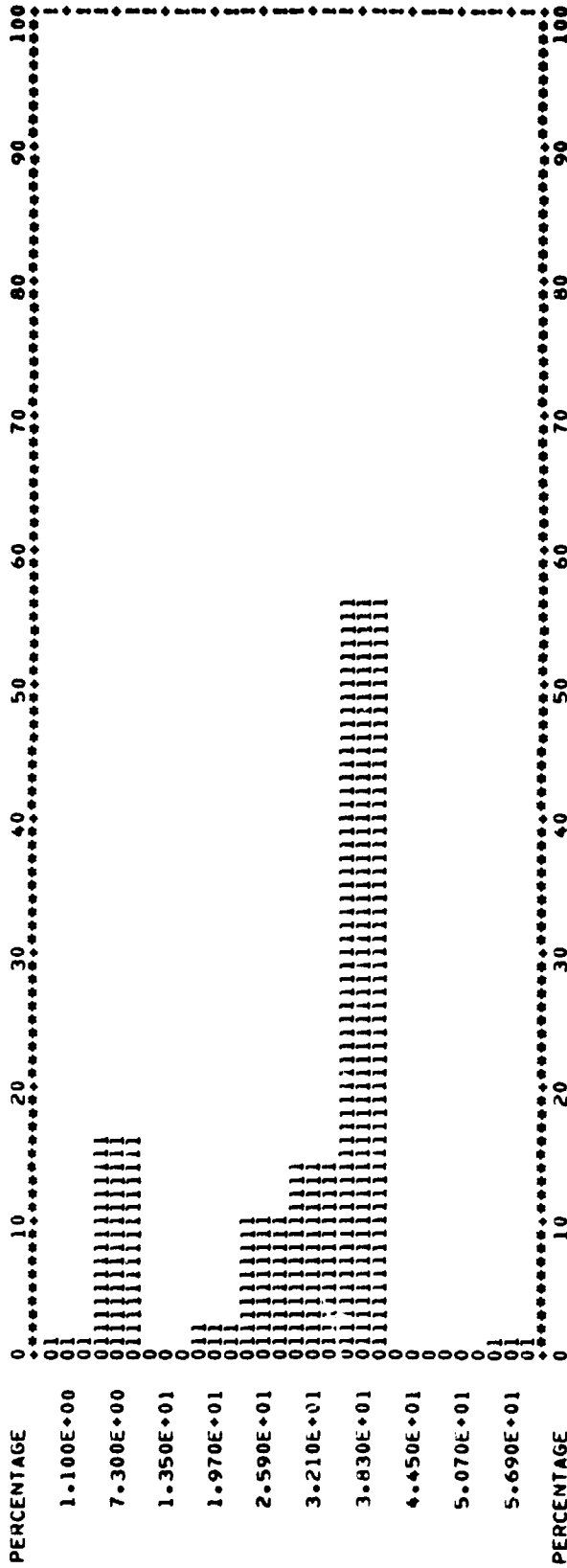
CROP TYPE IS 50  
 SEGMENTS = 187 188 195 196 198 200 297 298 299  
 SLEP = 5.5000095  
 CENTERPOINT OF INITIAL GROUP = 27.7499847  
 CENTERPOINT OF FINAL GROUP = 77.2500000  
 NUMBER OF OBSERVATIONS = 135  
 NUMBER OF GROUPS = 10



8-80  
170

ROW WIDTH - INCHES

CHOP TYPE IS 50  
SEGMENTS = 187 186 195 196 198 200 297 298 299  
STEP = 7.19999790  
CENTERPOINT OF INITIAL GROUP = 1.09999857  
CENTERPOINT OF FINAL GROUP = 56.8999939  
NUMBER OF OBSERVATIONS = 135  
NUMBER OF GROUPS = 10



CONTENT  
BIN  
1.10 7.30 13.50 19.70 25.90 32.10 38.30 44.50 50.70 56.90  
1.00 21.00 0.00 3.00 14.00 19.00 25.00 31.00 37.00 43.00

BST  
191

MISSOURI

~~B-62~~  
192



SEEDING RATE - LB/ACRE

CROP TYPE IS CR

209 211 217 314

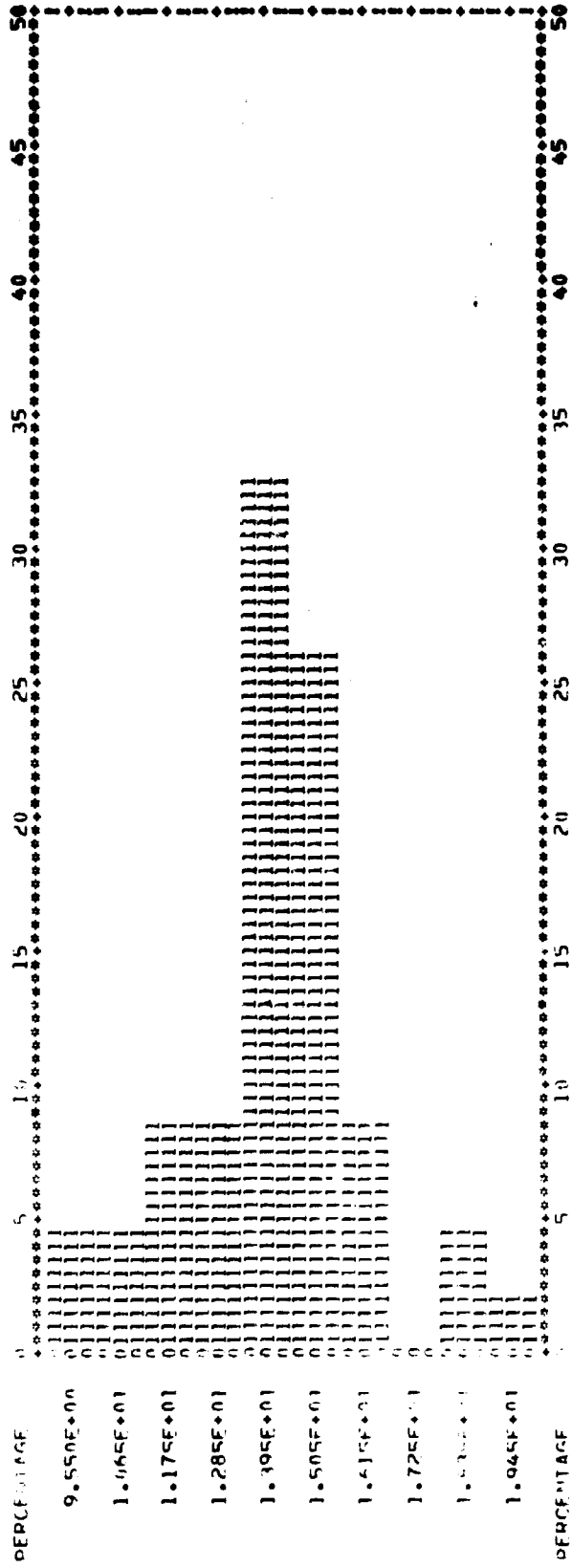
SEEDS PER ACRE = 1,000,000

SEEDS PER LB = 100,000

SEEDS PER BU = 10,000,000

NUMBER OF OBSERVATIONS = 10<sup>46</sup>

NUMBER OF GROUPS = 10



HT: 9.55 10.65 11.75 12.85 13.95 15.05 16.15 17.25 18.35 19.45  
CONTENT 2.00 2.00 4.00 4.00 4.00 4.00 4.00 0.0 2.00 2.00 1.00

ROW WIDTH - 14 CMES

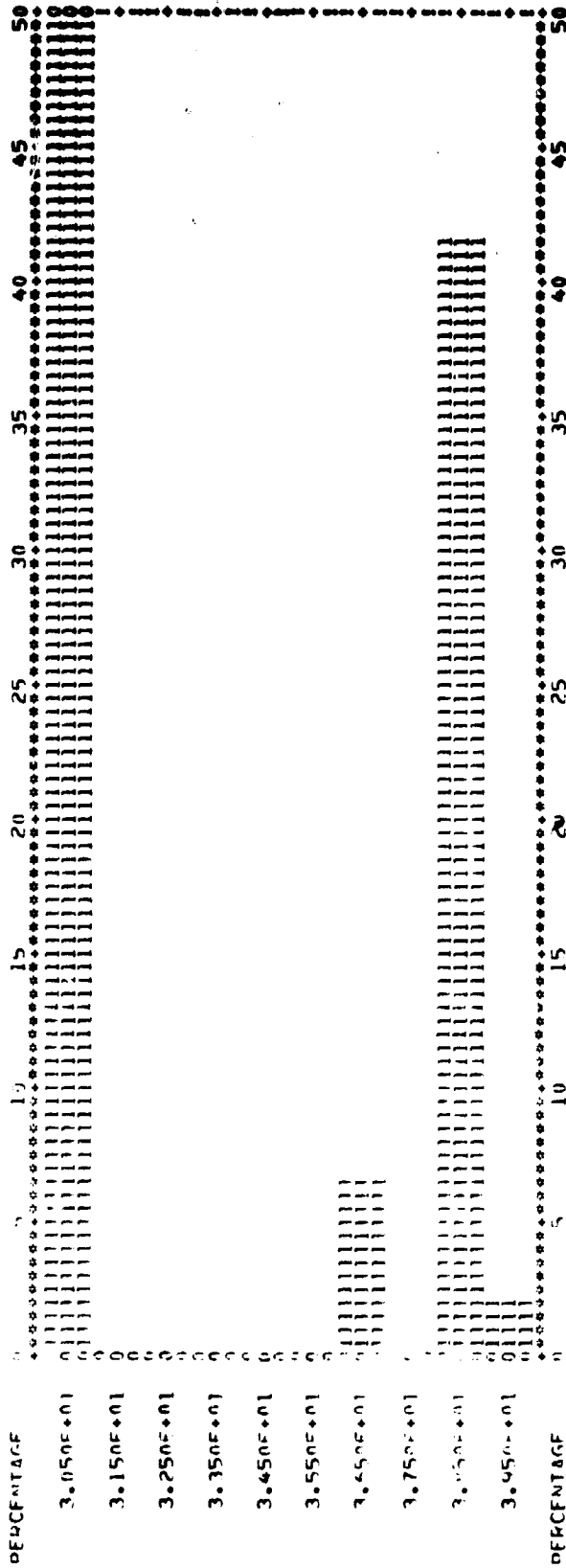
GROUP TYPE IS CR

209 211 217 316

PERCENTAGE OF TOTAL OBSERVATIONS = 10

39.5000000

NUMBER OF OBSERVATIONS = 46



SEEDING RATE - L/ACRE

CROP TYPE IS 50  
SEGMENTS = 204

209 211 217 316

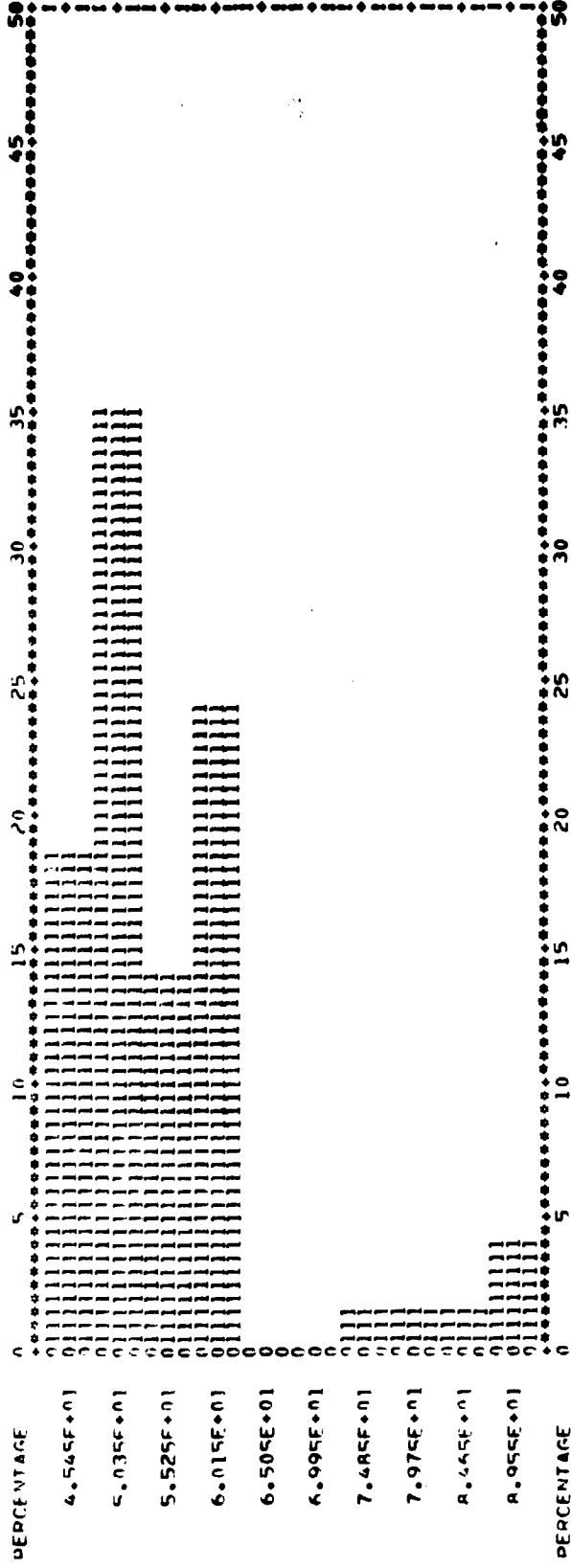
STEP = 4.90000057

CENTERPOINT OF FINAL GROUP = 10

CENTERPOINT OF FINAL GROUP = 10

NUMBER OF OBSERVATIONS = 71

NUMBER OF GROUPS = 10



CONTENT 45.45 50.35 55.25 60.15 65.05 69.95 74.85 79.75 84.65 89.55  
13.00 25.00 10.00 17.00 0.00 0.00 1.00 1.00 1.00 3.00

ROW WIDTH - INCHES

CROP TYPE IS 50

209 211 217 314

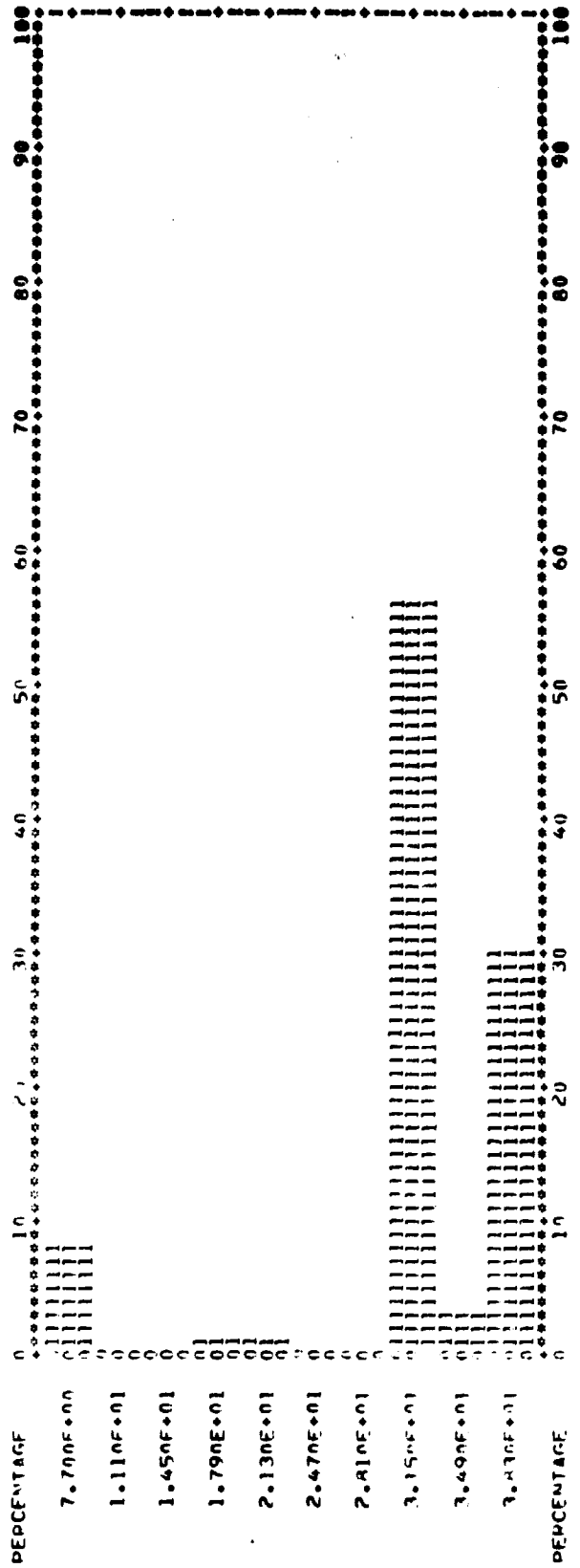
STED = 33399576

7.5999999A

NUMBER OF OBSERVATIONS = 71

10

71



CONTENT 7.70 11.10 14.50 17.90 21.30 24.70 28.10 31.50 34.90 38.30  
6.00 0.00 0.00 1.00 1.00 0.00 0.00 40.00 2.00 21.00

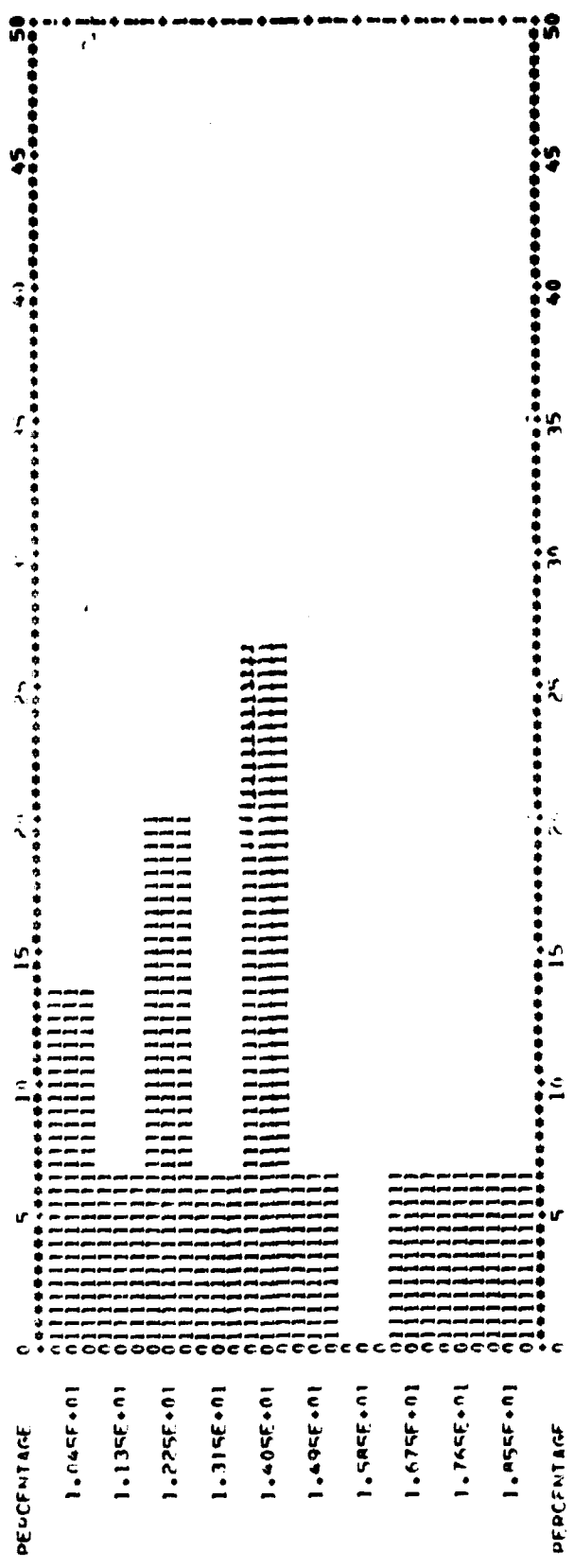
NEBRASKA

~~B-67~~

197

SEEDING RATE - 14/ACRE

CROP TYPE IS CR 1380 1594 1594  
SEGMENTS = 0.494990472  
CENTROID OF INITIAL GROUP = 12.484990472  
CENTROID OF FINAL GROUP = 10.15



MIN	CONTENT	10.45	11.35	12.25	13.15	14.05	14.95	15.85	16.75	17.65	18.55
		2.00	1.00	3.00	1.00	4.00	1.00	5.00	1.00	1.00	1.00

198

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ROW WIDTH - INCHES

CROP TYPE IS CP

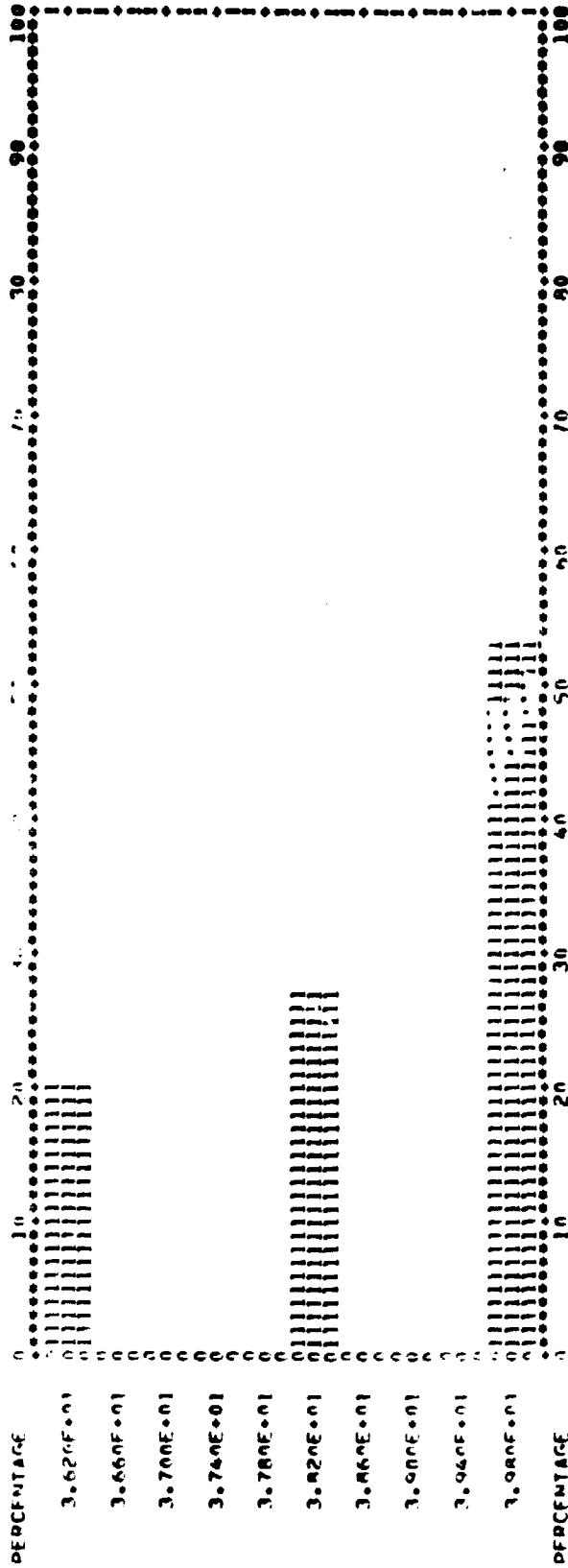
1308 1594 1506

STEP = 0.40000003

CENTERPOINT OF INITIAL SCALPE = 35.75000000

CENTERPOINT OF FINAL SCALPE = 39.15000000

INITIAL TORSION = 16.15



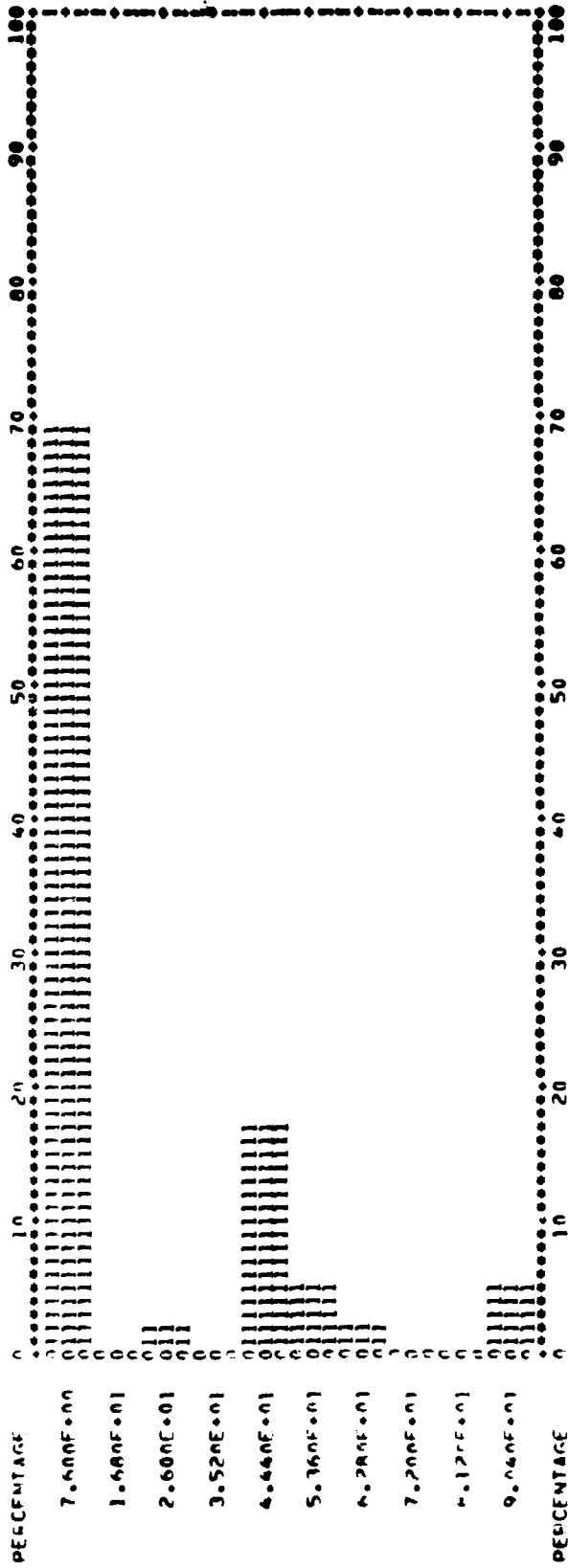
SEEDING RATE - 14/ACRE

CROP TYPE IS SP  
 SEGUENTS = 32A 17A 1594 1504

CITY = 9.1349760  
 CENTERPOINT OF INITIAL GROUP =  
 CENTERPOINT OF FINAL GROUP =

7.5555467  
 90.1555439

NUMBER OF OBSERVATIONS = 1042  
 NUMBER OF GROUPS



CONTIN 7.60 16.00 26.00 35.20 44.40 53.60 62.80 72.00 81.20 90.40  
 29.00 0.0 1.00 6.00 7.00 2.00 1.00 0.0 0.0 2.00



ROW WIDTH - INCHES

CROP TYPE IS SR

SEGMENTS = 326 1398 1594 1596

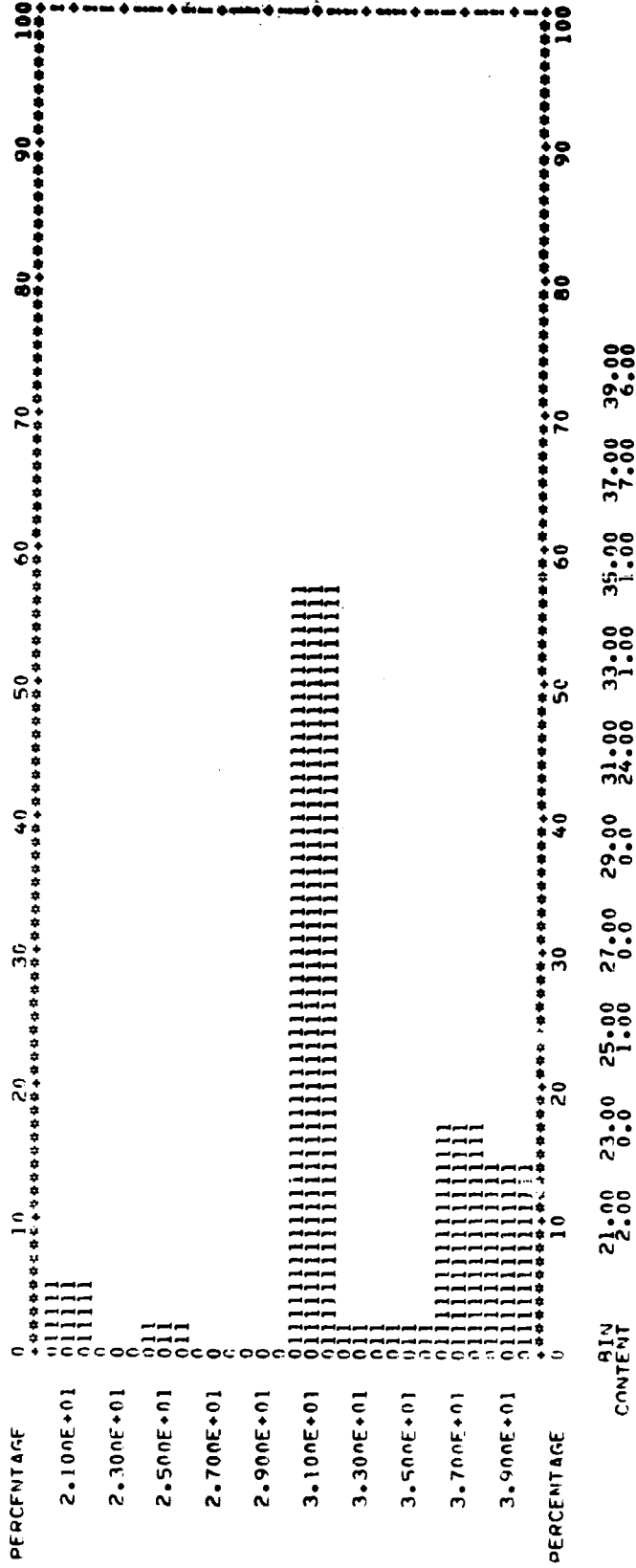
STEP = 2.000000095

CENTERPOINT OF INITIAL GROUP =

39.0000000

NUMBER OF OBSERVATIONS = 42

NUMBER OF GROUPS = 10



201

SPREADING RATE - 1.14/ACRF

CROP TYPE IS SO

1388 1594 1596

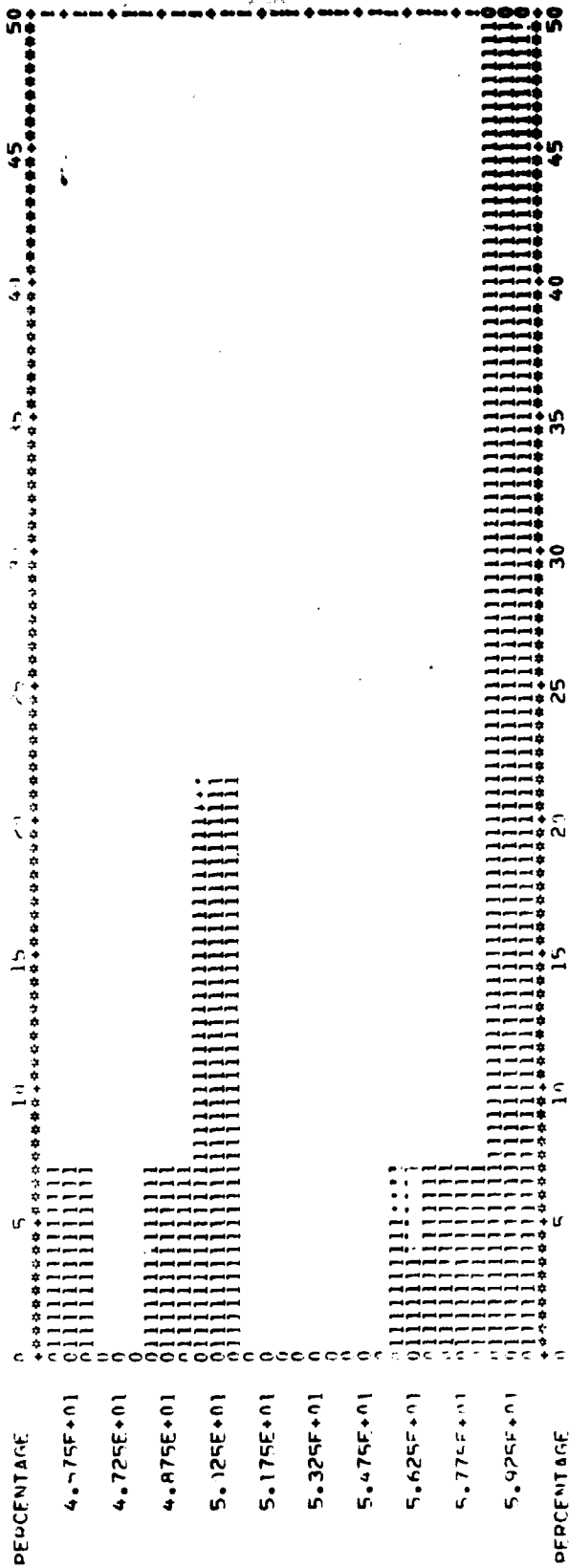
CTED = 1.50000005

CENTERPOINT OF INITIAL GROUP = 45.7499997

CENTERPOINT OF FINAL GROUP = 54.2500000

NUMBER OF GROUPS = 10

14

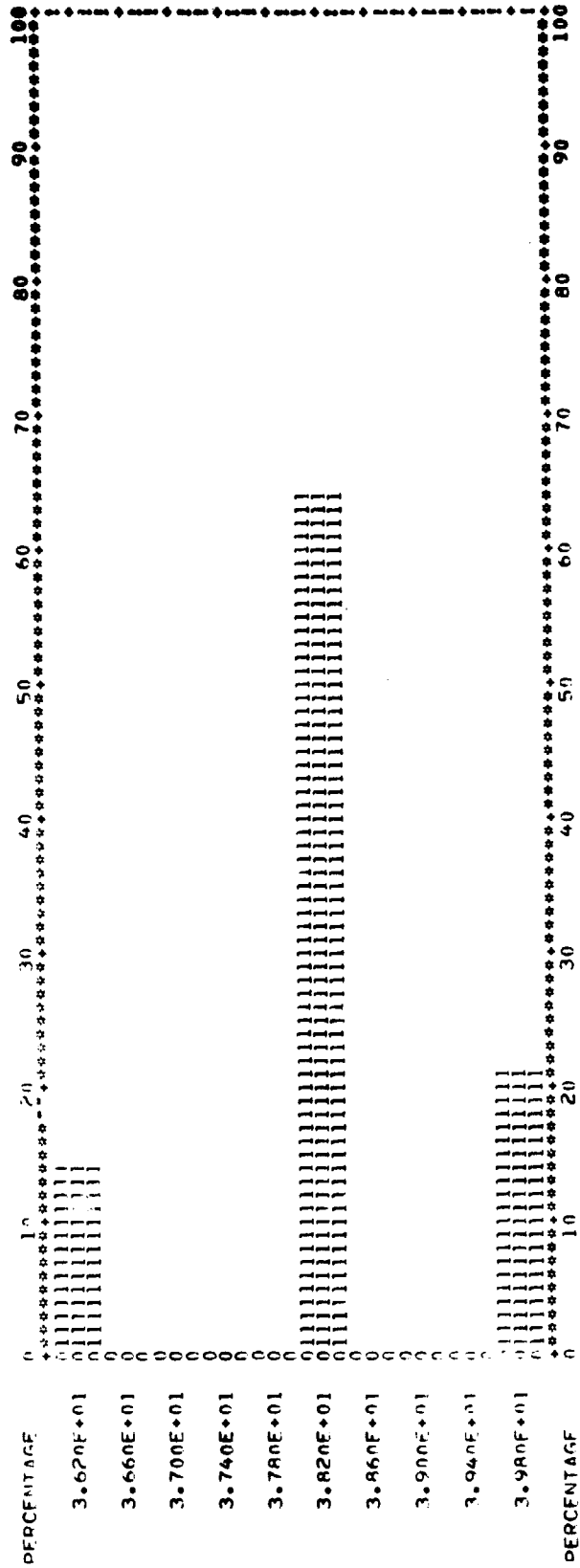


CONTENT 45.75 47.25 49.75 50.25 51.75 53.25 54.75 56.25 57.75 59.25  
1.00 0.00 1.00 3.00 0.00 0.00 0.00 1.00 1.00 7.00

B-72  
300

ROW WIDTH - INCHES

CROP TYPE IS 50  
SEGMENTS = 1388 1574 1596  
STEP = 0.500000003  
CENTRE POINT OF INITIAL GROUP = 36.1999817  
CENTRE POINT OF FINAL GROUP = 39.7999874  
NUMBER OF OBSERVATIONS = 14  
NUMBER OF GROUPS = 10



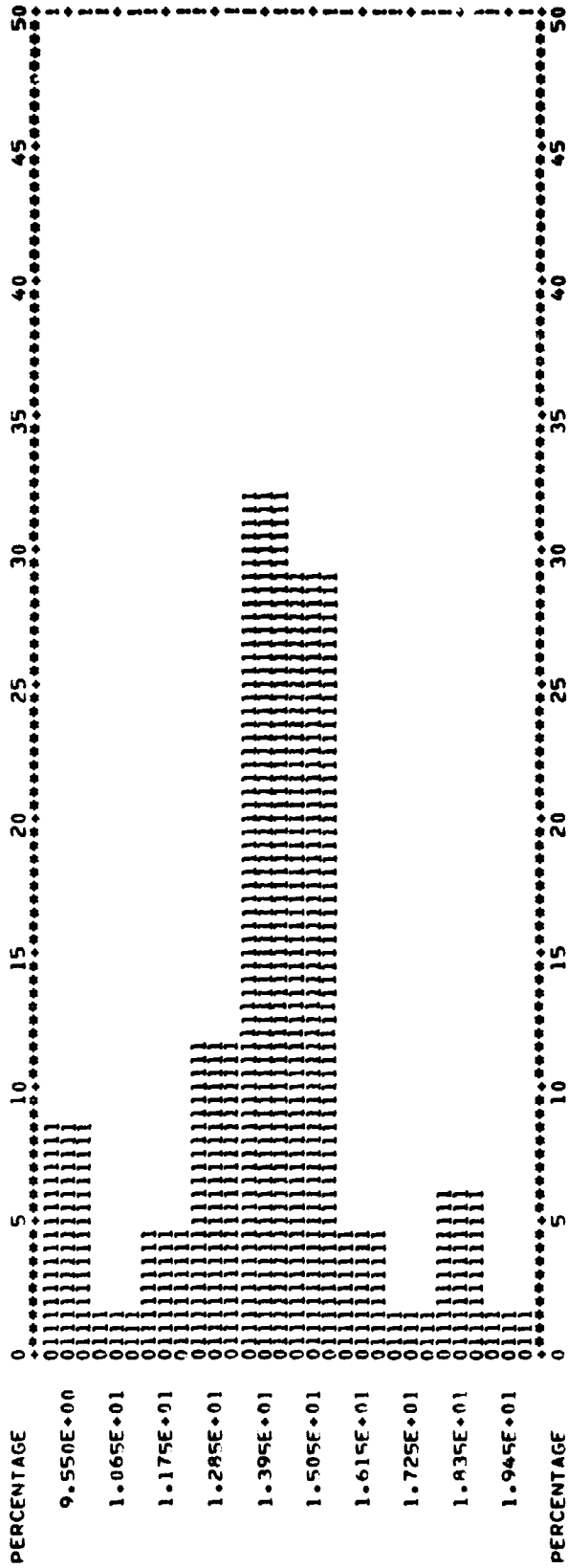
CONTENT 2.00 36.20 36.60 37.00 37.40 37.80 38.20 38.60 39.00 39.40 39.80

NORTH CAROLINA

~~B-74~~  
204

SEEDING RATE - LB/ACRE

CROP TYPE IS CR  
 SEGMENTS = 332 341 342 343 344  
 STFP = 1.09999943  
 CENTERPOINT OF INITIAL GROUP = 9.54999828  
 CENTERPOINT OF FINAL GROUP = 19.4499969  
 NUMBER OF OBSERVATIONS = 69  
 NUMBER OF GROUPS = 10



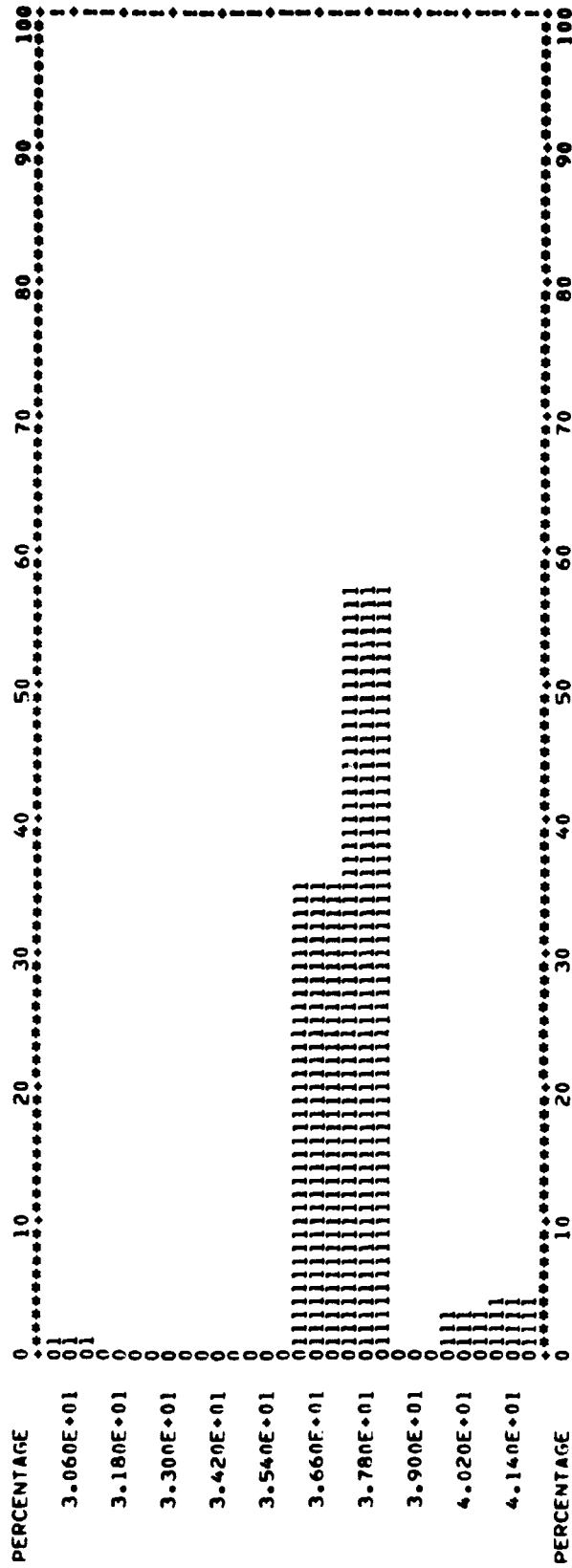
PERCENTAGE  
 9.550E+00  
 1.065E+01  
 1.175E+01  
 1.285E+01  
 1.395E+01  
 1.505E+01  
 1.615E+01  
 1.725E+01  
 1.835E+01  
 1.945E+01  
 PERCENTAGE

BIN  
 CONTENT

205

ROW WIDTH - INCHES

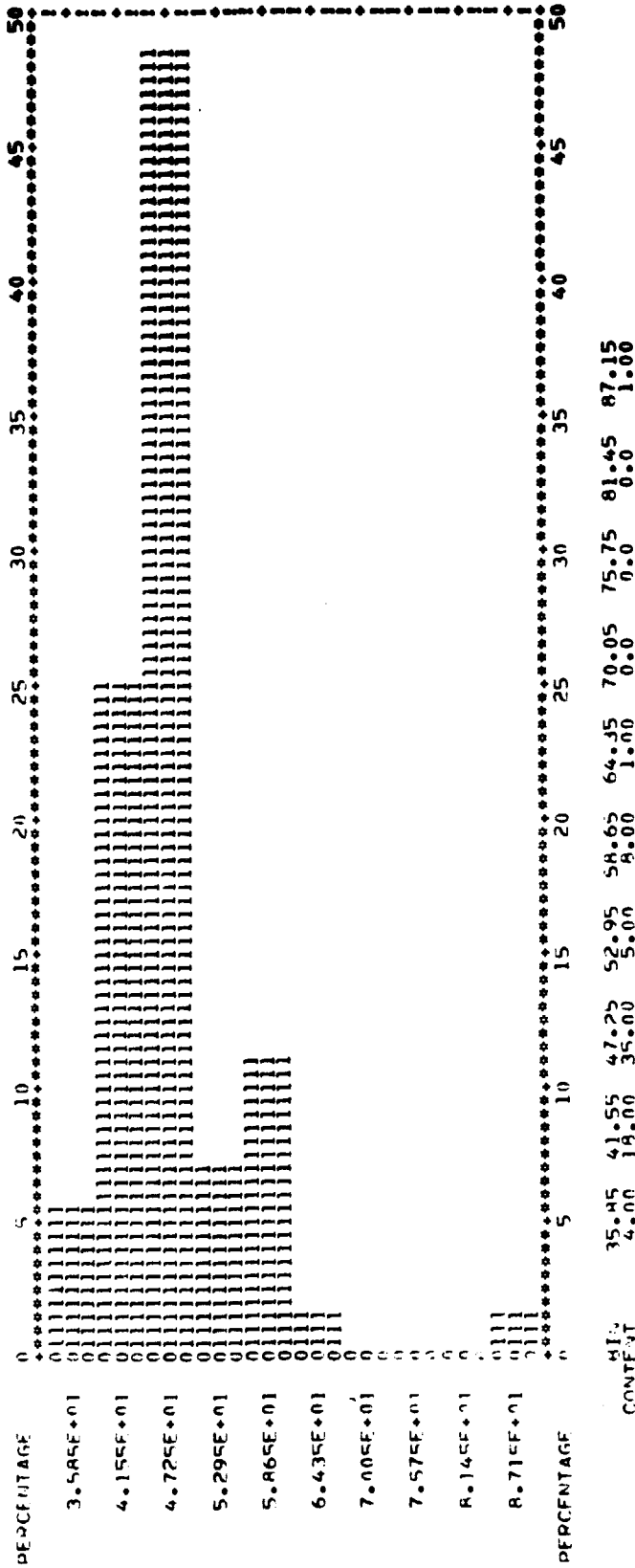
CROP TYPE IS CR  
SEGMENTS = 332 341 342 343 344  
STEP = 1 20000172  
CENTERPOINT OF INITIAL GROUP = 30.5999756 NUMBER OF OBSERVATIONS = 69  
CENTERPOINT OF FINAL GROUP = 41.3999939 NUMBER OF GROUPS = 10



BIN CONTENT 30.60 31.80 33.00 34.20 35.40 36.60 37.80 39.00 40.20 41.40  
1.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.00 41.40

SEEDING RATE - L/H/ACRE

CROP TYPE IS 50  
 SEGMENTS = 332 340 341 342 343 344  
 STP = 5.70000172  
 CENTERPOINT OF INITIAL GROUP = 35.8499756  
 CENTERPOINT OF FINAL GROUP = 87.1499939  
 NUMBER OF OBSERVATIONS = 72  
 NUMBER OF GROUPS = 10



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207

ROW WIDTH - INCHES

CROP TYPE IS SO

SEGMENTS = 33

340 341 342 343 344

STED = 3.39774576

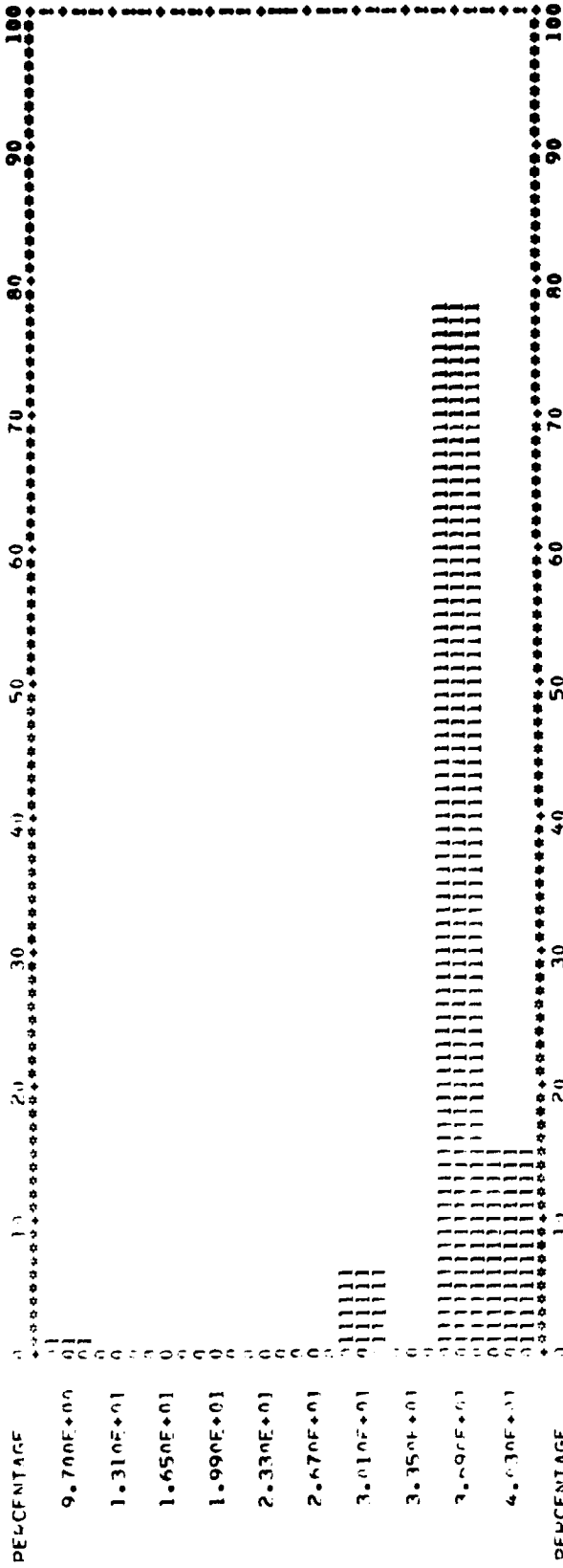
CENTREPOINT OF INITIAL PERIOD =

CENTREPOINT OF FINAL PERIOD =

40.2999878

NUMBER OF OBSERVATIONS = 72

NUMBER OF GROUPS = 10



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208



OHIO

B-86  
2/16

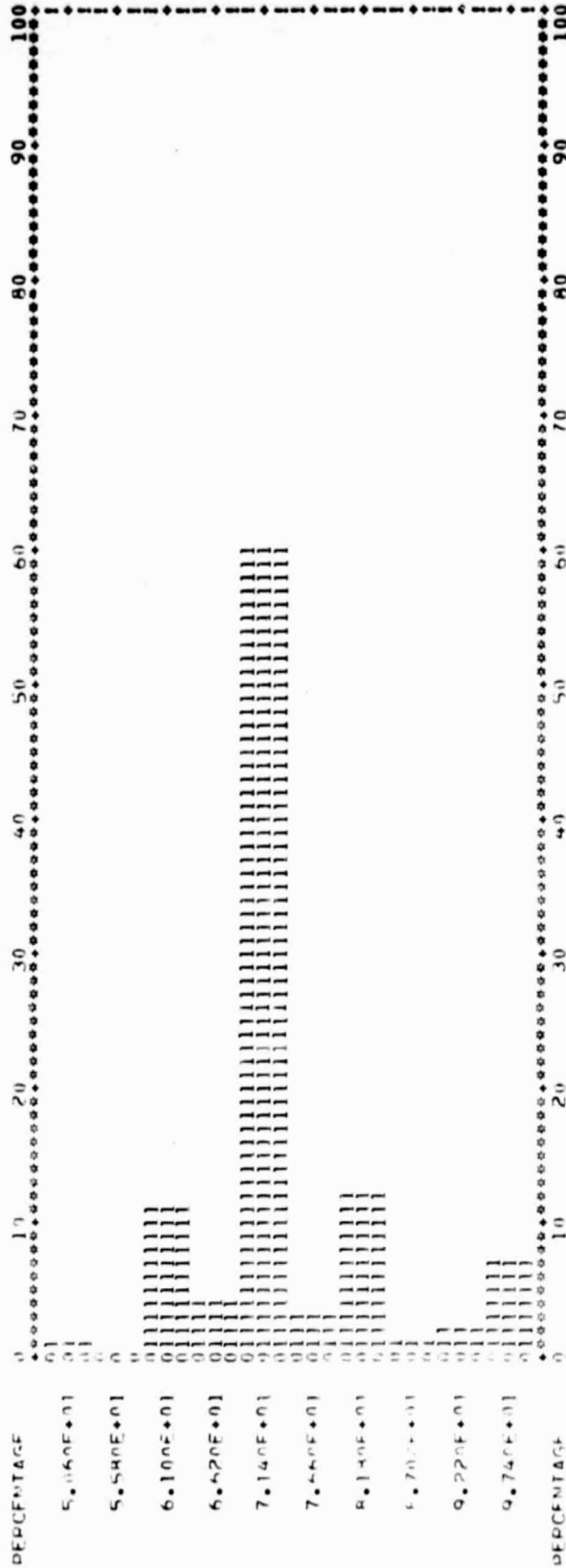
NORTH DAKOTA

~~B-79~~  
209

FEEDING RATE - 17ACDF

CHOP TYPE IS HD  
 ELEMENTS = 1997 1998 1999 1997 1998 1999 1997 1998 1999 1997 1998 1999 1997 1998 1999 1997 1998 1999  
 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993

STEP = 5200000172 NUMBER OF OBSERVATIONS = 190  
 PERCENTAGE OF INITIAL GROUP = 50.8999756 NUMBER OF GROUPS = 10  
 PERCENTAGE OF FINAL GROUP = 97.8999933



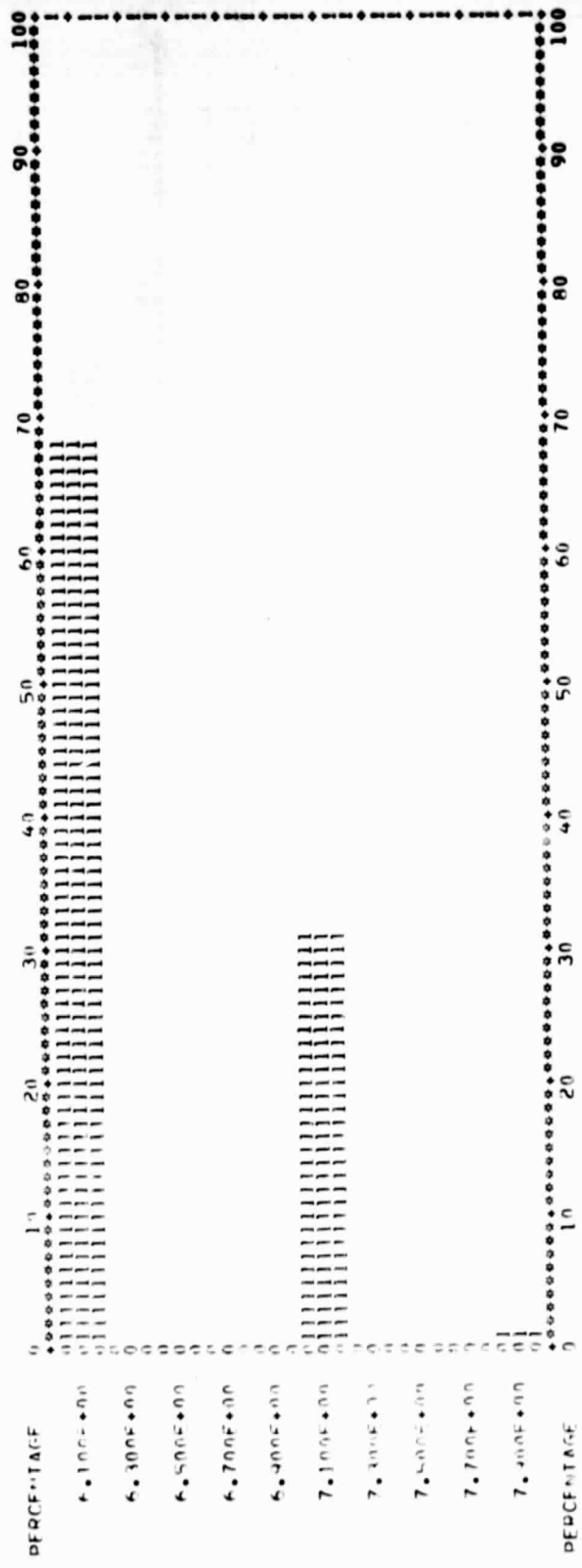
B-80

ORIGINAL PAGE IS OF POOR QUALITY

ROW WIDTH - INCHES

CARD TYPE IS 10  
SERIALS = 139 132 146 139 137 141 147 147 157 162 162 161 124 1617 1617  
1974 1974 1974 1974 1974 1974 1974 1974 1974 1974 1974 1974 1974 1974 1974

STEP = 0.20000023 NUMBER OF OBSERVATIONS = 190  
CENTRAL OF INITIAL GROUP = 5.69999947  
CENTRAL OF FINAL GROUP = 7.90000057

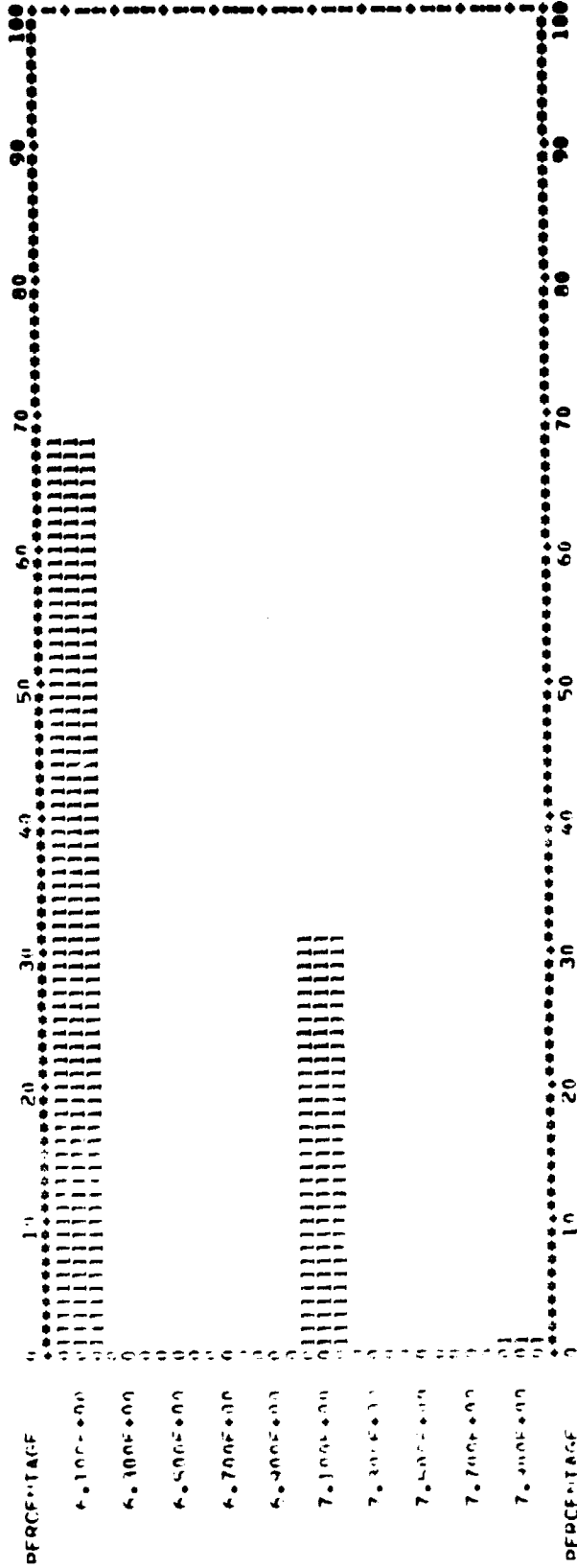


PERCENTAGE 130.00 6.10 6.30 6.50 6.70 6.90 7.10 7.30 7.50 7.70 7.90  
CONTENT 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

ROW WIDTH - INCHES

CARD TYPE IS 80  
 COMMENTS = 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818 2819 2820 2821 2822 2823 2824 2825 2826 2827 2828 2829 2830 2831 2832 2833 2834 2835 2836 2837 2838 2839 2840 2841 2842 2843 2844 2845 2846 2847 2848 2849 2850 2851 2852 2853 2854 2855 2856 2857 2858 2859 2860 2861 2862 2863 2864 2865 2866 2867 2868 2869 2870 2871 2872 2873 2874 2875 2876 2877 2878 2879 2880 2881 2882 2883 2884 2885 2886 2887 2888 2889 2890 2891 2892 2893 2894 2895 2896 2897 2898 2899 2900 2901 2902 2903 2904 2905 2906 2907 2908 2909 2910 2911 2912 2913 2914 2915 2916 2917 2918 2919 2920 2921 2922 2923 2924 2925 2926 2927 2928 2929 2930 2931 2932 2933 2934 2935 2936 2937 2938 2939 2940 2941 2942 2943 2944 2945 2946 2947 2948 2949 2950 2951 2952 2953 2954 2955 2956 2957 2958 2959 2960 2961 2962 2963 2964 2965 2966 2967 2968 2969 2970 2971 2972 2973 2974 2975 2976 2977 2978 2979 2980 2981 2982 2983 2984 2985 2986 2987 2988 2989 2990 2991 2992 2993 2994 2995 2996 2997 2998 2999 3000

STEP = 0.20000023 NUMBER OF OBSERVATIONS = 190  
 GROUPS OF INITIAL GROUPS = 5.00000047 NUMBER OF GROUPS = 10  
 GROUPS OF FINAL GROUPS = 7.90000037



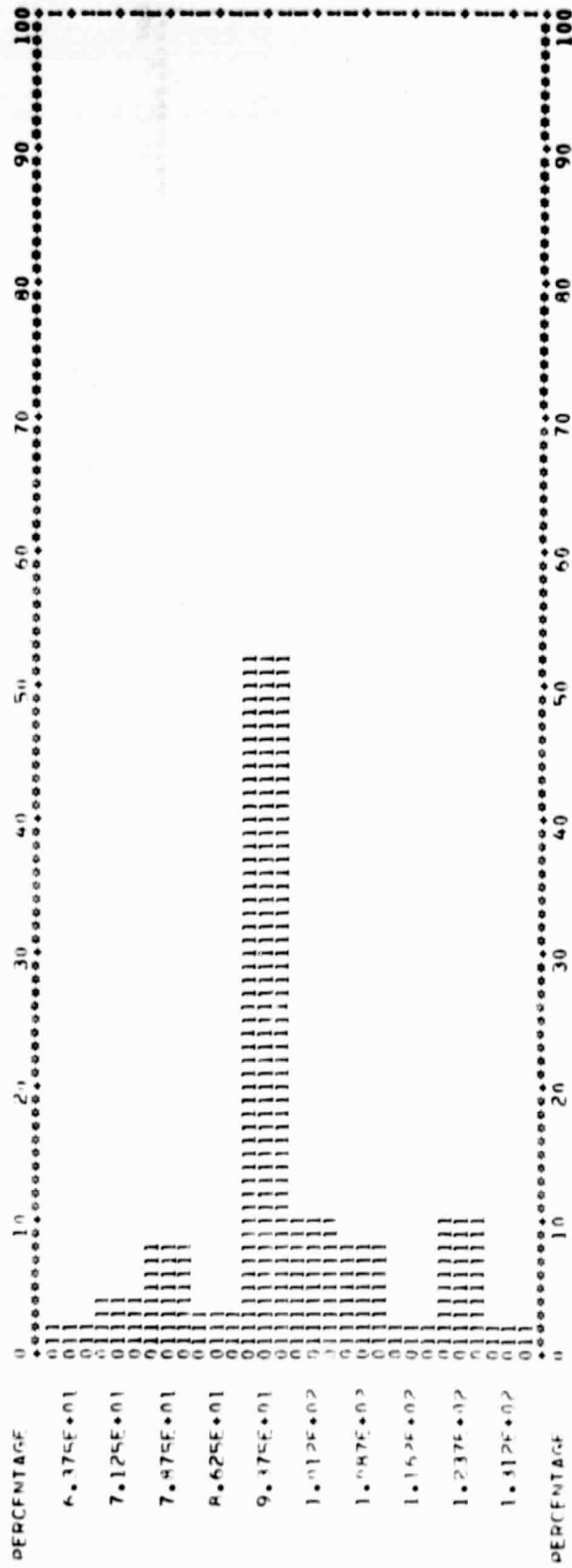
CONTENT 6.10 6.30 6.50 6.70 6.90 7.10 7.30 7.50 7.70 7.90  
 130.00 0.00 0.00 0.00 0.00 56.00 0.00 0.00 0.00 2.00

SEEDING RATE - LBS/ACRE

CROP TYPE IS DW  
 SEEDINGS = 1347 1302 1394  
 1613 1527  
 1924 1974

1957 1961 1967 1970  
 1972 1977 1981 1987

STEP = 7.50000005  
 CENTERPOINT OF INITIAL GROUP = 13.75000000  
 CENTERPOINT OF FINAL GROUP = 10.25000000  
 NUMBER OF OBSERVATIONS = 126  
 NUMBER OF GROUPS = 10



MIN CONTENT 53.75 71.25 78.75 86.25 93.75 101.25 108.75 116.25 123.75 131.25  
 2.00 5.00 10.00 4.00 66.00 12.00 10.00 2.00 13.00 2.00

SEEDING RATE - 1 A/ACRE

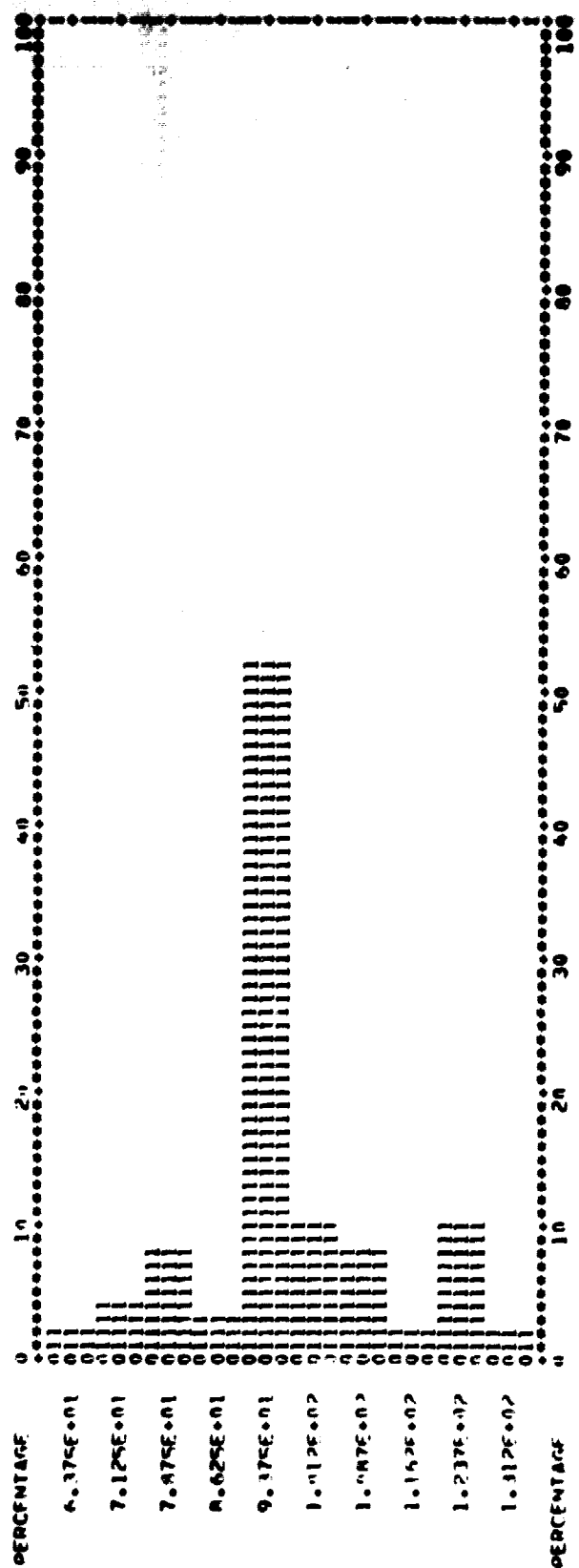
CROP TYPE IS DM  
 SEEDMENTS = 1347 1342 1394  
 1613 1627  
 1624 1974

1957 1441 1447 1474  
 1959

1962 1911

1917

STEP = 7.50000005  
 CENTERPOINT OF INITIAL GROUPS = 10.75000007  
 CENTERPOINT OF FINAL GROUPS = 11.25000000  
 NUMBER OF OBSERVATIONS = 126  
 NUMBER OF GROUPS = 18



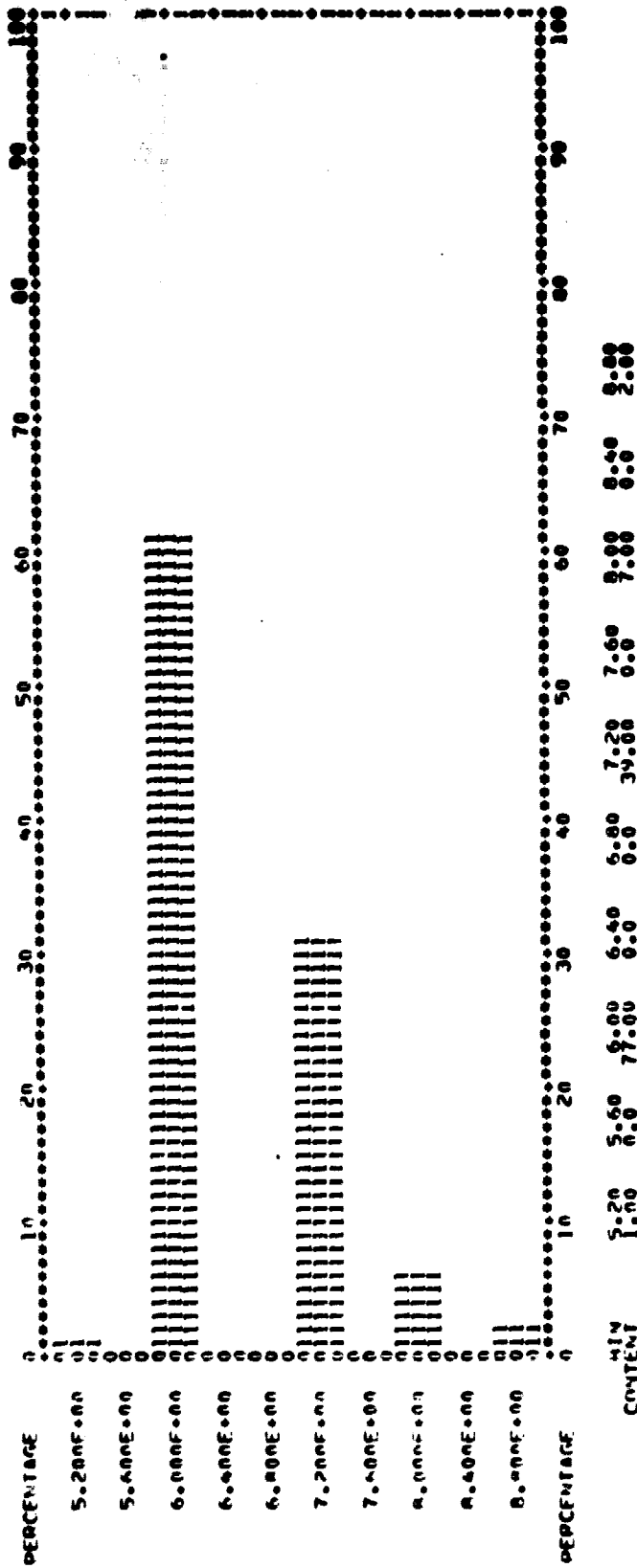
MIN CONTENT 63.75 71.25 78.75 86.25 93.75 101.25 108.75 116.25 123.75 131.25  
 2.00 5.00 10.00 10.00 4.00 66.00 66.00 12.00 10.00 10.00 2.00 13.00 13.00 2.00

ROOM WIDTH - INCHES

CAMP TYPE IS 04  
 SPACINGS = 147 132 144 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200

1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

SIZE = 0.4000010  
 CENTERPOINT OF INITIAL GROUPS = 5.13333333  
 CENTERPOINT OF FINAL GROUPS = 4.2000010  
 NUMBER OF OBSERVATIONS = 120  
 NUMBER OF GROUPS = 10





SEEDING RATE - LH/ACRE

CROP TYPE IS SW  
 CROPERIOD = 1947 1948 1949 1957 1961 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050

SEED = 10.00000000  
 CROPERIOD OF INITIAL SEED = 59.44444444 NUMBER OF OBSERVATIONS = 354  
 CROPERIOD OF FINAL SEED = 195.00000000 NUMBER OF SEEDS = 10

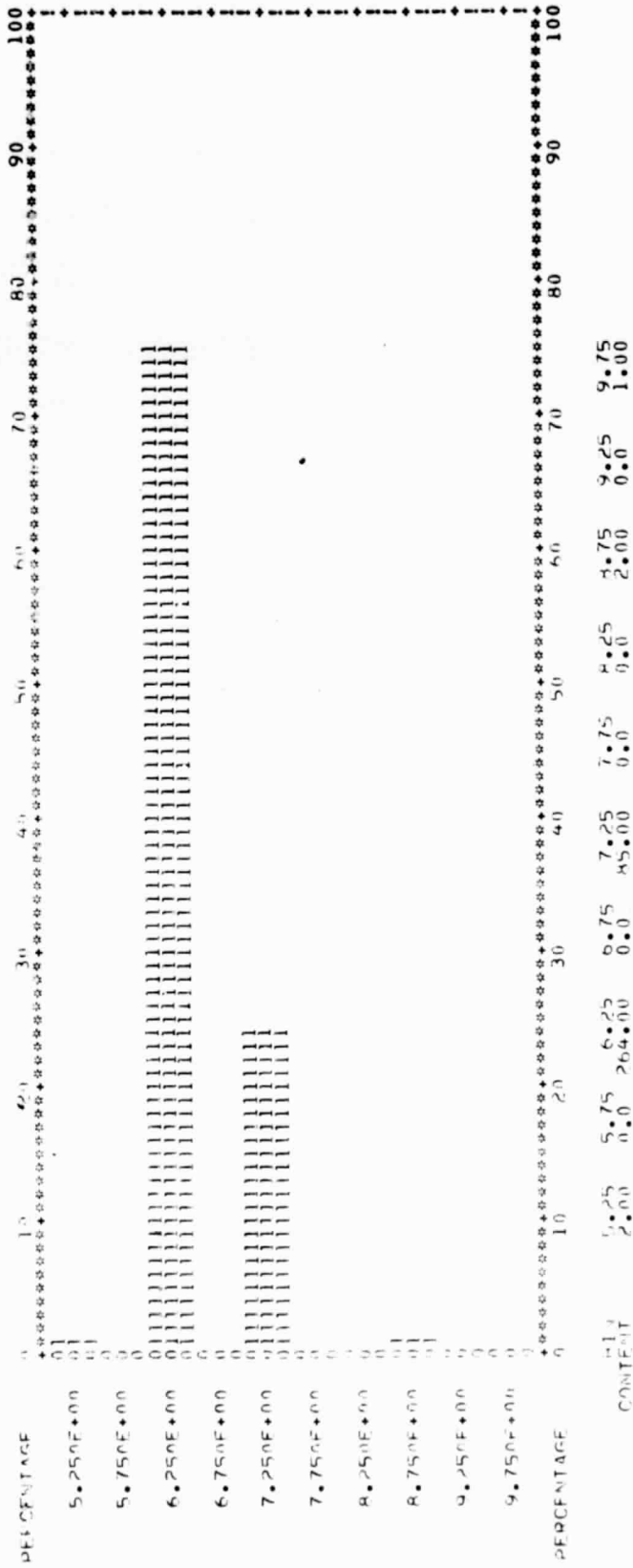


COUNT 57.00 75.00 75.00 55.00 75.00 105.00 115.00 125.00 135.00 145.00  
 17.00 9.00 96.00 57.00 129.00 19.00 1.00 11.00 0.00 15.00

ROW WIDTH - TICHES

CRQP TYPE IS SN  
 SFG-FFMS = 1387 1392 1394 1399 1457 1461 1472 1473 1571 1584 1602 1611 1612 1617  
 1618 1627 1630 1646 1653 1655 1663 1664 1669 1673 1674 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800

TYPE = 0-20000117 NUMBER OF OBSERVATIONS = 354  
 CENTRALLOT OF INITIAL GROUPS = 5-28799995 NUMBER OF GROUPS = 10  
 CENTRALLOT OF FINAL GROUPS = 4-78000045



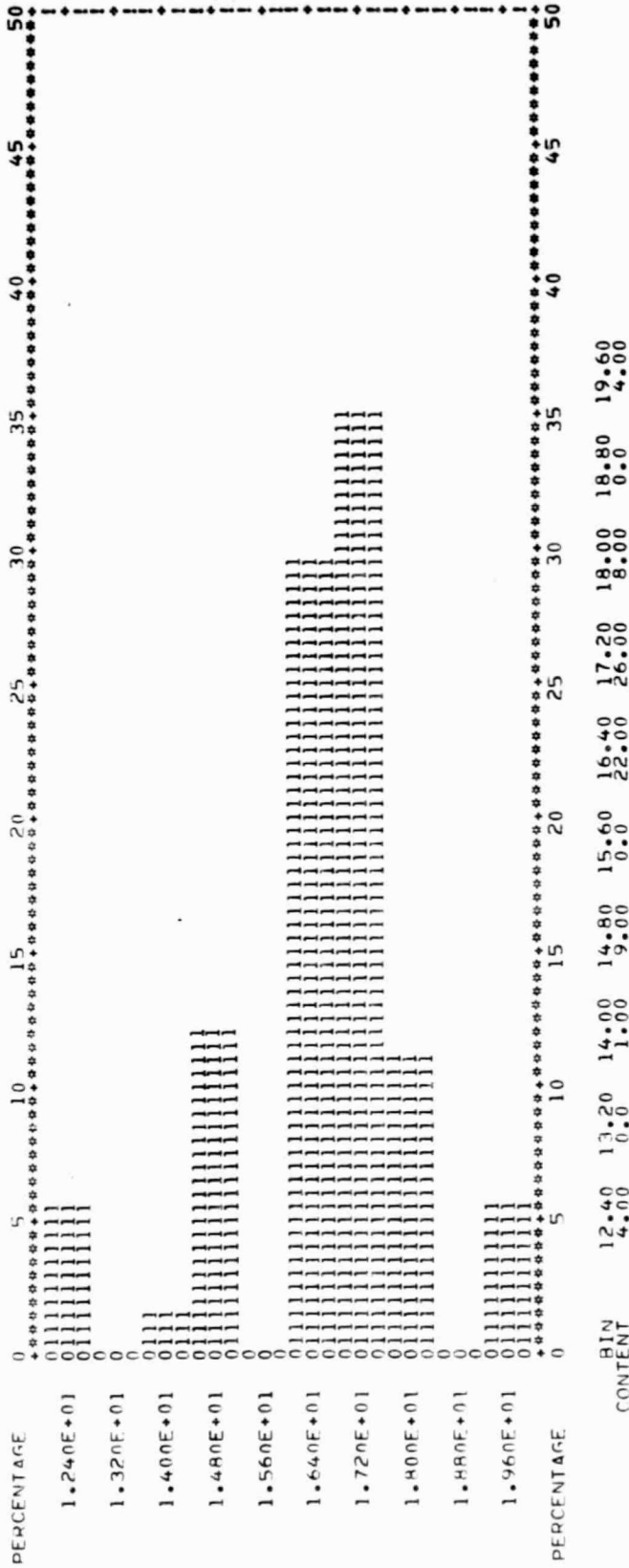
ORIGINAL PAGE IS  
 OF POOR QUALITY

OHIO

~~B-86~~  
2/6

SEEDING RATE - 1/2 ACRE

CROP TYPE IS CR 230 231 234 0.79999912  
 SEGMENTS = 229  
 STFP = 12.39999997  
 CENTERPOINT OF INITIAL GROUP = 19.59999998  
 NUMBER OF OBSERVATIONS = 10 74  
 CENTERPOINT OF FINAL GROUP =



ROW WIDTH - INCHES

CROP TYPE IS CR

SEGMENTS = 220 230 231 234 238

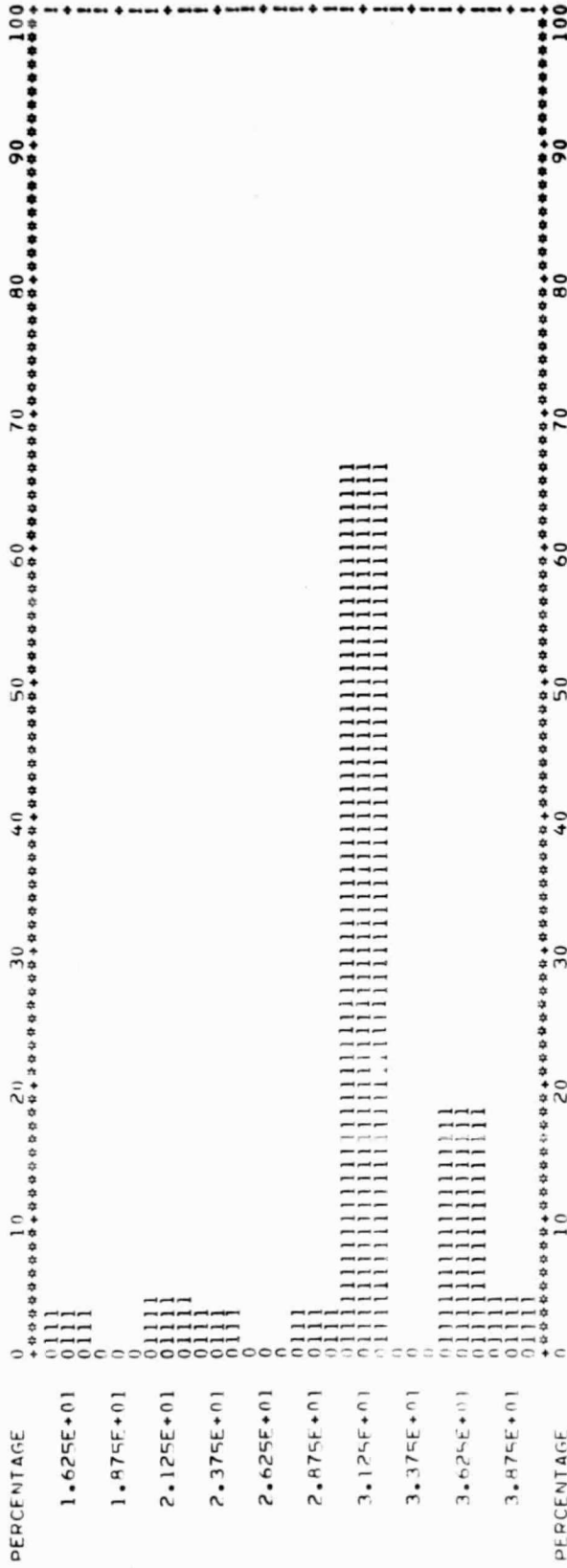
STEP = 2.500000095

CENTERPOINT OF INITIAL GROUP = 16.2499847

CENTERPOINT OF FINAL GROUP = 38.7500000

NUMBER OF OBSERVATIONS = 74

NUMBER OF GROUPS = 10

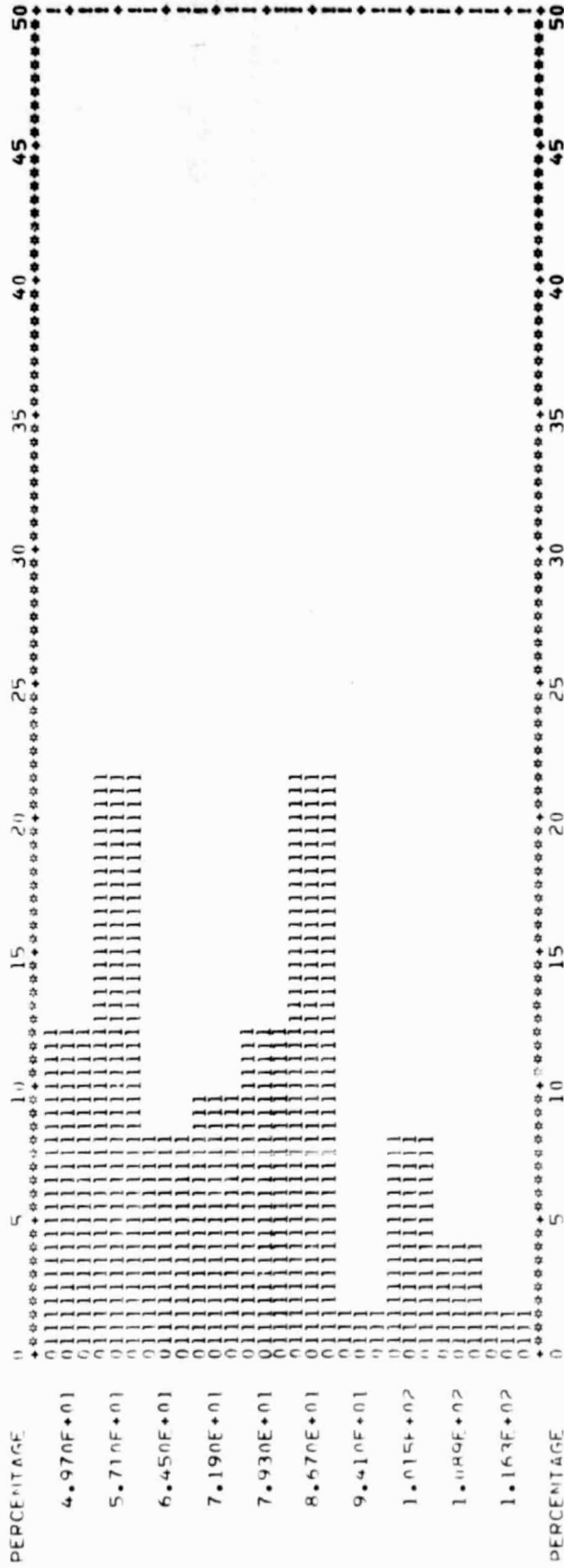


CONTENT 16.25 18.75 21.25 23.75 26.25 28.75 31.25 33.75 36.25 38.75

2.00 0.0 3.00 2.00 0.0 2.00 49.00 0.0 13.00 3.00

SEEDING RATE - 1 R/ACRE

CROP TYPE IS 50  
SEGMENTS = 229    STEP 231 234 238 239    7,400,000E7    NUMBER OF OBSERVATIONS = 74  
CENTROPOINT OF INITIAL GROUP = 49.49494H17    NUMBER OF GROUPS = 10  
CENTROPOINT OF FINAL GROUP = 116.29999H8



BIN    49.70 57.10 64.50 71.90 79.30 86.70 94.10 101.50 108.90 116.30  
CONTENT    9.00 16.00 6.00 7.00 9.00 16.00 1.00 6.00 3.00 1.00

ROW WIDTH - INCHES

CROP TYPE IS 50  
SEGMENTS = 220 230 231 234 238  
STEP = 3.1999790  
CENTERPOINT OF INITIAL GROUP = 7.59999347  
CENTERPOINT OF FINAL GROUP = 35.3999939  
NUMBER OF OBSERVATIONS = 1074  
NUMBER OF GROUPS =



PENNSYLVANIA

~~B-91~~

221



SEEDING RATE - LB/ACRE

CROP TYPE IS CR

SEGMENTS = 319

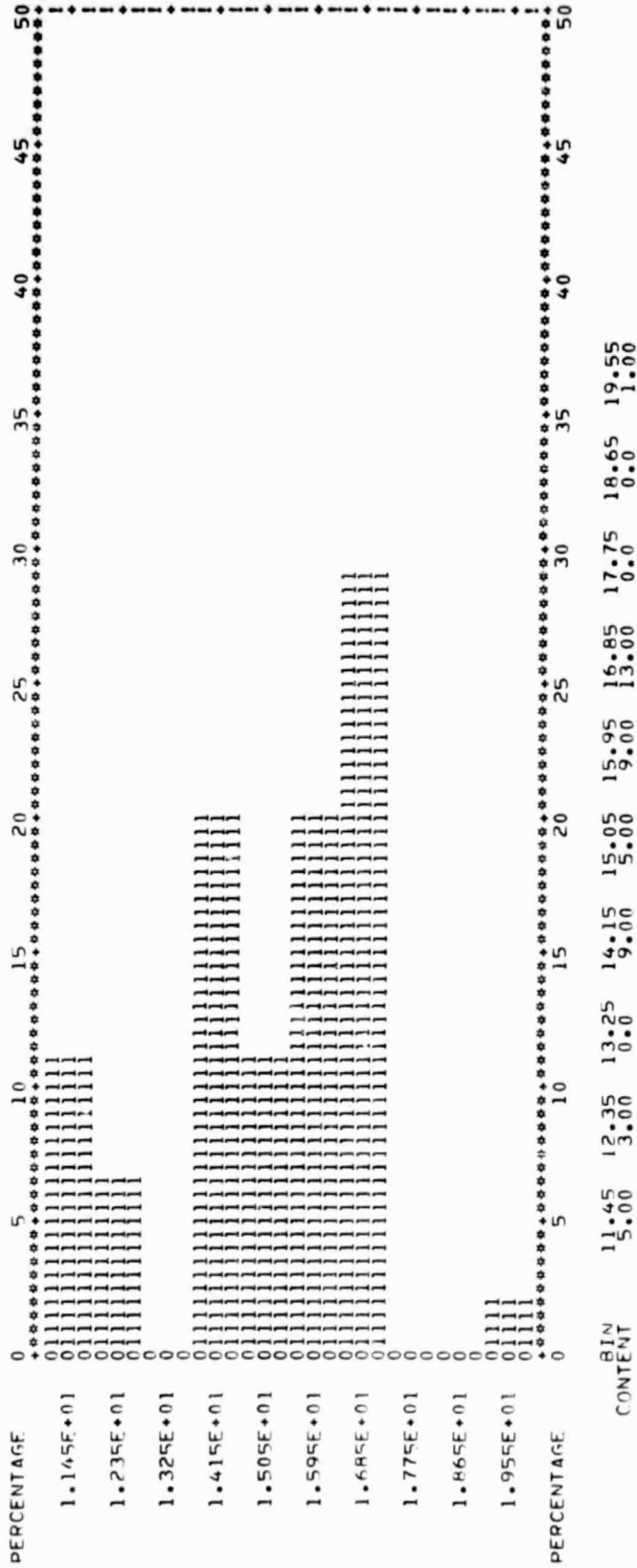
STEP = 320

CENTERPOINT OF INITIAL GROUP = 0.89999872

CENTERPOINT OF FINAL GROUP = 19.5499878

NUMBER OF OBSERVATIONS = 45

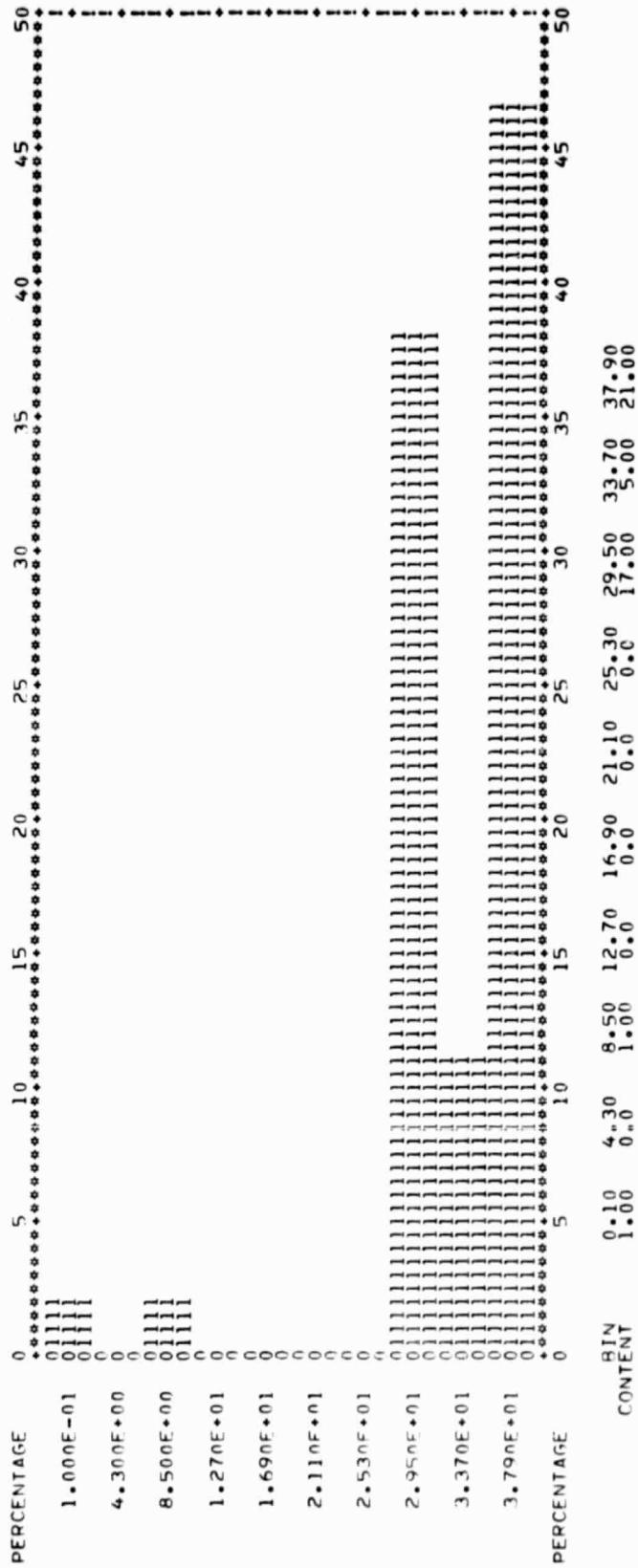
NUMBER OF GROUPS = 10



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322

ROW WIDTH - INCHES

CROP TYPE IS CR  
SEGMENTS = 319 320 322  
STEP = 4.19999790  
CENTERPOINT OF INITIAL GROUP = 0.09999841  
CENTERPOINT OF FINAL GROUP = 37.89999939  
NUMBER OF OBSERVATIONS = 45  
NUMBER OF GROUPS = 10



SOUTH CAROLINA

~~B-94~~

224

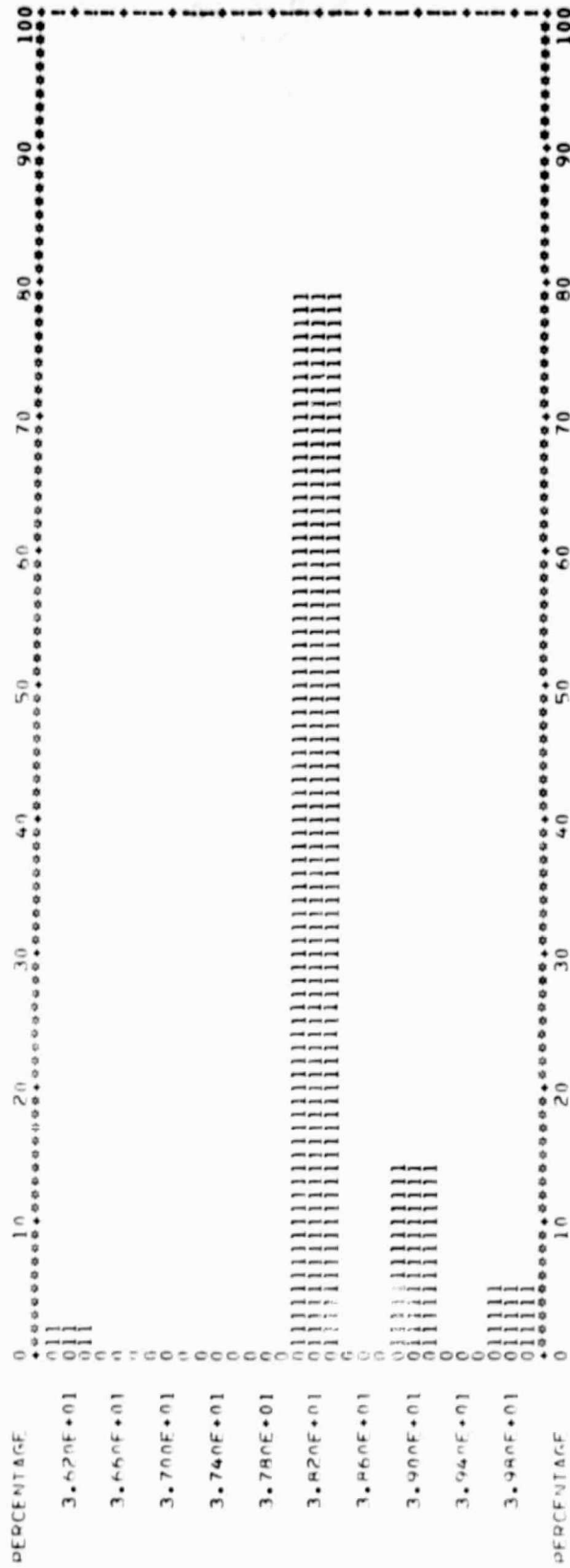
SEEDING RATE - LB/ACRE

CROP TYPE IS CR 334 337 338 339 0.79999912  
 SEGMENTS = 334 SIFP = 10.3999987 NUMBER OF OBSERVATIONS = 10 43  
 CENTERPOINT OF INITIAL GROUP = 17.5999901 NUMBER OF GROUPS  
 CENTERPOINT OF FINAL GROUP =



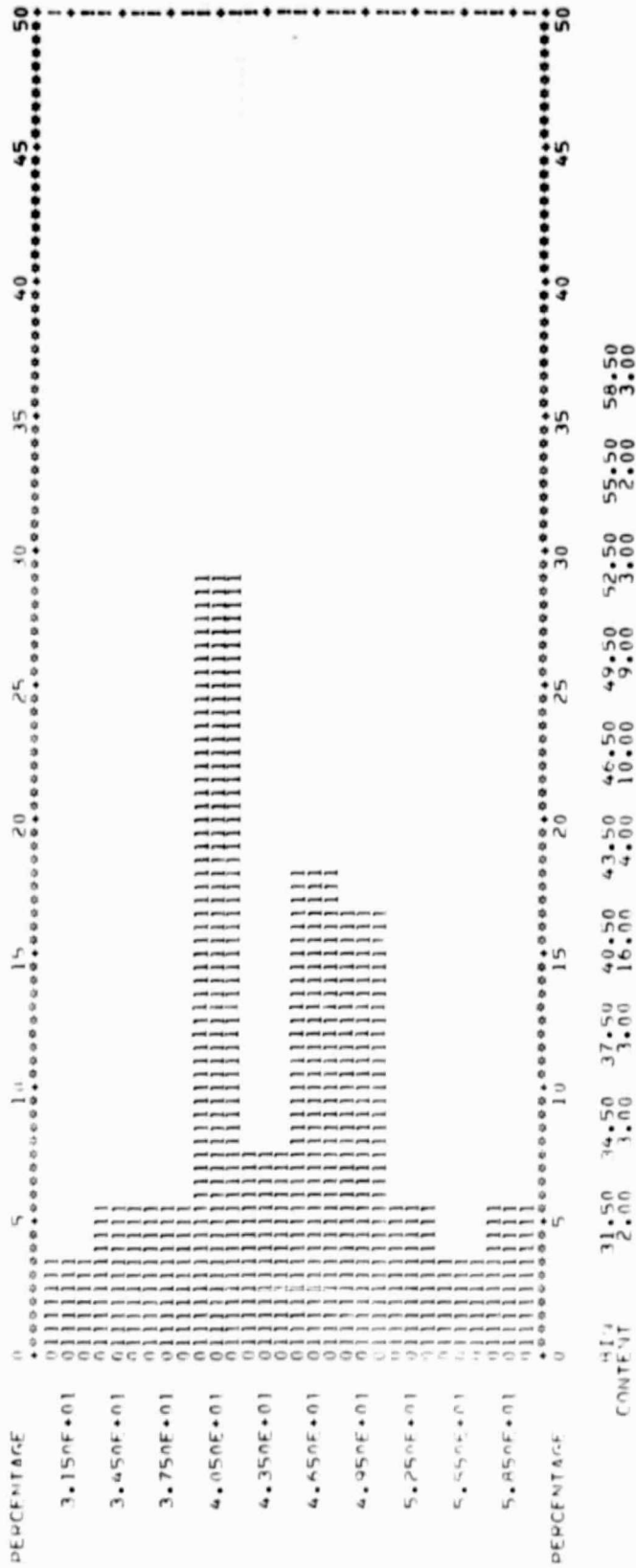
ROW WIDTH - INCHES

CROP TYPE IS CR  
SEGMENTS = 336 337 338 339 0.40000063  
CENTERPOINT OF INITIAL GROUP = 36.1999817 NUMBER OF OBSERVATIONS = 43  
CENTERPOINT OF FINAL GROUP = 39.7999878 NUMBER OF GROUPS = 10



SEEDING RATE - LB/ACRE

CROP TYPE IS 50  
 SEGMENTS = 336 337 338 339 3.000000005  
 STEP = 31.49000047  
 CENTERPOINT OF INITIAL GROUP = 54.5000000  
 CENTERPOINT OF FINAL GROUP = 10 NUMBER OF OBSERVATIONS = 55  
 NUMBER OF GROUPS = 10



ROW WIDTH - INCHES

CROP TYPE IS SO

SEGMENTS = 336

STEP = 337

338

339

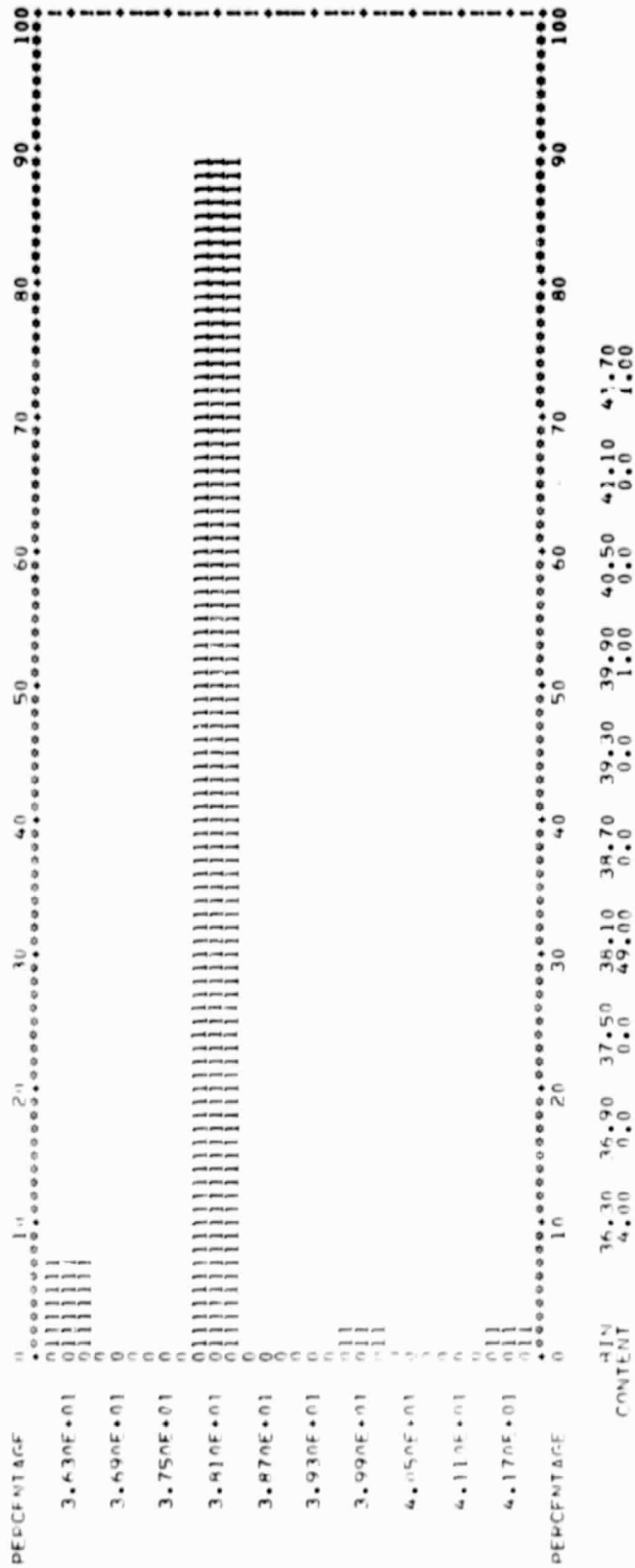
INITIAL GROUP = 0.0000271

35.2494725

NUMBER OF OBSERVATIONS = 55

FINAL GROUP = 41.6999964

NUMBER OF GROUPS = 10



TEXAS

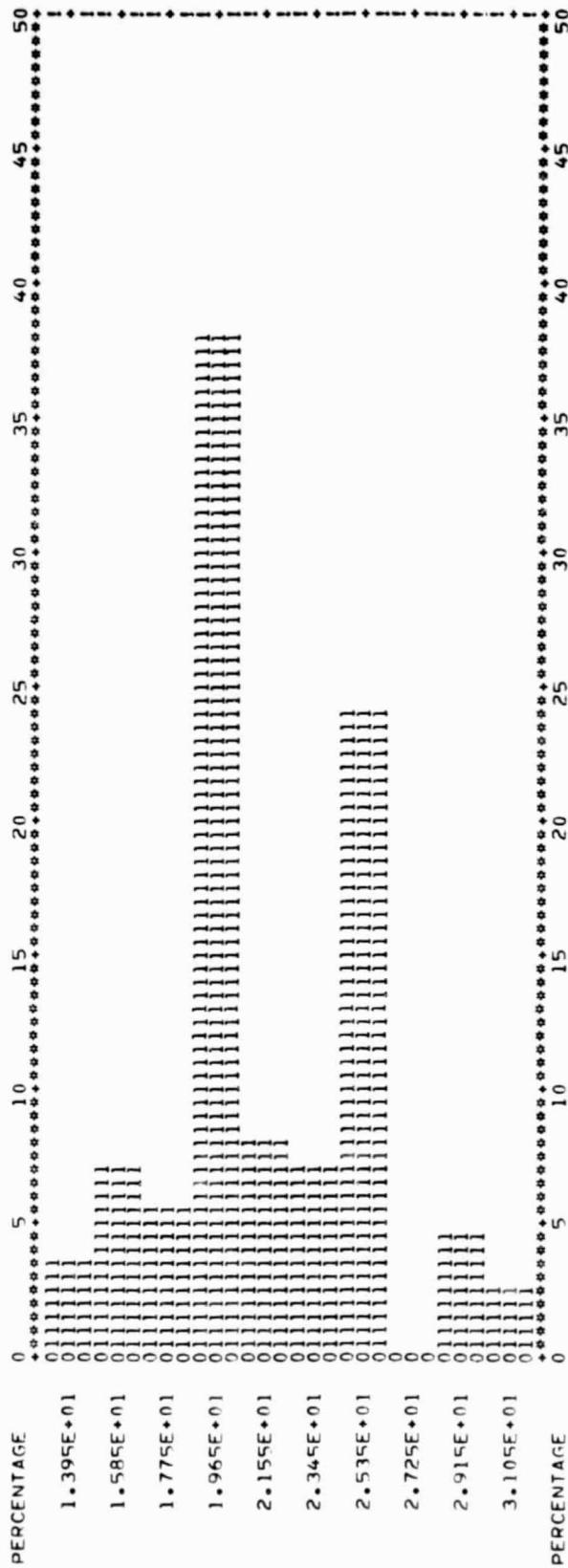
~~B-99~~  
229



SEEDING RATE - LB/ACRE

CROP TYPE IS CT  
SEGMENTS =

292 293 284 290 292 1377  
 STEP = 1.89999676  
 CENTERPOINT OF INITIAL GROUP = 31.0499878  
 CENTERPOINT OF FINAL GROUP = 13.9499963  
 NUMBER OF OBSERVATIONS = 87  
 NUMBER OF GROUPS = 10



BIN	CONTENT	13.95	15.85	17.75	19.65	21.55	23.45	25.35	27.25	29.15	31.05
		3.00	6.00	5.00	33.00	7.00	6.00	21.00	0.00	4.00	2.00

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230

ROW WIDTH - INCHES

CROP TYPE IS CT

SEGMENTS =

282 283 284

290 292

1377

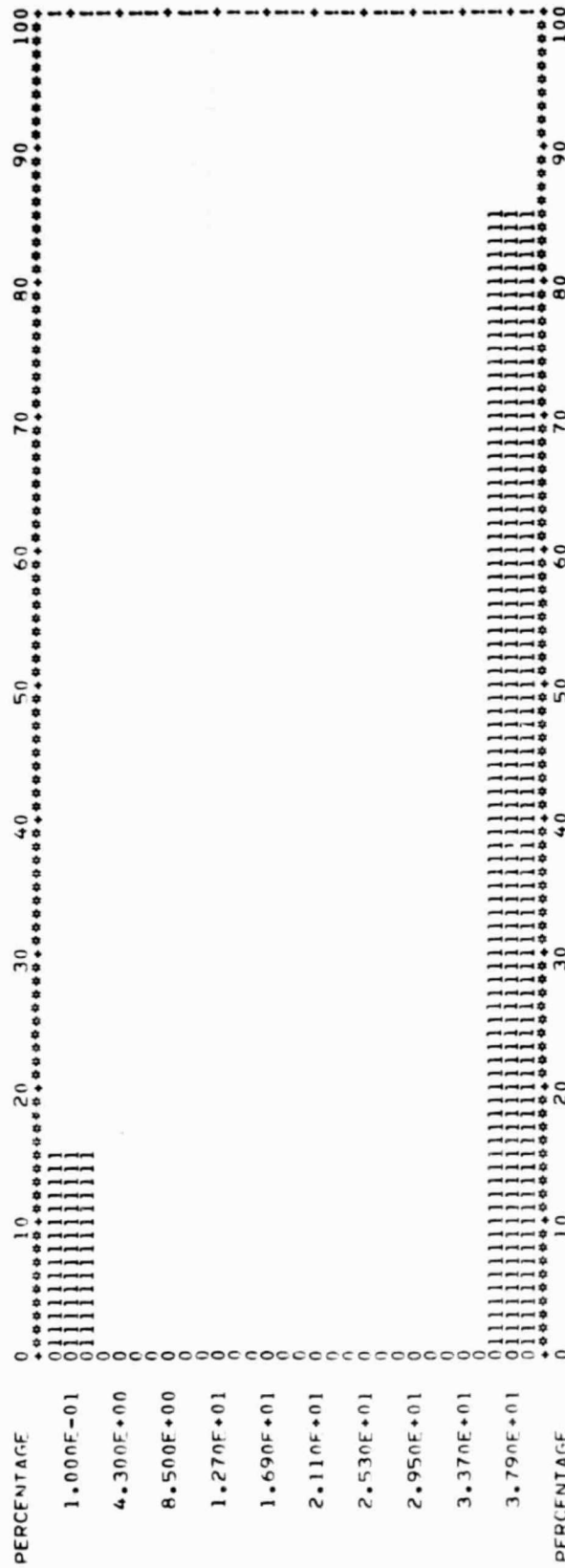
STEP = 4.1999790

CENTERPOINT OF INITIAL GROUP = 0.09999841

CENTERPOINT OF FINAL GROUP = 37.4999939

NUMBER OF OBSERVATIONS = 87

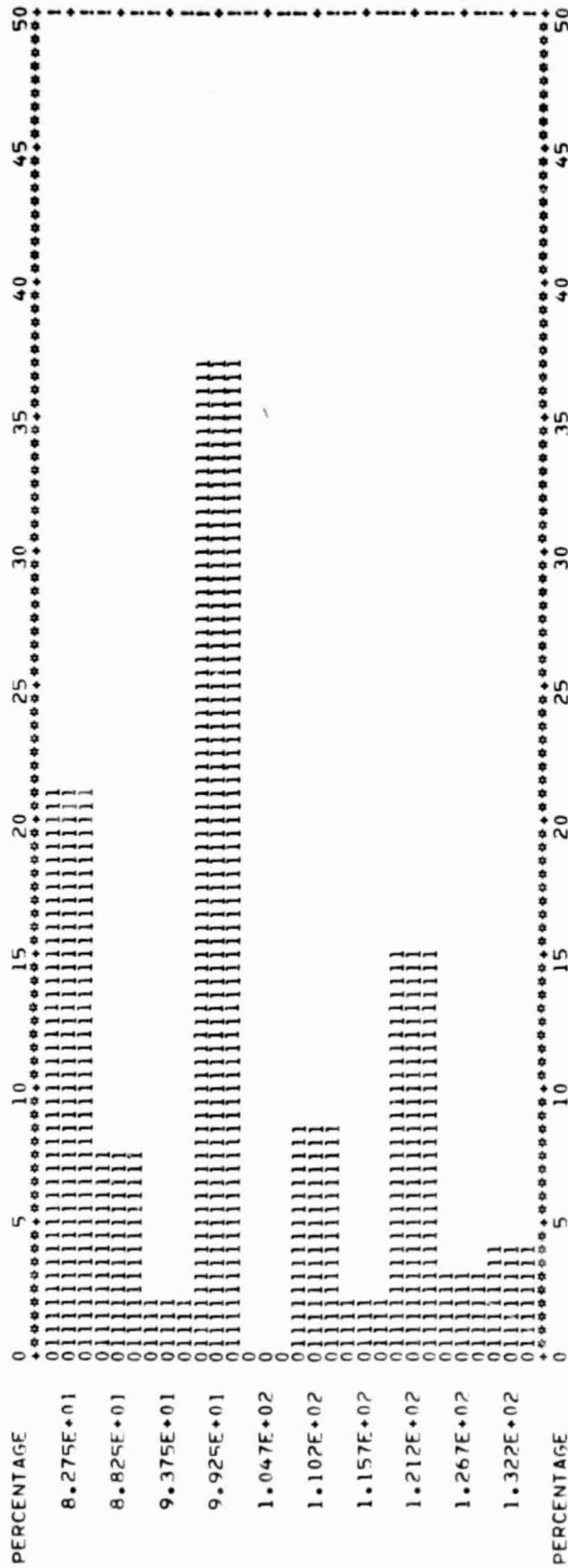
NUMBER OF GROUPS = 10



CONTENT 0.10 4.30 8.50 12.70 16.90 21.10 25.30 29.50 33.70 37.90  
13.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

SEEDING RATE - LB/ACRE

CROP TYPE IS RI 276 277 279 329  
 SEGMENTS = 5  
 STP = 5.50000095  
 CENTERPOINT OF INITIAL GROUP = 82.7499847  
 CENTERPOINT OF FINAL GROUP = 132.250000  
 NUMBER OF OBSERVATIONS = 105  
 NUMBER OF GROUPS = 10



BIN CONTENT 82.75 88.25 93.75 99.25 104.75 110.25 115.75 121.25 126.75 132.25  
 22.00 8.00 2.00 39.00 0.0 0.0 2.00 16.00 3.00 4.00

ROW WIDTH - INCHES

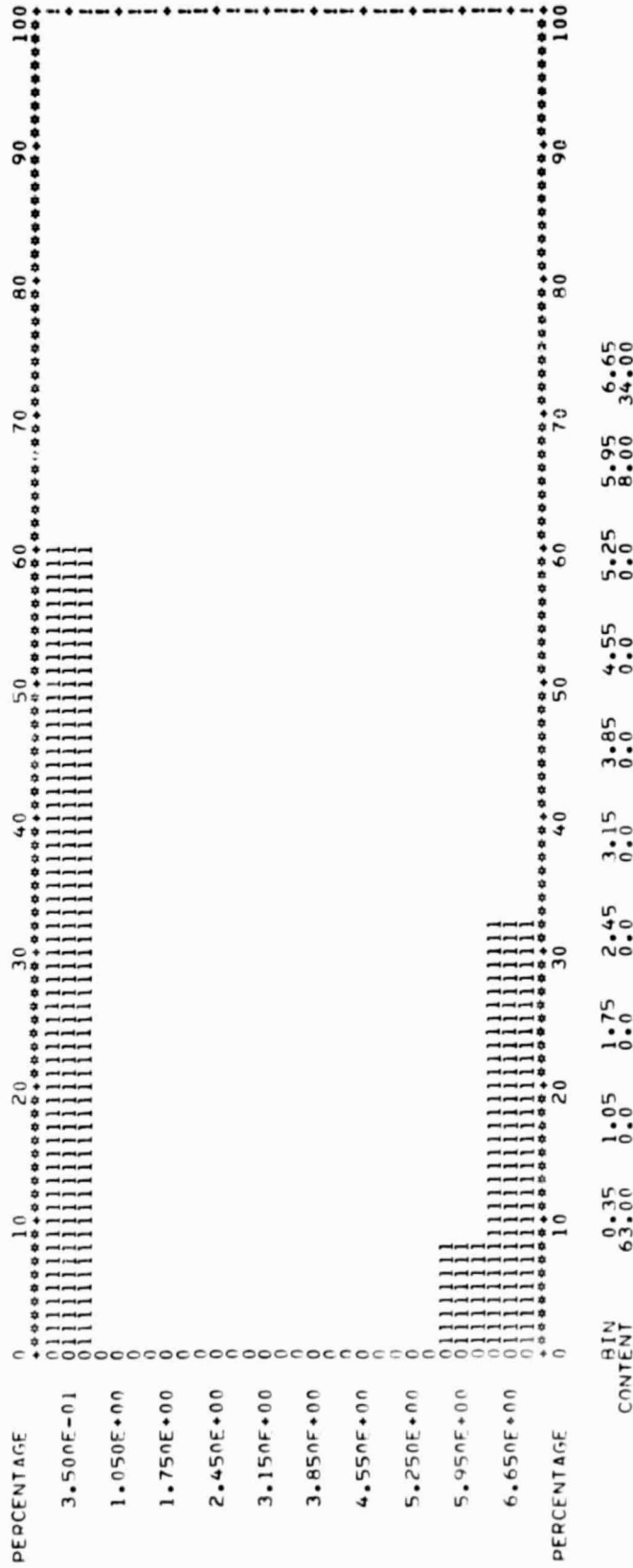
CROP TYPE IS RI

329

NUMBER OF OBSERVATIONS = 105  
NUMBER OF GROUPS = 10

STEP = 0.70000011

CENTERPOINT OF INITIAL GROUP = 0.34999895  
CENTERPOINT OF FINAL GROUP = 6.45000057

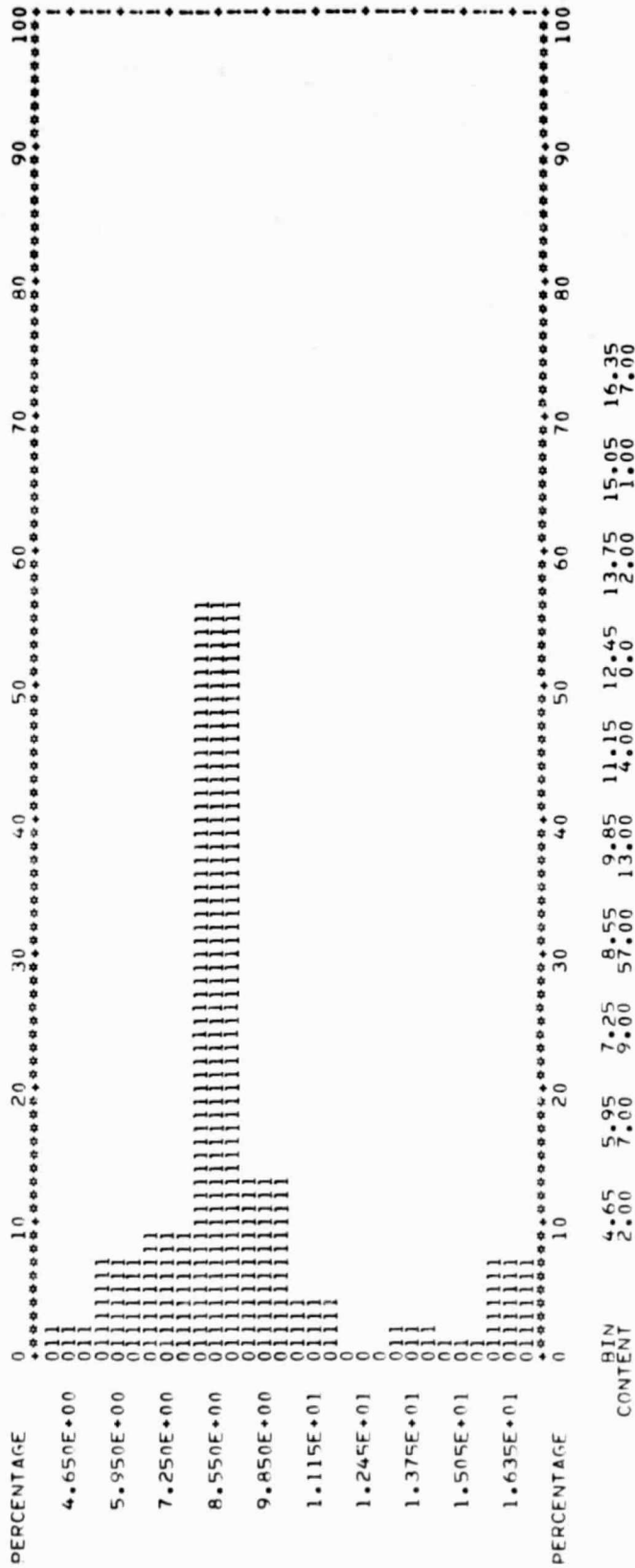


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233

SEEDING RATE - LB/ACRE

CROP TYPE IS SR  
SEGMENTS = 275

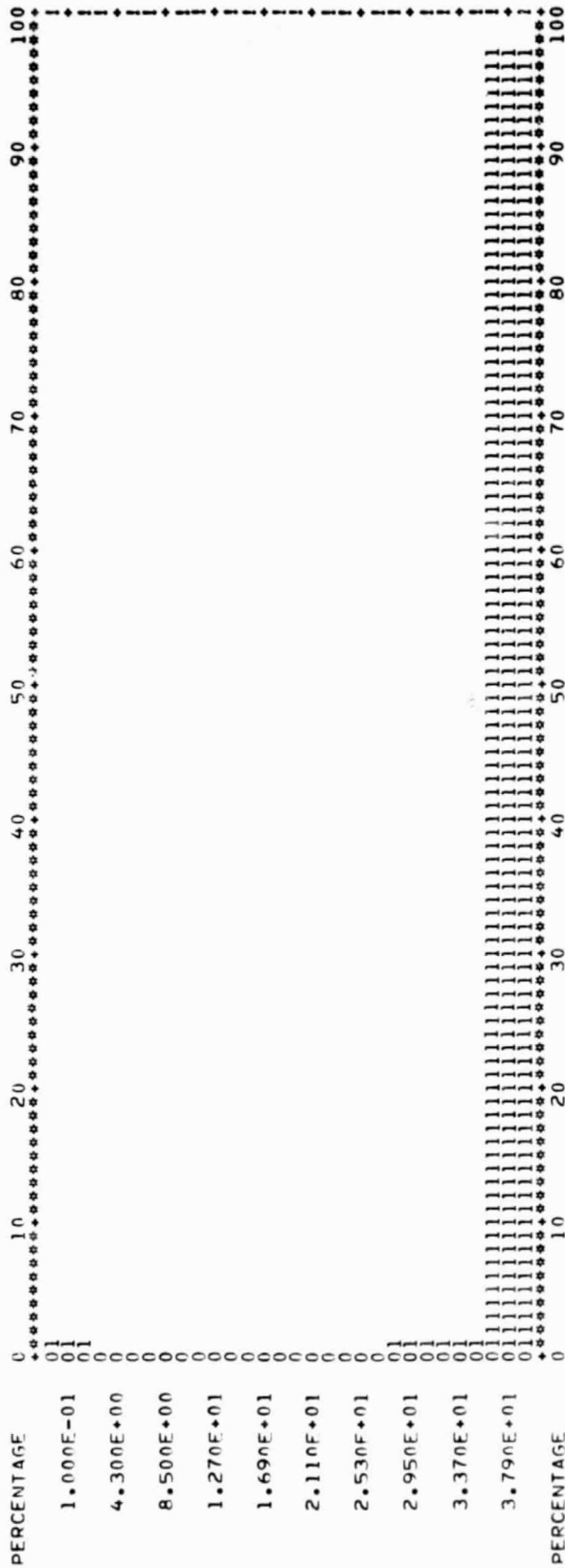
283 284 286 292 1377  
1.29099924  
CENTERPOINT OF INITIAL GROUP = 4.64999866 NUMBER OF OBSERVATIONS = 102  
CENTERPOINT OF FINAL GROUP = 16.3499904 NUMBER OF GROUPS = 10



ROW WIDTH - INCHES

CROP TYPE IS SR  
SEGMENTS = 275

STEP = 283 284 286 292 1377  
CENTERPOINT OF INITIAL GROUP = 4.19999700  
CENTERPOINT OF FINAL GROUP = 37.9999939  
NUMBER OF OBSERVATIONS = 102  
NUMBER OF GROUPS = 10



SEEDING RATE - LB/ACRE

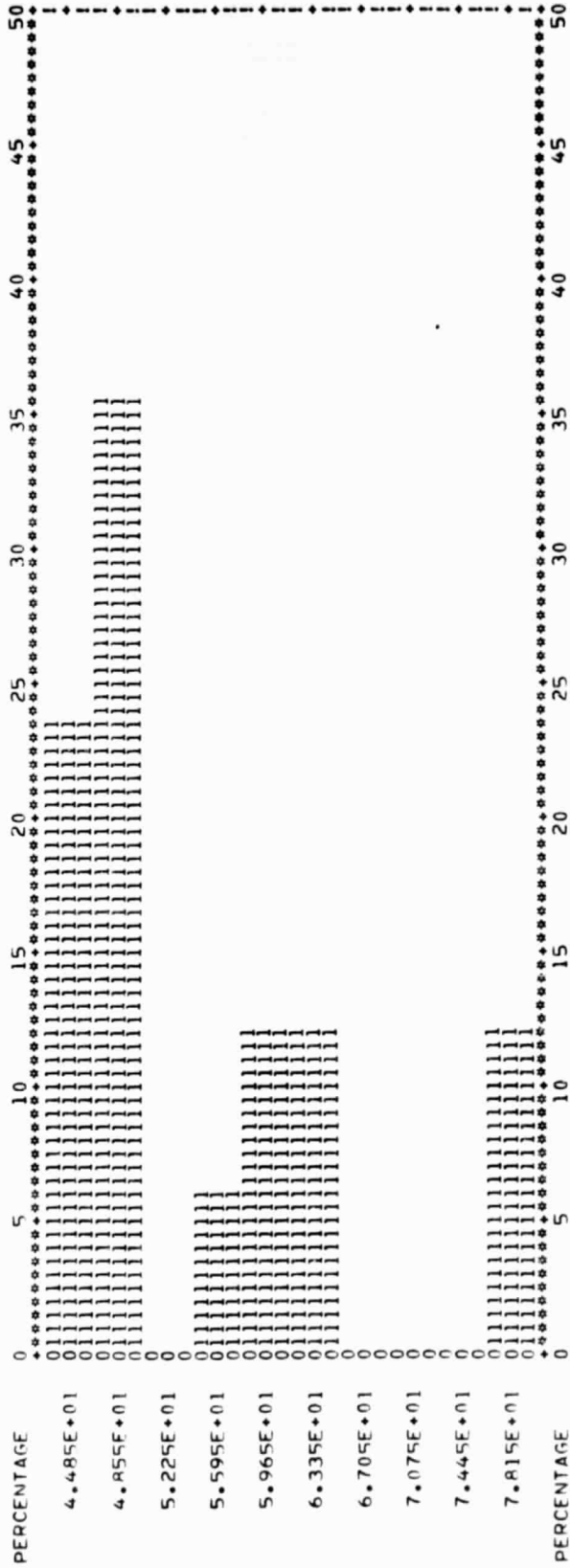
CROP TYPE IS SO  
SEGMENTS =

288

STEP = 3.70000172  
CENTERPOINT OF INITIAL GROUP =  
CENTERPOINT OF FINAL GROUP =

44.8499756  
78.1499939

NUMBER OF OBSERVATIONS = 17  
NUMBER OF GROUPS = 10



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236

ROW WIDTH - INCHES

CROP TYPE IS SO

SEGMENTS =

276

STFP =

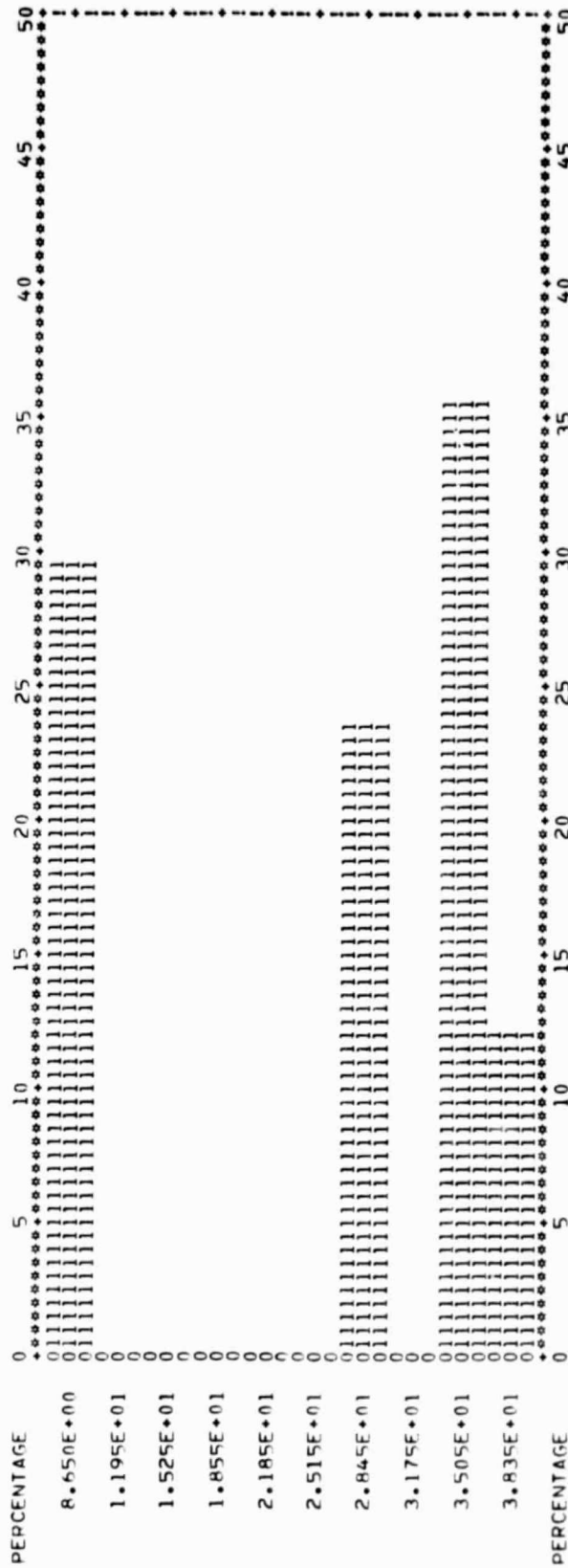
288

CENTERPOINT OF INITIAL GROUP = 3.29099713

CENTERPOINT OF FINAL GROUP = 38.3499908

NUMBER OF OBSERVATIONS = 17

NUMBER OF GROUPS = 10



B-107

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APPENDIX C  
PLANT HEIGHT GRAPHS

ALABAMA

~~62~~  
239

MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
-0.31	0.09	0.48	0.88	1.27	1	3.000	3.000	3.25		
115.70	2.03	45.07	0.45	45.34	1	3.000	3.000			
112.78					1					
109.67					1					
106.56					1					
104.45					1					
102.35					1					
100.24					1					
98.13					1					
96.02					1					
93.91					1					
91.80					1					
89.69					1					
87.58					1					
85.47					1					
83.36					1					
81.25					1					
79.15					1					
77.04					1					
74.93					1					
72.82					1					
70.71					1					
68.60					1					
66.49					1					
64.38					1					
62.27					1					
60.16					1					
58.05					1					
55.94					1					
53.83					1					
51.72					1					
49.61					1					
47.50					1					
45.39					1					
43.28					1					
41.17					1					
39.06					1					
36.95					1					
34.84					1					
32.73					1					
30.62					1					
28.51					1					
26.40					1					
24.29					1					
22.18					1					
20.07					1					
17.96					1					
15.85					1					
13.74					1					
11.63					1					
9.52					1					
7.41					1					
5.30					1					
3.19					1					
1.08					1					
-0.31	0.09	0.48	0.88	1.27	1	3.000	3.000	3.25		

C-3  
240

MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	MSIG-X	MSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
	0.00	2.59	0.48	14.02	1	3.000	3.000		
	0.00	34.56	0.88	1.27	2	2.46	2.86		3.25
42.00									
41.85									
59.71									
58.54									
27.47									
50.27									
55.13									
52.84									
51.59									
50.40									
48.25									
47.11									
45.96									
43.82									
42.67									
41.53									
40.38									
39.24									
37.09									
35.95									
34.81									
33.65									
32.51									
31.34									
30.22									
29.03									
27.79									
26.44									
25.69									
24.35									
23.25									
21.91									
20.76									
19.42									
18.47									
17.33									
15.14									
13.99									
12.75									
11.60									
10.45									
9.31									
8.16									
7.02									
5.87									
4.73									
3.58									
2.44									
1.29									
0.153									
-0.31									

241

YAKIS=

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000 3.2.86

MODE 1 2.07

DEVY 16.74840 1.67

DEVX 0.54882 1.27

YMFAN 23.92 0.48

XMFAN 2.47 0.48

0.09 2.47

MPRINT 0.09 2.47

0.09 2.47

0.09 2.47

MPRINT	XMFAN	YMFAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAKIS=
54.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
52.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
51.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
50.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
49.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
48.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
47.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
46.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
45.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
44.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
43.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
42.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
41.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
40.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
39.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
38.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
37.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
36.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
35.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
34.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
33.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
32.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
31.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
30.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
29.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
28.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
27.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
26.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
25.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
24.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
23.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
22.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
21.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
20.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
19.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
18.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
17.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
16.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
15.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
14.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
13.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
12.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
11.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
10.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
9.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
8.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
7.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
6.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
5.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
4.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
3.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
2.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
1.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
0.00	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
-0.003	2.47	23.92	0.54882	16.74840	1	3.000	3.000			
-0.31	2.47	23.92	0.54882	16.74840	1	3.000	3.000			

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65  
242

ARKANSAS

~~C-6~~  
243

Y AXIS =

79 PERIODIC X-AXIS = DOY

NSIG-Y 3.000 2.86

NSIG-X 3.000 2.46

MODE 1 2.07

DEVY 14.24922 1.67

DEVX 0.61266 1.27

YMEAN 25.71 0.44

XMEAN 2.35 0.44

0.00 0.44

MPPOINT 123

-0.31

MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79 PERIODIC	X-AXIS = DOY	Y AXIS =
50.00	0.00	2.35	0.44	14.24922	1	3.000	3.000	1	3.25	*
49.07										
48.15										
47.22										
46.29										
45.36										
44.44										
43.51										
42.58										
41.65										
40.73										
39.80										
38.87										
37.95										
37.02										
36.09										
35.16										
34.24										
33.31										
32.38										
31.45										
30.53										
29.60										
28.67										
27.75										
26.82										
25.89										
24.96										
24.04										
23.11										
22.18										
21.25										
20.33										
19.40										
18.47										
17.55										
16.62										
15.69										
14.76										
13.84										
12.91										
11.98										
11.05										
10.13										
9.20										
8.27										
7.35										
6.42										
5.50										
4.57										
3.64										
2.71										
1.78										
0.85										
-0.073										
-0.31										

C-7  
244

MPPOINT	X AT 0.1	Y AT 0.1	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
	0.09	0.44	0.4608	14.00696	1	3.000	3.000	3.25	
	↓	↓	↓	↓	↓	↓	↓	↓	↓
50.00									
53.04									
53.96									
51.95									
50.03									
49.91									
48.89									
47.87									
45.85									
45.84									
44.82									
43.80									
42.78									
41.76									
40.75									
39.73									
38.71									
37.69									
36.67									
35.65									
34.64									
33.62									
32.60									
31.58									
30.56									
29.54									
28.52									
27.51									
26.49									
25.47									
24.45									
23.44									
22.42									
21.40									
20.38									
19.36									
18.34									
17.32									
16.31									
15.29									
14.27									
13.25									
12.24									
11.22									
10.20									
9.18									
8.16									
7.15									
6.13									
5.11									
4.09									
3.07									
2.05									
1.03									
0.02									
-0.01									

68  
245



Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DFVY 14.64124

DFVX 0.46149

YMEAN 23.45

XMEAN 2.42

MPDPT 0.31

0.09

0.44

1.27

1.67

2.07

2.46

2.86

3.25

3.25

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SC

SE 3.25

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276

CALIFORNIA

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247

17

MPOINT	XMFEAN	YMEAN	DFVX	DFVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
	0.09	0.48	0.88	1.27	1 2.07	3.000 2.46	3.000 2.86	3.25	
70.00									
68.71									
67.42									
66.13									
64.84									
63.55									
62.26									
60.97									
59.68									
58.39									
57.10									
55.81									
54.52									
53.23									
51.94									
50.65									
49.36									
48.07									
46.78									
45.49									
44.20									
42.91									
41.62									
40.33									
39.04									
37.75									
36.46									
35.17									
33.88									
32.59									
31.30									
30.01									
28.72									
27.43									
26.14									
24.85									
23.56									
22.27									
20.98									
19.69									
18.40									
17.11									
15.82									
14.53									
13.24									
11.95									
10.66									
9.37									
8.08									
6.79									
5.50									
4.21									
2.92									
1.63									
0.34									
-0.95									

248

YAKIS=

79PERIODIC X-AXIS=DOY

NSIG-Y  
3.000  
2.86

NSIG-X  
3.000  
2.46

MODE  
1 2.07

DEVI  
10.46532  
1.57

DEVX  
0.54071  
1.27

Y-H-A-U  
3.99  
0.44

X-4E-A-U  
2.44  
0.09

MPOINT  
115  
-0.31

3.25

2.86

2.07

1.67

0.88

0.44

0.10

-0.31

YAKIS	79PERIODIC X-AXIS=DOY	NSIG-Y	NSIG-X	MODE	DEVI	DEVX	Y-H-A-U	X-4E-A-U	MPOINT
51.00									
50.05		1	1	1					
49.11									
48.16		1	1	1					
47.22									
46.27		1	1	1					
45.33									
44.38		1	1	1					
43.44									
42.49		1	1	1					
41.55		2	2	2					
40.60		1	1	1					
39.65		1	1	1					
38.71		1	1	1					
37.76		2	2	2					
36.82									
35.87		1	1	1					
34.93		1	1	1					
33.98		1	1	1					
32.94		1	1	1					
32.09									
31.15									
30.20		11	11	11					
29.31									
27.36		1	1	1					
26.42									
25.47		1	1	1					
24.53									
23.58		1	1	1					
22.64									
21.69		1	1	1					
20.80									
19.85		2	2	2					
18.91									
17.96		1	1	1					
16.02									
15.17									
14.13									
13.18									
12.24									
11.29									
10.35		1	1	1					
9.40									
8.45									
7.51									
6.56		1	1	1					
5.62									
4.67									
3.73									
2.78									
1.84									
0.89									
-0.053									
-0.31		2	2	2					
		7	7	7					
		2.86	2.86	2.86					
		2.46	2.46	2.46					
		2.07	2.07	2.07					
		1.67	1.67	1.67					
		0.88	0.88	0.88					
		0.44	0.44	0.44					
		0.10	0.10	0.10					
		-0.31	-0.31	-0.31					

249

GEORGIA

~~C-13~~  
250





ILLINOIS

~~C-16~~

253



YAXIS=

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

491

3.25

3.000

3.000

1 2.07

43.84035

1.27

0.44

79.89

2.39

0.09

0.31

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254

POINT	KMEAN	YMEAN	DEVA	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=			
	0.00	2.34	0.44	0.88	0.44	0.88	1.27	16.58	1.67	2.07	2.46	2.86	3.25
50.00													
49.07													
48.15													
47.22													
46.29													
45.36													
44.44													
43.51													
42.58													
41.65													
40.73													
39.80													
38.87													
37.95													
37.02													
36.09													
35.16													
34.24													
33.31													
32.38													
31.45													
30.53													
29.60													
28.67													
27.75													
26.82													
25.90													
24.97													
24.04													
23.11													
22.18													
21.25													
20.33													
19.40													
18.47													
17.55													
16.62													
15.70													
14.77													
13.84													
12.91													
11.98													
11.05													
10.13													
9.20													
8.27													
7.35													
6.42													
5.49													
4.56													
3.64													
2.71													
1.78													
0.85													
-0.073													
-0.31													

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INDIANA

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ORIGIN OF THE IS  
OF IOWA CITY

IOWA

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79PERIODIC X-AXIS=DOY YAXIS=

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
	0.09	0.48	0.88	1.27	1.67	3.000	3.000	3.25	2.86	3.25
1639	2.41	18.78	0.46296	14.93728	1	2.07	2.46	3.000	2.86	3.25
-0.31	0.09	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
50	0.07	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
49	0.15	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
48	0.26	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
47	0.36	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
46	0.44	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
45	0.51	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
44	0.58	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
43	0.65	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
42	0.73	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
41	0.80	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
40	0.87	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
39	0.95	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
38	1.02	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
37	1.09	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
36	1.16	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
35	1.24	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
34	1.31	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
33	1.39	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
32	1.46	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
31	1.54	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
30	1.61	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
29	1.69	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
28	1.76	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
27	1.84	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
26	1.91	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
25	1.99	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
24	2.06	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
23	2.14	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
22	2.21	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
21	2.29	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
20	2.36	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
19	2.44	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
18	2.51	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
17	2.59	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
16	2.66	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
15	2.74	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
14	2.81	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
13	2.89	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
12	2.96	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
11	3.04	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
10	3.11	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
9	3.19	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
8	3.26	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
7	3.34	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
6	3.41	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
5	3.49	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
4	3.56	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
3	3.64	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
2	3.71	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
1	3.79	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25
0	3.86	0.48	0.88	1.27	1.67	2.07	2.46	3.000	2.86	3.25

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LOUISIANA

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PROBIT	X MEAN	Y MEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
	0.09	34.76	0.52	17.21	1	3.000	3.000			
	0.09	34.76	0.52	17.21	2.07	2.46	2.86			3.25
71.00						1				
69.59						1				
68.18						1				
66.77						1				
65.36						3				
63.95						1				
62.54						1				
61.13						2				
59.72						1				
58.31						2				
56.90						1				
55.49						1				
54.08						1				
52.67						1				
51.26						1				
49.85						1				
48.44						1				
47.03						1				
45.62						1				
44.21						1				
42.80						1				
41.39						1				
39.98						1				
38.57						1				
37.16						1				
35.75						1				
34.34						1				
32.93						1				
31.52						1				
30.11						1				
28.70						1				
27.29						1				
25.88						1				
24.47						1				
23.06						1				
21.65						1				
20.24						1				
18.83						1				
17.42						1				
16.01						1				
14.60						1				
13.19						1				
11.78						1				
10.37						1				
8.96						1				
7.55						1				
6.14						1				
4.73						1				
3.32						1				
1.91						1				
0.50						1				
-0.31						1				

ORIGINAL PAGE IS  
OF POOR QUALITY

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YAXIS=

7PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DFVY

DFVX

YMEAN

XMEAN

MPOTNT

MPOTNT	XMEAN	YMEAN	DFVX	DFVY	MODE	NSIG-X	NSIG-Y	7PERIODIC X-AXIS=DOY	YAXIS=
269	0.00	2.25	0.00	19.77293	1	3.000	3.000	3.25	*
-0.31	0.44	2.12	0.88	1.67	1	2.07	2.86		
54.00					1				
53.00					1				
52.00					1				
51.00					1				
50.00					2				
49.00					2				
48.00					2				
47.00					2				
46.00					2				
45.00					2				
44.00					2				
43.00					2				
42.00					2				
41.00					2				
40.00					2				
39.00					2				
38.00					2				
37.00					2				
36.00					2				
35.00					2				
34.00					2				
33.00					2				
32.00					2				
31.00					2				
30.00					2				
29.00					2				
28.00					2				
27.00					2				
26.00					2				
25.00					2				
24.00					2				
23.00					2				
22.00					2				
21.00					2				
20.00					2				
19.00					2				
18.00					2				
17.00					2				
16.00					2				
15.00					2				
14.00					2				
13.00					2				
12.00					2				
11.00					2				
10.00					2				
9.00					2				
8.00					2				
7.00					2				
6.00					2				
5.00					2				
4.00					2				
3.00					2				
2.00					2				
1.00					2				
-0.0003					2				
-0.31	0.09	0.48	0.88	1.67	2	2.07	2.86	3.25	*

ORIGINAL PAGE IS OF POOR QUALITY

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Y AXIS =

79PERIODIC X-AXIS=00Y

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

945

3.25

3.000

2.07

14.55670

0.42664

27.24

2.53

0.43

0.09

0.31

MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=00Y	Y AXIS =
50.00	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
49.07	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
48.15	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
47.22	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
46.29	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
45.36	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
44.44	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
43.51	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
42.58	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
41.65	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
40.73	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
39.80	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
38.87	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
37.95	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
37.02	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
36.09	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
35.16	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
34.24	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
33.31	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
32.38	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
31.45	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
30.53	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
29.60	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
28.67	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
27.75	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
26.82	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
25.89	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
24.96	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
24.04	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
23.11	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
22.18	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
21.25	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
20.33	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
19.40	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
18.47	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
17.55	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
16.62	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
15.69	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
14.76	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
13.84	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
12.91	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
11.98	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
11.05	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
10.13	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
9.20	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
8.27	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
7.35	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
6.42	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
5.49	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
4.56	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
3.64	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
2.71	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
1.78	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
0.85	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
-0.07	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	
-0.31	0.09	27.24	0.42664	14.55670	1	3.000	3.000	3.25	

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MINNESOTA

~~C-29~~

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MPOINT XMEAN YMEAN DEVX DEVY MODE NSIG-X NSIG-Y NSIG-Z 79PERIODIC X-AXIS=DOY YAXIS=  
 347 2.19 14.20 0.34405 1.27 14.89897 1 2.07 3.000 3.000 3.000 3.25  
 -0.31 0.46 0.48 0.48 1.27 1.67 2.07 2.46 2.86 3.25

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	NSIG-Z	79PERIODIC	X-AXIS=DOY	YAXIS=
50.00	0.09	2.19	0.46	1.27	1	2.07	3.000	3.000	3.000	3.25	
49.17											
48.15											
47.22											
46.29											
45.36											
44.44											
43.51											
42.58											
41.65											
40.73											
39.80											
38.87											
37.95											
37.02											
36.10											
35.17											
34.24											
33.31											
32.38											
31.45											
30.52											
29.59											
28.66											
27.73											
26.80											
25.87											
24.94											
24.01											
23.08											
22.15											
21.22											
20.29											
19.36											
18.43											
17.50											
16.57											
15.64											
14.71											
13.78											
12.85											
11.92											
10.99											
10.06											
9.13											
8.20											
7.27											
6.34											
5.41											
4.48											
3.55											
2.62											
1.69											
0.76											
-0.17											
-0.31											

ORIGINAL PAGE IS OF POOR QUALITY

YAKIS=

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVX

DEVY

YMEAN

XMEAN

MPOINT

0.09

2.46

0.48

0.88

1.27

1.67

2.07

2.46

2.86

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268

MPQNT 170 0.00 2.34 0.44 24.44 0.88 1.27 13.27 1.00 1.67 2.07 3.00 2.46 3.00 3.25 79PERIODIC X-AXIS=00Y YAXIS=

MPQNT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=00Y	YAXIS=				
-0.31	0.00	2.34	0.44	24.44	0.88	1.27	13.27	1.00	1.67	2.07	3.00	2.46	3.00	3.25
50.00														
49.07														
44.15														
47.22														
46.20														
45.34														
44.44														
43.51														
42.58														
41.63														
40.80														
38.87														
37.05														
35.09														
34.16														
34.31														
33.34														
31.45														
30.60														
28.67														
27.75														
26.82														
25.89														
24.96														
23.04														
22.11														
21.25														
20.33														
19.40														
18.55														
17.62														
16.74														
15.84														
14.94														
14.05														
13.13														
12.20														
11.27														
10.35														
9.49														
8.56														
7.64														
6.71														
5.85														
4.95														
4.07														
-0.31	0.09	0.44	0.88	1.27	1.67	2.07	2.46	2.86	3.25					

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264



MPOINT 0.09 2.19 0.48 17.85 0.88 0.33672 1.27 12.77288 1.57 2.07 3.00 2.46 3.00 2.86 3.25  
 774  
 -0.31

X-MEAN Y-MEAN  
 79PERIODIC X-AXIS=DOY Y-AXIS=

MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	Y-AXIS=
1	3.00	3.00	3.00	3.25
2	1	1	1	1
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	1	1	1	1
8	1	1	1	1
9	1	1	1	1
10	1	1	1	1
11	1	1	1	1
12	1	1	1	1
13	1	1	1	1
14	1	1	1	1
15	1	1	1	1
16	1	1	1	1
17	1	1	1	1
18	1	1	1	1
19	1	1	1	1
20	1	1	1	1
21	1	1	1	1
22	1	1	1	1
23	1	1	1	1
24	1	1	1	1
25	1	1	1	1
26	1	1	1	1
27	1	1	1	1
28	1	1	1	1
29	1	1	1	1
30	1	1	1	1
31	1	1	1	1
32	1	1	1	1
33	1	1	1	1
34	1	1	1	1
35	1	1	1	1
36	1	1	1	1
37	1	1	1	1
38	1	1	1	1
39	1	1	1	1
40	1	1	1	1
41	1	1	1	1
42	1	1	1	1
43	1	1	1	1
44	1	1	1	1
45	1	1	1	1
46	1	1	1	1
47	1	1	1	1
48	1	1	1	1
49	1	1	1	1
50	1	1	1	1
51	1	1	1	1
52	1	1	1	1
53	1	1	1	1
54	1	1	1	1
55	1	1	1	1
56	1	1	1	1
57	1	1	1	1
58	1	1	1	1
59	1	1	1	1
60	1	1	1	1
61	1	1	1	1
62	1	1	1	1
63	1	1	1	1
64	1	1	1	1
65	1	1	1	1
66	1	1	1	1
67	1	1	1	1
68	1	1	1	1
69	1	1	1	1
70	1	1	1	1
71	1	1	1	1
72	1	1	1	1
73	1	1	1	1
74	1	1	1	1
75	1	1	1	1
76	1	1	1	1
77	1	1	1	1
78	1	1	1	1
79	1	1	1	1
80	1	1	1	1
81	1	1	1	1
82	1	1	1	1
83	1	1	1	1
84	1	1	1	1
85	1	1	1	1
86	1	1	1	1
87	1	1	1	1
88	1	1	1	1
89	1	1	1	1
90	1	1	1	1
91	1	1	1	1
92	1	1	1	1
93	1	1	1	1
94	1	1	1	1
95	1	1	1	1
96	1	1	1	1
97	1	1	1	1
98	1	1	1	1
99	1	1	1	1
100	1	1	1	1

1 13 R N G E BE E  
 2.07 2.46 2.86 3.25

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 633

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OF POOR QUALITY

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CT

Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

749

3.25

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	Y AXIS =
-0.31	0.09	2.50	0.88	0.51705	1	2.07	3.000	3.000	3.25
720.67	0.48	35.83	1.27	18.90671	1	2.46	2.86	2.86	3.25
70.35									
69.02									
68.69									
65.36									
64.04									
62.71									
61.38									
60.05									
59.73									
57.40									
56.07									
55.75									
53.42									
52.09									
50.76									
49.44									
48.11									
46.78									
45.45									
44.12									
42.79									
41.46									
40.13									
38.80									
37.47									
36.14									
34.81									
33.48									
32.15									
30.82									
29.49									
28.16									
26.83									
25.50									
24.17									
22.84									
21.51									
20.18									
18.85									
17.52									
16.19									
14.86									
13.53									
12.20									
10.87									
9.54									
8.21									
6.88									
5.55									
4.22									
2.89									
1.56									
0.23									
-0.31	0.09	2.50	0.88	18.90671	1	2.07	3.000	3.000	3.25

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MPOINT XMEAN YMEAN DEVM DEVMX DEVSX XSIG-X NSIG-Y 79PERIODIC X-AXIS=DOY YAXIS=

MPOINT	XMEAN	YMEAN	DEVM	DEVMX	DEVSX	XSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
1222	2.48	19.86	0.48	0.50244	1.27	3.000	3.000		2.86	
-0.31	0.09	0.48	0.48	1.27	1.67	2.07	2.46		3.25	
52	1.04	19.86	0.48	0.50244	1.27	1	1	1	1	1
55	1.07	19.86	0.48	0.50244	1.27	1	1	1	1	1
49	1.1	19.86	0.48	0.50244	1.27	1	1	1	1	1
48	1.18	19.86	0.48	0.50244	1.27	1	1	1	1	1
47	1.22	19.86	0.48	0.50244	1.27	1	1	1	1	1
45	1.25	19.86	0.48	0.50244	1.27	1	1	1	1	1
44	1.29	19.86	0.48	0.50244	1.27	1	1	1	1	1
43	1.36	19.86	0.48	0.50244	1.27	1	1	1	1	1
42	1.40	19.86	0.48	0.50244	1.27	1	1	1	1	1
41	1.44	19.86	0.48	0.50244	1.27	1	1	1	1	1
40	1.47	19.86	0.48	0.50244	1.27	1	1	1	1	1
39	1.51	19.86	0.48	0.50244	1.27	1	1	1	1	1
38	1.55	19.86	0.48	0.50244	1.27	1	1	1	1	1
37	1.58	19.86	0.48	0.50244	1.27	1	1	1	1	1
36	1.62	19.86	0.48	0.50244	1.27	1	1	1	1	1
35	1.65	19.86	0.48	0.50244	1.27	1	1	1	1	1
34	1.69	19.86	0.48	0.50244	1.27	1	1	1	1	1
33	1.72	19.86	0.48	0.50244	1.27	1	1	1	1	1
32	1.76	19.86	0.48	0.50244	1.27	1	1	1	1	1
31	1.80	19.86	0.48	0.50244	1.27	1	1	1	1	1
30	1.84	19.86	0.48	0.50244	1.27	1	1	1	1	1
29	1.87	19.86	0.48	0.50244	1.27	1	1	1	1	1
28	1.91	19.86	0.48	0.50244	1.27	1	1	1	1	1
27	1.95	19.86	0.48	0.50244	1.27	1	1	1	1	1
26	1.99	19.86	0.48	0.50244	1.27	1	1	1	1	1
25	2.03	19.86	0.48	0.50244	1.27	1	1	1	1	1
24	2.07	19.86	0.48	0.50244	1.27	1	1	1	1	1
23	2.11	19.86	0.48	0.50244	1.27	1	1	1	1	1
22	2.15	19.86	0.48	0.50244	1.27	1	1	1	1	1
21	2.19	19.86	0.48	0.50244	1.27	1	1	1	1	1
20	2.23	19.86	0.48	0.50244	1.27	1	1	1	1	1
19	2.27	19.86	0.48	0.50244	1.27	1	1	1	1	1
18	2.31	19.86	0.48	0.50244	1.27	1	1	1	1	1
17	2.35	19.86	0.48	0.50244	1.27	1	1	1	1	1
16	2.38	19.86	0.48	0.50244	1.27	1	1	1	1	1
15	2.42	19.86	0.48	0.50244	1.27	1	1	1	1	1
14	2.45	19.86	0.48	0.50244	1.27	1	1	1	1	1
13	2.49	19.86	0.48	0.50244	1.27	1	1	1	1	1
12	2.53	19.86	0.48	0.50244	1.27	1	1	1	1	1
11	2.56	19.86	0.48	0.50244	1.27	1	1	1	1	1
10	2.60	19.86	0.48	0.50244	1.27	1	1	1	1	1
9	2.64	19.86	0.48	0.50244	1.27	1	1	1	1	1
8	2.67	19.86	0.48	0.50244	1.27	1	1	1	1	1
7	2.71	19.86	0.48	0.50244	1.27	1	1	1	1	1
6	2.75	19.86	0.48	0.50244	1.27	1	1	1	1	1
5	2.78	19.86	0.48	0.50244	1.27	1	1	1	1	1
4	2.82	19.86	0.48	0.50244	1.27	1	1	1	1	1
3	2.85	19.86	0.48	0.50244	1.27	1	1	1	1	1
2	2.89	19.86	0.48	0.50244	1.27	1	1	1	1	1
1	2.93	19.86	0.48	0.50244	1.27	1	1	1	1	1
0	2.97	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.043	3.01	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.08	3.05	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.12	3.09	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.16	3.13	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.20	3.17	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.24	3.21	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.28	3.25	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.32	3.29	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.36	3.33	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.40	3.37	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.44	3.41	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.48	3.45	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.52	3.49	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.56	3.53	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.60	3.57	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.64	3.61	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.68	3.65	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.72	3.69	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.76	3.73	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.80	3.77	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.84	3.81	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.88	3.85	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.92	3.89	19.86	0.48	0.50244	1.27	1	1	1	1	1
-0.96	3.93	19.86	0.48	0.50244	1.27	1	1	1	1	1
-1.00	3.97	19.86	0.48	0.50244	1.27	1	1	1	1	1

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MOOTHY	XMEAN	YMEAN	DEVS	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
	0.00	51.72	0.88	47.73218	1	3.000	3.000		3.25	
-0.31	0.48	1.27	1.67	2.07	1	4	4			
16.54					1	4	4			
123.38					1	4	4			
119.07					1	4	4			
116.76					1	4	4			
112.45					1	4	4			
109.84					1	4	4			
107.53					1	4	4			
105.22					1	4	4			
102.91					1	4	4			
98.29					1	4	4			
95.98					1	4	4			
93.67					1	4	4			
91.36					1	4	4			
89.05					1	4	4			
86.75					1	4	4			
84.44					1	4	4			
82.13					1	4	4			
79.82					1	4	4			
77.51					1	4	4			
75.20					1	4	4			
72.89					1	4	4			
70.58					1	4	4			
68.27					1	4	4			
65.96					1	4	4			
63.65					1	4	4			
61.35					1	4	4			
59.04					1	4	4			
56.73					1	4	4			
54.42					1	4	4			
52.11					1	4	4			
49.80					1	4	4			
47.49					1	4	4			
45.18					1	4	4			
42.87					1	4	4			
40.56					1	4	4			
38.25					1	4	4			
35.94					1	4	4			
33.63					1	4	4			
31.32					1	4	4			
29.01					1	4	4			
26.70					1	4	4			
24.39					1	4	4			
22.08					1	4	4			
19.77					1	4	4			
17.46					1	4	4			
15.15					1	4	4			
12.84					1	4	4			
10.53					1	4	4			
8.22					1	4	4			
5.91					1	4	4			
3.60					1	4	4			
1.29					1	4	4			
-0.02					1	4	4			

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Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVI

DEVI

Y-ERR

X-ERR

MPOINT

612

3.25

MPOINT	X-ERR	Y-ERR	DEVI	DEVI	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	Y AXIS =
-0.31	0.09	0.48	0.88	1.27	1	1	3.000	2.46	3.25	
30.00										
49.07										
49.15										
47.22										
45.39										
45.76										
44.44										
43.51										
42.58										
41.55										
40.73										
39.87										
37.95										
37.02										
36.16										
35.16										
34.31										
33.38										
31.45										
29.60										
28.67										
27.75										
26.80										
25.80										
24.84										
23.11										
22.25										
21.33										
19.40										
19.47										
17.55										
16.69										
15.69										
14.76										
13.84										
12.91										
11.08										
11.05										
10.13										
9.20										
8.27										
7.35										
6.42										
5.49										
4.56										
3.64										
2.71										
1.78										
1.05										
-0.073										
-0.31	0.09	0.48	0.88	1.27	2	2	3.000	2.46	3.25	

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MPPOINT	XMEAN	YMEAN	DEYX	DEY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
	0.09	73.12	0.88	35.72	1	3.000	3.000			
	0.47	0.44	1.27	1.67	2.17	2.46	2.86			
	0.09	0.44	0.88	1.27	2.17	2.46	2.86			
114.00										
111.01										
109.82										
107.75										
105.66										
103.55										
101.45										
99.36										
97.27										
95.18										
93.09										
91.00										
88.91										
86.82										
84.73										
82.64										
80.55										
78.46										
76.37										
74.28										
72.18										
70.09										
68.00										
65.91										
63.82										
61.73										
59.64										
57.55										
55.45										
53.36										
51.27										
49.18										
47.09										
45.00										
42.91										
40.82										
38.73										
36.64										
34.55										
32.45										
30.36										
28.27										
26.18										
24.09										
22.00										
19.91										
17.82										
15.73										
13.64										
11.55										
9.46										
7.36										
5.27										
3.18										
1.09										
-0.31										

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Y AXIS =

79 PERIODIC X-AXIS = DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 14.11147

DEVX 11.45432

Y-MEAN 34.37

X-MEAN 2.41

MPOINT 487

0.09

0.44

1.27

3.25

2.86

2.46

2.07

1.67

1.27

0.88

0.44

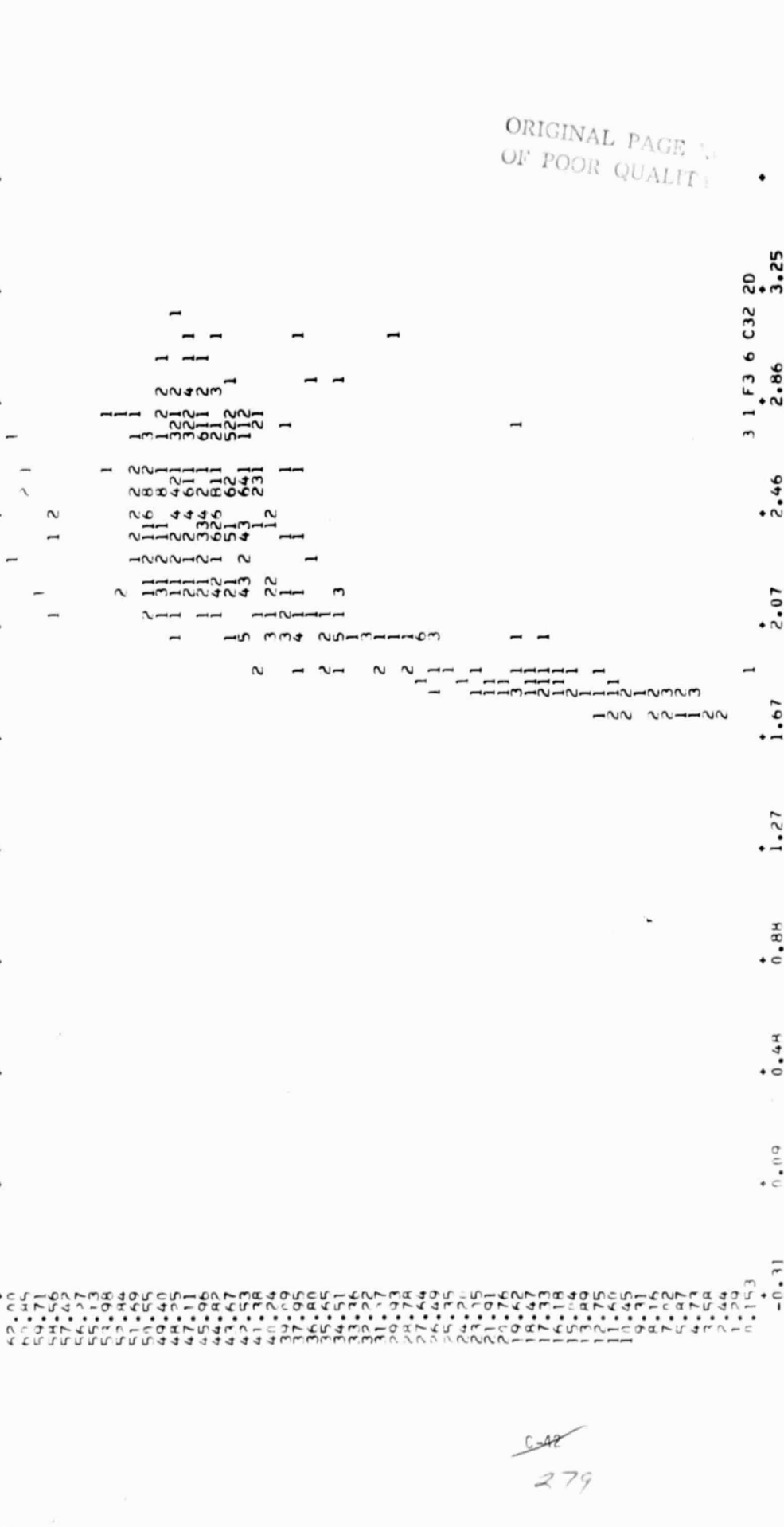
0.09

0.44

1.27

1.67

2.07



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POINT X MEAN Y MEAN DEVI DEVI DEVI NSIG-X NSIG-Y 79PERIODIC X-AXIS=DOY YAXIS=  
 R1 0.09 2.20 14.79 0.48 1.27 13.86 3.00 3.00 3.25  
 -0.31 0.48 0.48 0.48 1.67 1.67 2.46 2.86  
 50.00 1 2.07 3.00 3.00 3.00  
 49.07 1 2.07 3.00 3.00 3.00  
 48.15 1 2.07 3.00 3.00 3.00  
 47.22 1 2.07 3.00 3.00 3.00  
 46.29 1 2.07 3.00 3.00 3.00  
 45.36 1 2.07 3.00 3.00 3.00  
 44.44 1 2.07 3.00 3.00 3.00  
 43.51 1 2.07 3.00 3.00 3.00  
 42.58 1 2.07 3.00 3.00 3.00  
 41.65 1 2.07 3.00 3.00 3.00  
 40.73 1 2.07 3.00 3.00 3.00  
 39.80 1 2.07 3.00 3.00 3.00  
 38.87 1 2.07 3.00 3.00 3.00  
 37.95 1 2.07 3.00 3.00 3.00  
 37.02 1 2.07 3.00 3.00 3.00  
 36.09 1 2.07 3.00 3.00 3.00  
 35.16 1 2.07 3.00 3.00 3.00  
 34.24 1 2.07 3.00 3.00 3.00  
 33.31 1 2.07 3.00 3.00 3.00  
 32.38 1 2.07 3.00 3.00 3.00  
 31.45 1 2.07 3.00 3.00 3.00  
 30.53 1 2.07 3.00 3.00 3.00  
 29.60 1 2.07 3.00 3.00 3.00  
 28.67 1 2.07 3.00 3.00 3.00  
 27.75 1 2.07 3.00 3.00 3.00  
 26.82 1 2.07 3.00 3.00 3.00  
 25.89 1 2.07 3.00 3.00 3.00  
 24.97 1 2.07 3.00 3.00 3.00  
 24.04 1 2.07 3.00 3.00 3.00  
 23.11 1 2.07 3.00 3.00 3.00  
 22.18 1 2.07 3.00 3.00 3.00  
 21.25 1 2.07 3.00 3.00 3.00  
 20.32 1 2.07 3.00 3.00 3.00  
 19.40 1 2.07 3.00 3.00 3.00  
 18.47 1 2.07 3.00 3.00 3.00  
 17.55 1 2.07 3.00 3.00 3.00  
 16.62 1 2.07 3.00 3.00 3.00  
 15.69 1 2.07 3.00 3.00 3.00  
 14.76 1 2.07 3.00 3.00 3.00  
 13.84 1 2.07 3.00 3.00 3.00  
 12.91 1 2.07 3.00 3.00 3.00  
 11.98 1 2.07 3.00 3.00 3.00  
 11.05 1 2.07 3.00 3.00 3.00  
 10.13 1 2.07 3.00 3.00 3.00  
 9.20 1 2.07 3.00 3.00 3.00  
 8.27 1 2.07 3.00 3.00 3.00  
 7.35 1 2.07 3.00 3.00 3.00  
 6.42 1 2.07 3.00 3.00 3.00  
 5.49 1 2.07 3.00 3.00 3.00  
 4.56 1 2.07 3.00 3.00 3.00  
 3.64 1 2.07 3.00 3.00 3.00  
 2.71 1 2.07 3.00 3.00 3.00  
 1.78 1 2.07 3.00 3.00 3.00  
 0.85 1 2.07 3.00 3.00 3.00  
 -0.073 1 2.07 3.00 3.00 3.00  
 -0.31 1 2.07 3.00 3.00 3.00

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NORTH CAROLINA

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Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	Y AXIS =
-0.31	0.09	2.60	0.48	54.20	1	3.000	3.000	3.25	
1.08						2	1		
1.19						2	1		
1.16						2	1		
1.12						2	1		
1.07						2	1		
1.05						2	1		
1.03						2	1		
1.01						2	1		
0.96						2	1		
0.92						2	1		
0.87						2	1		
0.85						2	1		
0.81						2	1		
0.76						2	1		
0.72						2	1		
0.67						2	1		
0.65						2	1		
0.61						2	1		
0.55						2	1		
0.52						2	1		
0.45						2	1		
0.42						2	1		
0.39						2	1		
0.35						2	1		
0.31						2	1		
-0.31	0.09	2.60	0.48	54.20	1	3.000	3.000	3.25	

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Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

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0.09

551

-0.31

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3.000

2.07

15.66446

0.45348

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2.78

0.09

551

-0.31

3.25

3.000

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2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

3.25

3.000

3.000

2.07

15.66446

0.45348

27.448

2.78

0.09

551

-0.31

NORTH DAKOTA

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MPPOINT	ASGAM	YESTAY	DEVK	DEVT	DEVT	MODE	MSIG-X	MSIG-Y	79PERIODIC	X-AXIS=D0Y	Y-AXIS=
	0.03	0.04	0.04	0.27	1.27	1.07	3.000	3.000	3.25		
49											
48											
47											
46											
45											
44											
43											
42											
41											
40											
39											
38											
37											
36											
35											
34											
33											
32											
31											
30											
29											
28											
27											
26											
25											
24											
23											
22											
21											
20											
19											
18											
17											
16											
15											
14											
13											
12											
11											
10											
9											
8											
7											
6											
5											
4											
3											
2											
1											
0											

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MPPOINT 84.0 X16FAN 2.21 Y16FAN 21.11 DEFX 0.30509 DEFY 14.74268 MODE 1 NSIG-X 3.000 NSIG-Y 3.000 79PERIODIC X-AXIS=00Y X-AXIS=00Y Y-AXIS=

MPPOINT	X16FAN	Y16FAN	DEFX	DEFY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=00Y	Y-AXIS=
-0.31	0.09	0.48	0.48	1.27	1	2.07	2.46	3.25		
55.08										
57.08										
57.99										
57.99										
59.91										
48.89										
47.87										
46.85										
44.82										
43.80										
41.76										
39.73										
38.71										
37.69										
36.67										
35.65										
34.62										
33.60										
32.58										
31.56										
29.53										
27.51										
26.49										
25.47										
24.45										
23.43										
22.41										
21.39										
20.37										
19.35										
18.33										
17.31										
16.29										
15.27										
14.25										
13.23										
12.21										
11.19										
10.18										
9.16										
8.15										
7.13										
6.11										
5.09										
4.07										
3.05										
2.04										
1.02										
0.00										
-0.31	0.09	0.48	0.88	1.27	1	2.07	2.46	3.25		

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MPOINT	XMEAN	YMFAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	YAXIS=
1712	2.17	16.85	0.2734	12.65180	1	3.000	3.000	3.25	
0.31	0.09	0.48	1.27	1.67	2.07	2.46	2.86		
50.00									
49.07									
48.15									
47.22									
46.30									
45.36									
44.44									
43.51									
42.58									
41.65									
40.73									
39.80									
38.87									
37.95									
37.02									
36.10									
35.16									
34.23									
33.31									
32.38									
31.45									
30.53									
29.60									
28.67									
27.75									
26.82									
25.90									
24.96									
24.04									
23.11									
22.19									
21.27									
20.33									
19.40									
18.47									
17.55									
16.62									
15.69									
14.76									
13.84									
12.91									
11.98									
11.05									
10.13									
9.20									
8.27									
7.35									
6.42									
5.50									
4.57									
3.64									
2.71									
1.78									
0.85									
-0.07									
-0.31									

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OHIO

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CA

MPOINT	X MEAN	Y MEAN	DEVS	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
702	2.51	73.04	0.54643	43.75954	1	3.000	3.000			
	0.09	0.44	1.27	1.67	2	2.46	2.86		3.25	
124.00					1	1				
125.45					1	1				
123.31					1	1				
120.96					1	1				
118.27					1	1				
116.27					1	1				
113.23					1	1				
111.54					1	1				
109.24					1	1				
106.89					1	1				
104.55					1	1				
102.20					1	1				
99.85					1	1				
97.51					1	1				
95.16					1	1				
92.82					1	1				
90.47					1	1				
88.13					1	1				
85.78					1	1				
83.44					1	1				
81.09					1	1				
78.75					1	1				
76.40					1	1				
74.05					1	1				
71.71					1	1				
69.36					1	1				
67.02					1	1				
64.67					1	1				
62.33					1	1				
59.98					1	1				
57.64					1	1				
55.29					1	1				
52.95					1	1				
50.60					1	1				
48.25					1	1				
45.91					1	1				
43.56					1	1				
41.22					1	1				
38.87					1	1				
36.53					1	1				
34.18					1	1				
31.84					1	1				
29.49					1	1				
27.15					1	1				
24.80					1	1				
22.45					1	1				
20.11					1	1				
17.76					1	1				
15.42					1	1				
13.07					1	1				
10.73					1	1				
8.38					1	1				
6.04					1	1				
3.69					1	1				
1.35					1	1				
-0.31					1	1				

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MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=D0Y	YAXIS=
-0.31	0.00	0.48	0.88	1.27	1	3.000	3.000	3.25		
50.00										
49.07						1	1	1		
48.15										
47.22							1	1		
46.30										
45.36							1	1		
44.44										
43.51							1	1		
42.58						1	1	1		
41.65							1	1		
40.73							1	1		
39.80							1	1		
38.87							1	1		
37.95							1	1		
37.02							1	1		
36.09							1	1		
35.16							1	1		
34.24							1	1		
33.31							1	1		
32.38							1	1		
31.45							1	1		
30.53							1	1		
29.60							1	1		
28.67							1	1		
27.75							1	1		
26.82							1	1		
25.89							1	1		
24.96							1	1		
24.04							1	1		
23.11							1	1		
22.18							1	1		
21.25							1	1		
20.33							1	1		
19.40							1	1		
18.47							1	1		
17.55							1	1		
16.62							1	1		
15.69							1	1		
14.76							1	1		
13.84							1	1		
12.91							1	1		
11.98							1	1		
11.05							1	1		
10.13							1	1		
9.20							1	1		
8.27							1	1		
7.35							1	1		
6.42							1	1		
5.49							1	1		
4.56							1	1		
3.64							1	1		
2.71							1	1		
1.78							1	1		
0.85							1	1		
0.00							1	1		
-0.073							1	1		
-0.31							1	1		

PENNSYLVANIA

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YAXIS=

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
-0.31	0.09	2.26	0.48	0.88	1	2.07	3.000	2.46	3.000	3.25
18	0.05	65.11	1.27	1.67	1	2	11	2	3.000	
125	0.31				1	1	21	1	2.86	
120	0.62				1	1	11	1		
116	0.93				2	2	3	2		
113	1.24				2	2	2	2		
110	1.55				5	5	2	2		
106	1.85				3	3	2	2		
102	2.15				7	7	4	5		
99	2.45				3	3	1	2		
95	2.75				2	2	1	2		
92	3.05				1	1	2	2		
88	3.35				1	1	1	1		
85	3.65				1	1	1	1		
83	3.95				1	1	1	1		
81	4.25				1	1	1	1		
78	4.55				1	1	1	1		
77	4.85				1	1	1	1		
71	5.15				1	1	1	1		
69	5.45				1	1	1	1		
67	5.75				1	1	1	1		
64	6.05				1	1	1	1		
62	6.35				1	1	1	1		
59	6.65				1	1	1	1		
57	6.95				1	1	1	1		
55	7.25				1	1	1	1		
50	7.55				1	1	1	1		
48	7.85				1	1	1	1		
44	8.15				1	1	1	1		
43	8.45				1	1	1	1		
41	8.75				1	1	1	1		
38	9.05				1	1	1	1		
37	9.35				1	1	1	1		
32	9.65				1	1	1	1		
27	9.95				1	1	1	1		
22	10.25				1	1	1	1		
20	10.55				1	1	1	1		
15	10.85				1	1	1	1		
13	11.15				1	1	1	1		
11	11.45				1	1	1	1		
10	11.75				1	1	1	1		
8	12.05				1	1	1	1		
6	12.35				1	1	1	1		
1	12.65				1	1	1	1		
-0.31	0.09	2.26	0.48	0.88	1	2.07	3.000	2.46	3.000	3.25

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SOUTH CAROLINA

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MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
37A	0.09	57.51	0.52920	47.80423	1	3.000	3.000	3.25	
-0.31	0.44	0.84	1.27	1.67	1	2.07	2.46	2.86	
119.00					1	1			
116.44					1	1			
112.45					1	1			
110.09					1	1			
105.73					1	1			
101.55					1	1			
97.19					1	1			
95.02					1	1			
90.45					1	1			
88.27					1	1			
84.09					1	1			
82.91					1	1			
79.55					1	1			
77.18					1	1			
73.00					1	1			
71.02					1	1			
69.44					1	1			
64.45					1	1			
62.00					1	1			
60.91					1	1			
55.55					1	1			
55.55					1	1			
50.18					1	1			
47.02					1	1			
45.45					1	1			
40.27					1	1			
38.09					1	1			
33.73					1	1			
31.55					1	1			
27.14					1	1			
25.00					1	1			
22.09					1	1			
16.45					1	1			
14.09					1	1			
12.71					1	1			
10.55					1	1			
1.11					1	1			
-0.31					1	1			

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79PERIODIC X-AXIS=00Y YAXIS=

MODE NSIG-X NSIG-Y

MODE NSIG-X NSIG-Y

MODE NSIG-X NSIG-Y

MODE NSIG-X NSIG-Y

MODE NSIG-X NSIG-Y

MODE NSIG-X NSIG-Y

MODE NSIG-X NSIG-Y

MODE NSIG-X NSIG-Y

MODE NSIG-X NSIG-Y

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

MPPOINT 56A

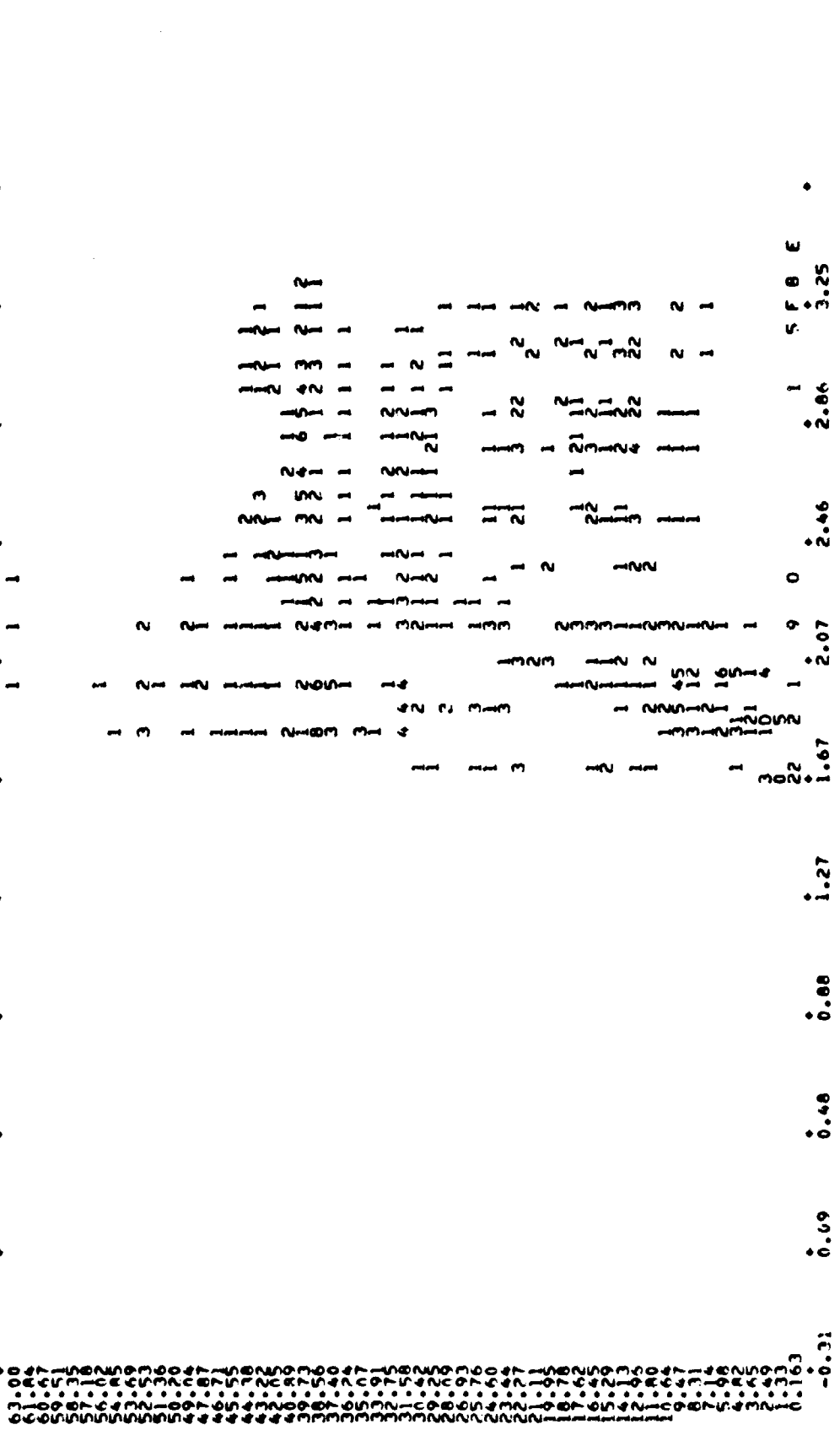
MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=00Y	YAXIS=
54	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
55	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
56	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
57	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
58	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
59	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
60	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
61	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
62	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
63	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
64	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
65	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
66	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
67	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
68	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
69	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
70	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
71	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
72	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
73	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
74	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
75	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
76	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
77	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
78	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
79	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
80	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
81	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
82	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
83	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
84	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
85	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
86	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
87	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
88	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
89	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
90	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
91	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
92	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
93	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
94	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
95	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
96	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
97	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
98	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
99	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	
100	2.51	24.64	0.84	15.94	1	3.00	3.00	1	3.25	

295

TEXAS

~~C-59~~  
296

MPOINT 649  
 XMEAN 2.41  
 YMEAN 21.57  
 DEVI 0.88  
 DEVI 1.27  
 DEVI 15.82216  
 MODE 1  
 NSIG-X 3.000  
 NSIG-Y 3.000  
 79PERIODIC X-AXIS=00  
 YAXIS=



C-80  
 227

YAXIS=

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 14.791

DEVX 0.45921

YMEAN 17.18

XMEAN 2.47

MPOINT 1052

0.09

0.48

1.27

1.67

3.25

Y	X	Z	C	M	H	Z	TR
-0.07	1	1	1	1	1	1	1
0.07	1	1	1	1	1	1	1
48.23	1	1	1	1	1	1	1
46.36	1	1	1	1	1	1	1
44.51	1	1	1	1	1	1	1
42.65	1	1	1	1	1	1	1
40.80	1	1	1	1	1	1	1
38.95	1	1	1	1	1	1	1
37.09	1	1	1	1	1	1	1
35.24	1	1	1	1	1	1	1
33.39	1	1	1	1	1	1	1
31.53	1	1	1	1	1	1	1
29.68	1	1	1	1	1	1	1
27.82	1	1	1	1	1	1	1
25.97	1	1	1	1	1	1	1
24.12	1	1	1	1	1	1	1
22.26	1	1	1	1	1	1	1
20.41	1	1	1	1	1	1	1
18.56	1	1	1	1	1	1	1
16.70	1	1	1	1	1	1	1
14.85	1	1	1	1	1	1	1
13.00	1	1	1	1	1	1	1
11.14	1	1	1	1	1	1	1
9.29	1	1	1	1	1	1	1
7.44	1	1	1	1	1	1	1
5.58	1	1	1	1	1	1	1
3.73	1	1	1	1	1	1	1
1.88	1	1	1	1	1	1	1
0.02	1	1	1	1	1	1	1
-0.83	1	1	1	1	1	1	1
-2.68	1	1	1	1	1	1	1
-4.53	1	1	1	1	1	1	1
-6.38	1	1	1	1	1	1	1
-8.23	1	1	1	1	1	1	1
-10.08	1	1	1	1	1	1	1
-11.93	1	1	1	1	1	1	1
-13.78	1	1	1	1	1	1	1
-15.63	1	1	1	1	1	1	1
-17.48	1	1	1	1	1	1	1
-19.33	1	1	1	1	1	1	1
-21.18	1	1	1	1	1	1	1
-23.03	1	1	1	1	1	1	1
-24.88	1	1	1	1	1	1	1
-26.73	1	1	1	1	1	1	1
-28.58	1	1	1	1	1	1	1
-30.43	1	1	1	1	1	1	1
-32.28	1	1	1	1	1	1	1
-34.13	1	1	1	1	1	1	1
-35.98	1	1	1	1	1	1	1
-37.83	1	1	1	1	1	1	1
-39.68	1	1	1	1	1	1	1
-41.53	1	1	1	1	1	1	1
-43.38	1	1	1	1	1	1	1
-45.23	1	1	1	1	1	1	1
-47.08	1	1	1	1	1	1	1
-48.93	1	1	1	1	1	1	1
-50.78	1	1	1	1	1	1	1
-52.63	1	1	1	1	1	1	1
-54.48	1	1	1	1	1	1	1
-56.33	1	1	1	1	1	1	1
-58.18	1	1	1	1	1	1	1
-60.03	1	1	1	1	1	1	1
-61.88	1	1	1	1	1	1	1
-63.73	1	1	1	1	1	1	1
-65.58	1	1	1	1	1	1	1
-67.43	1	1	1	1	1	1	1
-69.28	1	1	1	1	1	1	1
-71.13	1	1	1	1	1	1	1
-72.98	1	1	1	1	1	1	1
-74.83	1	1	1	1	1	1	1
-76.68	1	1	1	1	1	1	1
-78.53	1	1	1	1	1	1	1
-80.38	1	1	1	1	1	1	1
-82.23	1	1	1	1	1	1	1
-84.08	1	1	1	1	1	1	1
-85.93	1	1	1	1	1	1	1
-87.78	1	1	1	1	1	1	1
-89.63	1	1	1	1	1	1	1
-91.48	1	1	1	1	1	1	1
-93.33	1	1	1	1	1	1	1
-95.18	1	1	1	1	1	1	1
-97.03	1	1	1	1	1	1	1
-98.88	1	1	1	1	1	1	1
-100.73	1	1	1	1	1	1	1

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
399	2.13	22.67	0.88	20.21996	1	3.000	3.000			
-0.31	0.09	0.48	1.27	1.67	2.07	2.46	2.86	3.25		
56.00					1					
54.00					1					
52.00					2					
50.00					1					
49.75					1					
48.75					1					
47.75					1					
46.64					1					
45.60					1					
44.55					1					
43.50					1					
42.45					1					
40.45					1					
39.35					1					
38.31					1					
37.24					1					
36.20					1					
35.13					1					
34.05					1					
33.00					1					
32.00					1					
31.00					1					
30.00					1					
29.00					1					
28.00					1					
27.00					1					
26.00					1					
25.00					1					
24.00					1					
23.00					1					
22.00					1					
21.00					1					
20.00					1					
19.00					1					
18.00					1					
17.00					1					
16.00					1					
15.00					1					
14.00					1					
13.00					1					
12.00					1					
11.00					1					
10.00					1					
9.00					1					
8.00					1					
7.00					1					
6.00					1					
5.00					1					
4.00					1					
3.00					1					
2.00					1					
1.00					1					
0.00					1					
-0.31					1					

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Y AXIS =

79 PERIODIC X-AXIS = DOY

NSIG-Y 3.000 3.286

NSIG-X 3.000 2.46

MODE 1 2.07

DEVX 0.502 1.27

DEY 15.404 6.64

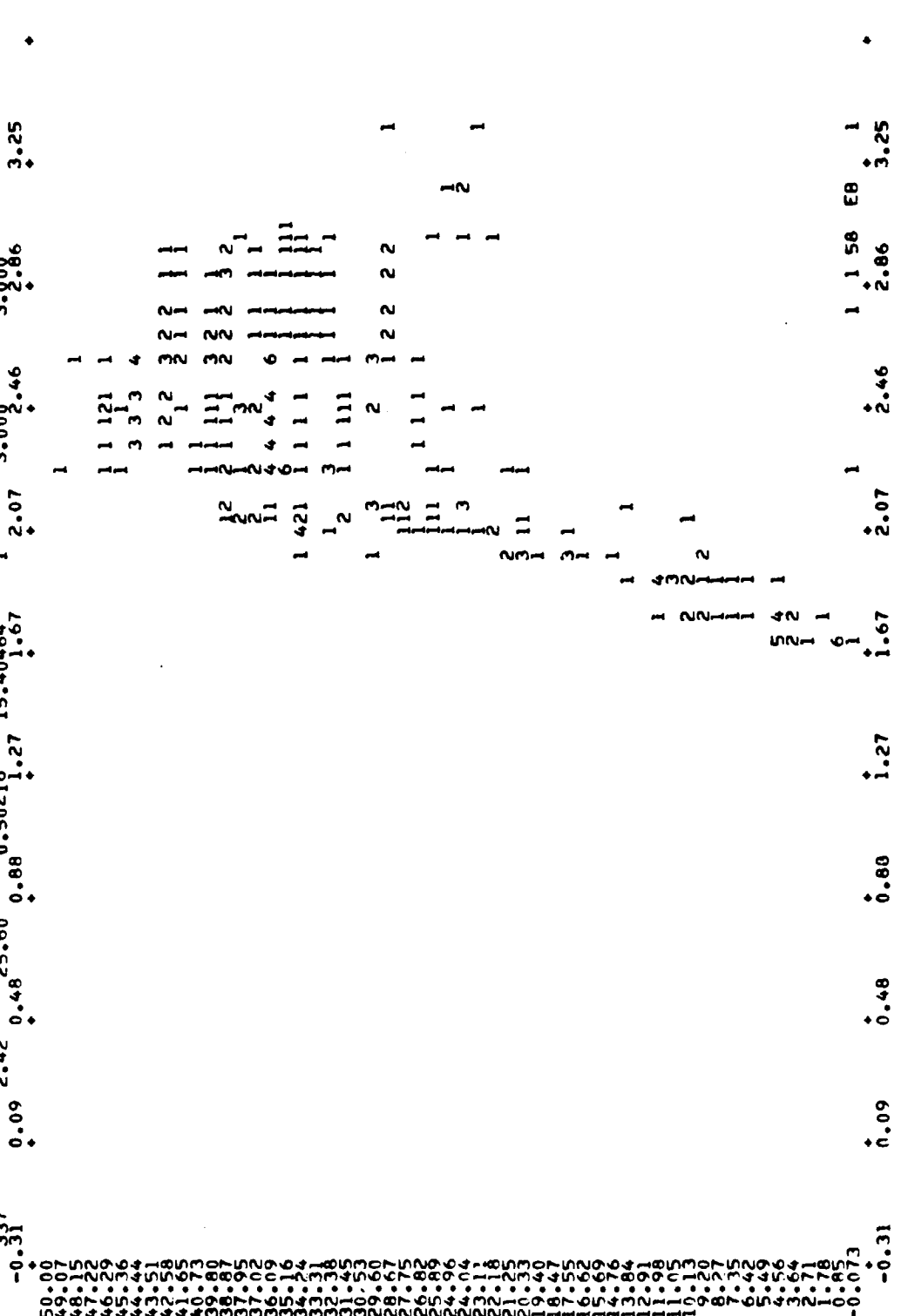
YMEAN 25.60

XMEAN 2.42

0.09 0.48 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20 3.40 3.60 3.80 4.00

MPOINT 337

-0.31



306

APPENDIX D  
GROUND COVER GRAPHS

~~D-7~~

301



ALABAMA

~~D-2~~  
302

C

79PERIODIC X-AXIS=DOY YAXIS=

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC
106	2.03	34.43	0.45346	45.01216	1	3.000	3.000	
-0.31	0.09	0.48	0.88	1.27	2	2.07	2.46	3.25

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MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC
106	2.03	34.43	0.45346	45.01216	1	3.000	3.000	
-0.31	0.09	0.48	0.88	1.27	2	2.07	2.46	3.25

100.00
96.18
92.76
88.55
84.73
80.91
77.09
73.27
69.45
65.73
61.91
58.09
54.27
50.45
46.64
42.82
39.01
35.09
31.18
27.45
23.64
19.82
16.00
12.18
8.36
4.54
0.73
-3.09
-0.31

D-3  
303

Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVX

DEVY

YMEAN

XMEAN

MPOINT

273

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	Y AXIS =
-0.31	0.09	0.44	0.88	1.27	1	3.000	3.000	3.25		
100.00	2.59	76.21	0.56724	25.95438		7	60	04	J	K
198.18					2	G	91	IA	0	9
96.37					4	S				K
92.76					1	K	I			
90.45					4					
88.55										
86.64										
84.73										
82.82										
80.91										
79.00										
77.09										
75.18										
73.27										
71.36										
69.45										
67.54										
65.63										
63.72										
61.81										
59.90										
58.00										
56.09										
54.18										
52.27										
50.36										
48.45										
46.54										
44.63										
42.72										
40.81										
38.90										
37.00										
35.09										
33.18										
31.27										
29.36										
27.45										
25.54										
23.63										
21.72										
19.81										
17.90										
16.00										
14.09										
12.18										
10.27										
8.36										
6.45										
4.54										
2.63										
0.72										
-1.19										
-3.00										
-0.31	0.09	0.48	0.88	1.27	1	67	2.07	2.46	2.86	3.25

MPOINT	XMEAN	YMFAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
0.09	2.47	53.27	0.88	42.24785	1	3.000	3.000		
0.09	0.48	1.27	1.27	1.67	1	2.07	2.86		3.25
100.00									
96.18					1	F	E	28	C
94.27									
92.36					7	5	4	6	7
90.45									
88.55									
86.64									
84.73									
82.82									
80.91									
79.00									
77.09					1	1	3	13	3
75.18									
73.27									
71.36									
69.45					3	1	4	2	2
67.55									
65.64									
63.73									
61.82									
59.91									
58.00					3	1	1	1	2
56.09									
54.18									
52.27					2				
50.36									
48.45									
46.54									
44.63									
42.72									
40.81									
38.90									
37.00									
35.09					3	1	1		1
33.18									
31.27									
29.36									
27.45									
25.54									
23.63									
21.72									
19.81					1				
17.90									
16.00									
14.09									
12.18									
10.27									
8.36									
6.45					0	1			1
4.54									2
2.63									
0.72									
-1.18									
-3.09									
-0.31									
0.09	0.48	1.27	0.88	1.67	2.07	2.46	2.86		3.25

0.5  
307

ARKANSAS

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306

CT

MPOINT	XMEAN	YMEAN	DFVX	DFVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
-0.31	0.00	0.48	0.88	1.27	1	3.00	3.000	3.25	
110.00	2.35	54.27	0.88	31.54680	1	2.07	2.46		
93.00									
94.18									
94.27									
99.27									
99.45									
148.64					2	3	3		
146.73									
82.82									
70.00					5	1	4	4	2
77.00									
75.18									
73.27									
71.36									
69.45									
67.55									
65.64					2	2	3	3	3
63.73									
61.82									
59.91									
58.00									
56.09									
54.18					3	1	1	2	1
52.27									
50.36									
48.45									
46.55									
44.64									
42.73					5	1	1	1	2
40.82									
38.91									
37.00									
35.09									
33.18									
31.27									
29.36									
27.45									
25.54									
23.63									
21.72									
19.81									
17.90									
16.00									
14.09					6	3			
12.18									
10.27									
8.36									
6.45									
4.54									
2.63									
0.72									
-1.19									
-3.00									
-0.31	0.00	0.48	0.88	1.27	2.07	2.46	2.86	3.25	

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307

79PERIODIC X-AXIS=DOY YAXIS=

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	MSIG-X	MSIG-Y
100	2.26	75.97	0.44	37.45	1	3.00	3.00
-0.31	0.19	0.44	1.27	1.67		2.46	2.86
100.00							3.25

100.00							
94.19							
86.27							
75.74							
64.55							
54.64							
44.73							
35.91							
27.09							
17.19							
7.36							
-2.55							
-12.73							
-22.91							
-33.09							
-43.27							
-53.45							
-63.63							
-73.81							
-83.99							
-94.17							
-104.35							
-114.53							
-124.71							
-134.89							
-145.07							
-155.25							
-165.43							
-175.61							
-185.79							
-195.97							
-206.15							
-216.33							
-226.51							
-236.69							
-246.87							
-257.05							
-267.23							
-277.41							
-287.59							
-297.77							
-307.95							
-318.13							
-328.31							
-338.49							
-348.67							
-358.85							
-369.03							
-379.21							
-389.39							
-399.57							
-409.75							
-419.93							
-430.11							
-440.29							
-450.47							
-460.65							
-470.83							
-481.01							
-491.19							
-501.37							
-511.55							
-521.73							
-531.91							
-542.09							
-552.27							
-562.45							
-572.63							
-582.81							
-592.99							
-603.17							
-613.35							
-623.53							
-633.71							
-643.89							
-654.07							
-664.25							
-674.43							
-684.61							
-694.79							
-704.97							
-715.15							
-725.33							
-735.51							
-745.69							
-755.87							
-766.05							
-776.23							
-786.41							
-796.59							
-806.77							
-816.95							
-827.13							
-837.31							
-847.49							
-857.67							
-867.85							
-878.03							
-888.21							
-898.39							
-908.57							
-918.75							
-928.93							
-939.11							
-949.29							
-959.47							
-969.65							
-979.83							
-989.99							
-1000.17							

E E E E E E E E E C I

C 2

0.19	0.44	0.88	1.27	1.67	2.07	2.46	2.86	3.25
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CALIFORNIA

~~D-10~~  
310



MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
100.00	0.00	2.44	0.58071	39.12443	1	3.000	3.000		
99.09	0.48	64.57	0.88	1.27	1	2.07	2.86	3.25	
95.27					1	1	8	9	4
92.76									
90.45									
88.55									
86.64									
84.73									
82.82									
80.91									
79.00									
77.09									
75.18									
73.27									
71.36									
69.45									
67.54									
65.63									
63.73									
61.82									
59.91									
58.00									
56.09									
54.18									
52.27									
50.36									
48.45									
46.54									
44.63									
42.72									
40.81									
38.90									
37.09									
35.18									
33.27									
31.36									
29.45									
27.54									
25.63									
23.72									
21.81									
19.90									
18.09									
16.18									
14.27									
12.36									
10.45									
8.54									
6.63									
4.72									
2.81									
0.90									
-0.31									

3/2

GEORGIA

~~D-13~~

313

Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 49.38783

DEVX 0.50217

YMEAN 43.49

XMEAN 2.48

MPOINT 608

0.09

0.09	0.48	0.88	1.27	1.67	2.07	2.46	3.000	3.25
108.00	96.18	94.27	92.00	90.00	88.00	86.00	84.00	82.00
80.00	78.00	76.00	74.00	72.00	70.00	68.00	66.00	64.00
62.00	60.00	58.00	56.00	54.00	52.00	50.00	48.00	46.00
44.00	42.00	40.00	38.00	36.00	34.00	32.00	30.00	28.00
26.00	24.00	22.00	20.00	18.00	16.00	14.00	12.00	10.00
8.00	6.00	4.00	2.00	0.00	-2.00	-4.00	-6.00	-8.00
-10.00	-12.00	-14.00	-16.00	-18.00	-20.00	-22.00	-24.00	-26.00
-28.00	-30.00	-32.00	-34.00	-36.00	-38.00	-40.00	-42.00	-44.00
-46.00	-48.00	-50.00	-52.00	-54.00	-56.00	-58.00	-60.00	-62.00
-64.00	-66.00	-68.00	-70.00	-72.00	-74.00	-76.00	-78.00	-80.00
-82.00	-84.00	-86.00	-88.00	-90.00	-92.00	-94.00	-96.00	-98.00
-100.00								

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0.09 0.48 0.88 1.27 1.67 2.07 2.46 3.000 3.25



ILLINOIS

~~D-16~~

316

MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	Y-AXIS=
-0.31	0.00	0.48	0.48	1.27	1	3.000	3.000			
100.00	2.39	66.71	0.48	37.20	4	3.000	3.000			
98.09										
94.27										
92.36										
90.45										
88.55										
86.64										
84.73										
82.82										
80.91										
79.00										
77.09										
75.18										
73.27										
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33.36										
31.45										
29.54										
27.63										
25.72										
23.81										
21.90										
19.99										
18.08										
16.17										
14.26										
12.35										
10.44										
8.53										
6.62										
4.71										
2.80										
0.89										
-0.31										

CR



MPOINT	X-MEAN	Y-MEAN	UEVA	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=00Y	YAXIS=
571	2.34	55.34	0.44	41.32663	1	3.000	3.000			
-0.31	0.09	0.44	0.34	1.27		2.07	2.86		3.25	
190.00					1		9			
96.18										
94.27					2	4	1			
92.36										
90.45										
88.54					7	8	13	1		
86.63										
84.72										
82.81										
80.90										
79.00										
77.09										
75.18										
73.27										
71.36										
69.45										
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65.63										
63.72										
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48.44										
46.53										
44.62										
42.71										
40.80										
38.89										
37.00										
35.09										
33.18										
31.27										
29.36										
27.45										
25.54										
23.63										
21.72										
19.81										
17.90										
16.00										
14.09										
12.18										
10.27										
8.36										
6.45										
4.54										
2.63										
0.72										
-1.19										
-3.31	0.09	0.44	0.88	1.27		2.07	2.86		3.25	

~~0.18~~  
318

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319

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MPOINT	XMEAN	YMEAN	DEVI	DEVI	DEVI	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=00Y	YAXIS=
1074	2.45	70.54	0.44	0.4479	37.0073	1	3.000	3.000		
-0.31	0.00	0.44	1.27	1.27	1.67		2.46	2.86	3.25	
100.00										
99.09										
94.18										
92.76										
90.45										
86.64										
82.73										
82.02										
80.91										
79.00										
77.09										
73.27										
71.36										
69.45										
67.54										
65.63										
63.72										
61.81										
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19.81										
17.90										
16.00										
14.09										
12.18										
10.27										
8.36										
6.45										
4.54										
2.63										
0.72										
-1.19										
-0.31	0.00	0.48	1.27	1.27	1.67		2.46	2.86	3.25	

D-20  
320

MPDINT	KMEAN	YMEAN	DEVX	DEVY	MODE	MSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	Y-AXIS=
0.31	2.34	51.52	0.48	36.71	1	3.000	3.000			
10.00	0.09	0.44	1.27	1.67	3	2.07	2.46			3.25
96.18					C	C	A			
94.27					2	00	8	22	L	3
92.36					E	F7	4	3	0	J
90.45										
88.55										
86.64										
84.73										
82.82										
80.91										
79.00										
77.09										
75.18										
73.27										
71.36										
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19.81										
17.90										
16.00										
14.09										
12.18										
10.27										
8.36										
6.45										
4.54										
2.63										
0.72										
-1.19										
-0.31										

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321

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322

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=00Y	YAKIS=
1714	2.39	67.04	0.52836	3A.40799	1	3.000	3.000		
-0.31	0.09	0.4K	1.27	1.67	2.07	2.46	2.86	3.25	
100.00					J OK P		9E5 R FM2		
92.27					2 8 M34 I0 4 C 1 43 2 L15 96 D 9 5 2 1				
92.36					13 I82 4 1 2 1 I I 1 C 4 2 1				
90.55					68 2 923 21	6	3	3	1
86.64					7L 6 62			3	1
82.42					EP 3 61				
82.91					59M 3				
79.00					1 53A 2				
77.18					6 K 524 1				
73.37					E Z X 9 H 2				
71.36									
65.44									
63.22									
61.81									
59.09									
55.55									
55.55									
54.42									
44.42									
42.09									
37.09									
33.17									
32.25									
22.25									
16.42									
11.86									
2.00									
-0.31	0.09	0.48	1.27	1.67	2.07	2.46	2.86	3.25	

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Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 41.24133

DEVX 0.46296

YMEAN 48.42

XMEAN 2.41

MPOINT 1639

-0.31

0.09

POINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	Y AXIS =
-0.31	0.09	48.42	0.46296	41.24133	1	3.000	3.000	3.25	
100.00	0.44	48.42	0.68	1.27	319	2.07	2.46		
194.09									
96.18									
92.27									
92.36									
92.45									
92.54									
92.63									
92.72									
92.81									
92.90									
93.00									
93.09									
93.18									
93.27									
93.36									
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99.81									
99.90									
100.00									

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LOUISIANA

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325-



Y AXIS =

79PERIODIC K-AXIS=DOY

NSIG-Y

NSIG-X

MOUF

DEYV

DEYX

YREF01

XREF01

MPOINT

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100.00  
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 63.73  
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 326

Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MOUE

DE VY

DE VA

Y-FON

XMFAN

MPPOINT

269

3.25

3.25

MPPOINT	XMFAN	Y-FON	DE VA	DE VY	MOUE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	Y AXIS =
-0.31	0.09	0.44	0.44	1.27	1	2.07	3.00	3.25	
100.00	2.25	41.52	0.44336	43.66234	3	M7E1742	3.00		
92.118									
94.274									
90.745									
88.555									
85.644									
84.773									
83.91									
79.00									
75.27									
73.26									
69.25									
67.25									
65.25									
63.25									
61.25									
58.00									
56.18									
52.27									
50.26									
48.25									
46.25									
44.25									
42.25									
39.00									
37.00									
35.00									
33.27									
31.27									
27.45									
25.44									
23.73									
21.91									
19.00									
17.00									
15.19									
13.27									
11.27									
9.45									
6.25									
2.25									
0.25									
-1.00									
-0.31	0.09	0.44	0.44	1.27	1	2.07	3.00	3.25	

0-27  
327

Y AXIS =

79 PERIODIC X-AXIS=DOY

NSIG-X NSIG-Y

DEVX DEYY

YMFAN YMFAM

XMFAN XMFAM

MODE

MPOINT

945

3.25

MPOINT	XMFAN	XMFAM	DEVX	DEYY	MODE	NSIG-X	NSIG-Y	79 PERIODIC	Y AXIS =
-0.31	0.09	2.53	0.48	56.35	0.88	1.27	40.43	1.67	3.25
100.00									
92.19									
94.27									
90.25									
89.55									
86.64									
84.73									
82.82									
80.91									
79.00									
77.09									
75.18									
73.27									
71.36									
69.45									
67.54									
65.63									
63.72									
61.81									
59.90									
58.00									
56.09									
54.18									
52.27									
50.36									
48.45									
46.54									
44.63									
42.72									
40.81									
38.90									
37.00									
35.09									
33.18									
31.27									
29.36									
27.45									
25.54									
23.63									
21.72									
19.81									
17.90									
16.00									
14.09									
12.18									
10.27									
8.36									
6.45									
4.54									
2.63									
0.72									
-1.19									
-0.31	0.09	0.48	0.88	1.27	1.67	2.07	2.46	2.86	3.25

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MINNESOTA

~~D-29~~

329.

B

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
347	2.19	41.56	0.88	43.39758	1	3.000	3.000		
-0.31	0.04	0.48	1.27	1.67		2.07	2.46	3.25	
100.00					0	C	F	6	6
94.09					1	2	9	3	3
96.14									
94.27					4	3	4	3	1
92.36					1	1	1	1	1
90.45					6	2	5	1	2
88.55					1	5	2	2	1
86.64									
84.73					3	4	1	3	1
82.82									
80.91					9	3	1	1	3
79.00									
77.09					2	1	1	4	1
75.18									
73.27					4	1	1	1	1
71.36									
69.45					1	5	2	2	1
67.55									
65.64					3	4	1	3	1
63.73									
61.82									
59.91					3	4	1	3	1
58.00									
56.09					9	3	1	1	3
54.18									
52.27					2	1	1	4	1
50.36									
48.45					4	1	1	1	1
46.54									
44.64					2	1	1	4	1
42.73									
40.82					4	1	1	1	1
38.91									
37.00					2	4			
35.09									
33.18					3	2	2		
31.27									
29.36									
27.45									
25.54									
23.64									
21.73									
19.82									
17.91									
16.00									
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0.73									
-1.18									
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-17.91									
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-97.91									
-99.91									
-100.00									

D-30  
330

(1)

YAXIS=

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 24.407016

DEVX 0.48475

YMEAN 2.46

YMEAN 0.44

YMEAN 0.44

YMEAN 0.44

YMEAN 0.44

YMEAN 0.44

YMEAN 0.44

YMEAN 0.44

YMEAN 0.44

4 E E H E E F E E E C 4

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5

Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVI

YMEAN

X MEAN

MPOINT

170

3.25

MPOINT	X MEAN	YMEAN	DEVI	DEVI	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	Y AXIS =
-0.31	0.09	0.48	0.88	1.27	1	2.46	3.00	3.25	
100.00					2	5	1		
96.14					6	7	1		
92.27					3				
88.45									
84.64									
80.82									
77.09									
73.27									
69.45									
65.64					1		3	2	2
61.82									
58.00					2	2		1	3
54.18									
50.36					4	1		1	1
46.55									
42.73									
38.91									
35.09									
31.27					7	1		1	1
27.45									
23.64					3			1	
19.82									
16.00									
12.18									
8.36									
4.55									
0.73									
-3.09									
-0.31	0.09	0.48	0.88	1.27	2	0.7	2.46	2.86	3.25

0.32  
332

YAXIS=

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

774

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
-0.31	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
100.00	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
94.14	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
92.27	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
90.45	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
88.55	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
86.64	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
84.73	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
82.82	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
80.91	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
79.00	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
77.09	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
75.18	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
73.27	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
71.36	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
69.45	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
67.55	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
65.64	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
63.73	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
61.82	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
59.91	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
58.00	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
56.09	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
54.18	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
52.27	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
50.36	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
48.45	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
46.55	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
44.64	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
42.73	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
40.82	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
38.91	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
37.00	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
35.09	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
33.18	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
31.27	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
29.36	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
27.45	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
25.54	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
23.63	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
21.72	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
19.81	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
17.90	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
16.00	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
14.09	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
12.18	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
10.27	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
8.36	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
6.45	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
4.54	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
2.63	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
0.72	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
-1.19	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25
-3.31	0.00	2.19	0.48	60.97	0.88	0.31672	1.27	1.67	3.25

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3 1 49 7 0 2 9 1 2 2 1 4

2 1 30 4 3 1 2 7 7 3

5 4 60 2 7 2 2 1 4

3 6 69 2 2 3 5 2

5 2 1 1 1 1

6 1 3 1

0 4

1

1.67 2.07 2.46 2.86 3.25

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333



MISSISSIPPI

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MPOINT	XMEAN	YMEAN	DEVX	DEVY	MOVE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
1222	0.09	2.48	0.44	1.27	1	3.00	3.20		
-0.31	0.44	0.44	0.44	1.67	2.07	2.46	2.86	3.25	
100.00									
98.09									
96.18									
94.27									
92.36									
90.45									
88.54									
86.63									
84.72									
82.81									
80.90									
79.00									
77.09									
75.18									
73.27									
71.36									
69.45									
67.54									
65.63									
63.72									
61.81									
59.90									
58.00									
56.09									
54.18									
52.27									
50.36									
48.45									
46.54									
44.63									
42.72									
40.81									
38.90									
37.00									
35.09									
33.18									
31.27									
29.36									
27.45									
25.54									
23.63									
21.72									
19.81									
17.90									
16.00									
14.09									
12.18									
10.27									
8.36									
6.45									
4.54									
2.63									
0.72									
-1.19									
-3.00									
-0.31	0.09	0.44	0.88	1.27	1.67	2.07	2.46	2.86	3.25

0-36  
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MISSOURI

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337



Y AXIS =

79PERIODIC X-AXIS=00Y

NS10-Y 3.000

US10-X 3.000

GROUP 1 2.07

DEVX 0.44

DEVY 42.74207

YMEAN 47.04

XMEAN 2.44

MEAN 0.09

612

-0.31

MEAN	YMEAN	DEVX	DEVY	GROUP	US10-X	NS10-Y	79PERIODIC X-AXIS=00Y	Y AXIS =
0.09	47.04	0.44	42.74207	1	2.07	3.000	3.25	
7	04	04	04	7	04	04	04	04
A	5A	7	5	3	3	3	3	3
11	5	34	5	1	4	1	1	1
7	41	1	2	2	2	2	2	2
1	0	11	2	1	1	1	1	1
A	E	22	4	4	3	1	1	1
5	6	1	1	1	1	1	1	1
14	7	2	2	2	2	2	2	2
24	3	3	3	3	3	3	3	3
K8	0	20	6	6	6	6	6	6
0.09	0.44	1.27	1.67	2.07	2.46	2.86	3.25	
-0.31								

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NEBRASKA

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Y AXIS=

79PERIODIC X-AXIS=DOY

NSIG-X NSIG-Y

MODE

DEVY

DEVA

YMEAN

XMEAN

MPOINT	DEVY	DEVA	YMEAN	XMEAN	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	Y AXIS=
-0.31	1.67	1.27	54.26	2.41	1	3.000	3.000			
100.00	34.97533	0.34	0.44	0.09	1	2.07	2.46			3.25
92.09	1.67	1.27	54.26	2.41	1	3.000	3.000			
94.27	1.67	1.27	54.26	2.41	1	3.000	3.000			
90.45	1.67	1.27	54.26	2.41	1	3.000	3.000			
88.55	1.67	1.27	54.26	2.41	1	3.000	3.000			
86.64	1.67	1.27	54.26	2.41	1	3.000	3.000			
84.73	1.67	1.27	54.26	2.41	1	3.000	3.000			
82.82	1.67	1.27	54.26	2.41	1	3.000	3.000			
80.91	1.67	1.27	54.26	2.41	1	3.000	3.000			
79.00	1.67	1.27	54.26	2.41	1	3.000	3.000			
77.09	1.67	1.27	54.26	2.41	1	3.000	3.000			
75.18	1.67	1.27	54.26	2.41	1	3.000	3.000			
73.27	1.67	1.27	54.26	2.41	1	3.000	3.000			
71.36	1.67	1.27	54.26	2.41	1	3.000	3.000			
69.45	1.67	1.27	54.26	2.41	1	3.000	3.000			
67.54	1.67	1.27	54.26	2.41	1	3.000	3.000			
65.63	1.67	1.27	54.26	2.41	1	3.000	3.000			
63.72	1.67	1.27	54.26	2.41	1	3.000	3.000			
61.81	1.67	1.27	54.26	2.41	1	3.000	3.000			
59.90	1.67	1.27	54.26	2.41	1	3.000	3.000			
58.00	1.67	1.27	54.26	2.41	1	3.000	3.000			
56.09	1.67	1.27	54.26	2.41	1	3.000	3.000			
54.18	1.67	1.27	54.26	2.41	1	3.000	3.000			
52.27	1.67	1.27	54.26	2.41	1	3.000	3.000			
50.36	1.67	1.27	54.26	2.41	1	3.000	3.000			
48.45	1.67	1.27	54.26	2.41	1	3.000	3.000			
46.54	1.67	1.27	54.26	2.41	1	3.000	3.000			
44.63	1.67	1.27	54.26	2.41	1	3.000	3.000			
42.72	1.67	1.27	54.26	2.41	1	3.000	3.000			
40.81	1.67	1.27	54.26	2.41	1	3.000	3.000			
38.90	1.67	1.27	54.26	2.41	1	3.000	3.000			
37.00	1.67	1.27	54.26	2.41	1	3.000	3.000			
35.09	1.67	1.27	54.26	2.41	1	3.000	3.000			
33.18	1.67	1.27	54.26	2.41	1	3.000	3.000			
31.27	1.67	1.27	54.26	2.41	1	3.000	3.000			
29.36	1.67	1.27	54.26	2.41	1	3.000	3.000			
27.45	1.67	1.27	54.26	2.41	1	3.000	3.000			
25.54	1.67	1.27	54.26	2.41	1	3.000	3.000			
23.63	1.67	1.27	54.26	2.41	1	3.000	3.000			
21.72	1.67	1.27	54.26	2.41	1	3.000	3.000			
19.81	1.67	1.27	54.26	2.41	1	3.000	3.000			
17.90	1.67	1.27	54.26	2.41	1	3.000	3.000			
16.00	1.67	1.27	54.26	2.41	1	3.000	3.000			
14.09	1.67	1.27	54.26	2.41	1	3.000	3.000			
12.18	1.67	1.27	54.26	2.41	1	3.000	3.000			
10.27	1.67	1.27	54.26	2.41	1	3.000	3.000			
8.36	1.67	1.27	54.26	2.41	1	3.000	3.000			
6.45	1.67	1.27	54.26	2.41	1	3.000	3.000			
4.54	1.67	1.27	54.26	2.41	1	3.000	3.000			
2.63	1.67	1.27	54.26	2.41	1	3.000	3.000			
0.72	1.67	1.27	54.26	2.41	1	3.000	3.000			
-1.19	1.67	1.27	54.26	2.41	1	3.000	3.000			
-3.28	1.67	1.27	54.26	2.41	1	3.000	3.000			
-5.37	1.67	1.27	54.26	2.41	1	3.000	3.000			
-7.46	1.67	1.27	54.26	2.41	1	3.000	3.000			
-9.55	1.67	1.27	54.26	2.41	1	3.000	3.000			
-11.64	1.67	1.27	54.26	2.41	1	3.000	3.000			
-13.73	1.67	1.27	54.26	2.41	1	3.000	3.000			
-15.82	1.67	1.27	54.26	2.41	1	3.000	3.000			
-17.91	1.67	1.27	54.26	2.41	1	3.000	3.000			
-20.00	1.67	1.27	54.26	2.41	1	3.000	3.000			
-22.09	1.67	1.27	54.26	2.41	1	3.000	3.000			
-24.18	1.67	1.27	54.26	2.41	1	3.000	3.000			
-26.27	1.67	1.27	54.26	2.41	1	3.000	3.000			
-28.36	1.67	1.27	54.26	2.41	1	3.000	3.000			
-30.45	1.67	1.27	54.26	2.41	1	3.000	3.000			
-32.54	1.67	1.27	54.26	2.41	1	3.000	3.000			
-34.63	1.67	1.27	54.26	2.41	1	3.000	3.000			
-36.72	1.67	1.27	54.26	2.41	1	3.000	3.000			
-38.81	1.67	1.27	54.26	2.41	1	3.000	3.000			
-40.90	1.67	1.27	54.26	2.41	1	3.000	3.000			
-42.99	1.67	1.27	54.26	2.41	1	3.000	3.000			
-45.08	1.67	1.27	54.26	2.41	1	3.000	3.000			
-47.17	1.67	1.27	54.26	2.41	1	3.000	3.000			
-49.26	1.67	1.27	54.26	2.41	1	3.000	3.000			
-51.35	1.67	1.27	54.26	2.41	1	3.000	3.000			
-53.44	1.67	1.27	54.26	2.41	1	3.000	3.000			
-55.53	1.67	1.27	54.26	2.41	1	3.000	3.000			
-57.62	1.67	1.27	54.26	2.41	1	3.000	3.000			
-59.71	1.67	1.27	54.26	2.41	1	3.000	3.000			
-61.80	1.67	1.27	54.26	2.41	1	3.000	3.000			
-63.89	1.67	1.27	54.26	2.41	1	3.000	3.000			
-65.98	1.67	1.27	54.26	2.41	1	3.000	3.000			
-68.07	1.67	1.27	54.26	2.41	1	3.000	3.000			
-70.16	1.67	1.27	54.26	2.41	1	3.000	3.000			
-72.25	1.67	1.27	54.26	2.41	1	3.000	3.000			
-74.34	1.67	1.27	54.26	2.41	1	3.000	3.000			
-76.43	1.67	1.27	54.26	2.41	1	3.000	3.000			
-78.52	1.67	1.27	54.26	2.41	1	3.000	3.000			
-80.61	1.67	1.27	54.26	2.41	1	3.000	3.000			
-82.70	1.67	1.27	54.26	2.41	1	3.000	3.000			
-84.79	1.67	1.27	54.26	2.41	1	3.000	3.000			
-86.88	1.67	1.27	54.26	2.41	1	3.000	3.000			
-88.97	1.67	1.27	54.26	2.41	1	3.000	3.000			
-91.06	1.67	1.27	54.26	2.41	1	3.000	3.000			
-93.15	1.67	1.27	54.26	2.41	1	3.000	3.000			
-95.24	1.67	1.27	54.26	2.41	1	3.000	3.000			
-97.33	1.67	1.27	54.26	2.41	1	3.000	3.000			
-99.42	1.67	1.27	54.26	2.41	1	3.000	3.000			
-101.51	1.67	1.27	54.26	2.41	1	3.000	3.000			
-103.60	1.67	1.27	54.26	2.41	1	3.000	3.000			
-105.69	1.67	1.27	54.26	2.41	1	3.000	3.000			
-107.78	1.67	1.27	54.26	2.41	1	3.000	3.000			
-109.87	1.67	1.27	54.26	2.41	1	3.000	3.000			
-111.96	1.67	1.27	54.26	2.41	1	3.000	3.000			
-114.05	1.67	1.27	54.26	2.41	1	3.000	3.000			
-116.14	1.67	1.27	54.26	2.41	1	3.000	3.000			
-118.23	1.67	1.27	54.26	2.41	1	3.000	3.000			
-120.32	1.67	1.27	54.26	2.41	1	3.000	3.000			
-122.41	1.67	1.27	54.26	2.41	1	3.000	3.000			
-124.50	1.67	1.27	54.26	2.41	1	3.000	3.000			
-126.59	1.67	1.27	54.26	2.41	1	3.000	3.000			
-128.68	1.67	1.27	54.26	2.41	1	3.000	3.000			
-130.77	1.67	1.27	54.26	2.41	1	3.000	3.000			
-132.86	1.67	1.27	54.26	2						

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MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
-0.31	0.09	35.74	0.60324	31.84755	1	3.000	3.000	3.25	
100.00	0.48	0.48	1.27	1.67		2.46	2.86		
98.09									
96.18									
94.27									
92.36									
90.45									
88.54									
86.63									
84.72									
82.81									
80.90									
79.00									
77.09									
75.18									
73.27									
71.36									
69.45									
67.55									
65.63									
63.72									
61.81									
59.90									
58.00									
56.10									
54.20									
52.30									
50.40									
48.50									
46.60									
44.70									
42.80									
40.90									
39.00									
37.10									
35.20									
33.30									
31.40									
29.50									
27.60									
25.70									
23.80									
21.90									
19.99									
18.09									
16.19									
14.29									
12.39									
10.49									
8.59									
6.69									
4.79									
2.89									
0.99									
-0.31									

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NORTH CAROLINA

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MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
371	2.60	52.33	0.41466	49.39149	1	3.000	3.000			
-0.31	0.09	0.48	0.88	1.27	2.07	2.46	2.86	3.25		
100.00										
99.18										
98.27										
97.36										
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82.00										
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57.70										
56.80										
55.90										
55.00										
54.10										
53.20										
52.30										
51.40										
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49.60										
48.70										
47.80										
46.90										
46.00										
45.10										
44.20										
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40.60										
39.70										
38.80										
37.90										
37.00										
36.10										
35.20										
34.30										
33.40										
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30.70										
29.80										
28.90										
28.00										
27.10										
26.20										
25.30										
24.40										
23.50										
22.60										
21.70										
20.80										
19.90										
19.00										
18.10										
17.20										
16.30										
15.40										
14.50										
13.60										
12.70										
11.80										
10.90										
10.00										
9.10										
8.20										
7.30										
6.40										
5.50										
4.60										
3.70										
2.80										
1.90										
1.00										
0.10										
-0.31	0.09	0.48	0.88	1.27	2.07	2.46	2.86	3.25		

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345



NORTH DAKOTA

~~D-47~~  
347

79PERIODIC X-AXIS=DOY YAXIS=

NSIG-Y 3.000  
 2.86  
 2.46  
 2.07  
 3.25

MODE 1  
 2.07  
 2.46  
 2.07  
 2.86  
 3.25

MSIG-X 3.000  
 2.86  
 2.46  
 2.07  
 2.86  
 3.25

DE-VY 40.04469  
 1.67  
 1.27  
 0.88  
 0.48  
 0.09

MPPOINT	X-FAV	Y-FAV	DE-VA	DE-VY	MODE	MSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
957	0.00	2.15	0.44	1.27	1	3.000	3.000			
-0.31	0.48	41.38	0.28147	1.67						
100.00					Y 3 0A20 A 2 41					
94.09										
94.118										
94.127										
93.365										
93.365										
94.664										
94.671										
94.682										
94.691										
79.000										
77.009										
75.127										
73.346										
69.345										
67.555										
65.644										
63.773										
61.891										
59.000										
57.118										
55.237										
53.355										
51.474										
49.593										
47.712										
45.831										
43.950										
42.069										
40.188										
38.307										
36.426										
34.545										
32.664										
30.783										
28.902										
27.021										
25.140										
23.259										
21.378										
19.497										
17.616										
15.735										
13.854										
11.973										
10.092										
8.211										
6.330										
4.449										
2.568										
0.687										
-1.204										
-3.083										

0.48  
 346





MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
1712	2.17	47.42	0.27343	36.06837	1	3.000	3.000		
-0.31	0.09	0.48	1.27	1.67		2.07	2.46	3.25	
100.00					A	VT25	403	1	
94.18									
92.36									
90.55									
86.64									
82.82									
80.91									
77.09									
75.18									
73.27									
71.36									
69.45									
65.64									
63.73									
61.82									
59.91									
58.00									
56.09									
54.18									
52.27									
50.36									
48.45									
46.54									
44.63									
42.72									
40.81									
38.90									
37.00									
35.09									
33.18									
31.27									
29.36									
27.45									
25.54									
23.63									
21.72									
19.81									
17.90									
16.00									
14.09									
12.18									
10.27									
8.36									
6.45									
4.54									
2.63									
0.72									
-1.19									
-3.09									
-0.31	0.09	0.48	1.27	1.67		2.07	2.46	2.86	3.25

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OHIO

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351

CI

MODE NSIG-X NSIG-Y 79PERIODIC X-AXIS=DOY YAXIS=

1 2.07 3.000 3.000 3.25

DEVI 41.05556 1.27 1.67

DEVI 1.54581 1.27 1.67

Y-CENT 2.61 0.44 0.44

Y-CENT 64.39 0.44 0.44

MODE 2 6 3 2 0 7 4 7 9

NSIG-X 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000

NSIG-Y 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000

79PERIODIC X-AXIS=DOY 0 0 2 1 1 1 8 1

YAXIS= 1 1 2 1 1 1 8 1

DEVI 1.67 1.67 1.67 1.67 1.67 1.67 1.67 1.67 1.67

DEVI 1.27 1.27 1.27 1.27 1.27 1.27 1.27 1.27 1.27

Y-CENT 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44

Y-CENT 64.39 64.39 64.39 64.39 64.39 64.39 64.39 64.39 64.39

MODE 2 6 3 2 0 7 4 7 9

NSIG-X 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000

NSIG-Y 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000

79PERIODIC X-AXIS=DOY 0 0 2 1 1 1 8 1

YAXIS= 1 1 2 1 1 1 8 1

DEVI 1.67 1.67 1.67 1.67 1.67 1.67 1.67 1.67 1.67

DEVI 1.27 1.27 1.27 1.27 1.27 1.27 1.27 1.27 1.27

Y-CENT 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44

Y-CENT 64.39 64.39 64.39 64.39 64.39 64.39 64.39 64.39 64.39

MODE 2 6 3 2 0 7 4 7 9

NSIG-X 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000

NSIG-Y 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000

79PERIODIC X-AXIS=DOY 0 0 2 1 1 1 8 1

YAXIS= 1 1 2 1 1 1 8 1

MODE 2 6 3 2 0 7 4 7 9

NSIG-X 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000

NSIG-Y 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000 3.000

79PERIODIC X-AXIS=DOY 0 0 2 1 1 1 8 1

YAXIS= 1 1 2 1 1 1 8 1

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Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 42.59705

DEVX 0.52075

Y-FAN 50.007

K-MEAN 2.556

MPOINT 644

0.00

0.09

0.09

2.07 2.46 3.25

RVB 6E 6 2

P 0

3 E 61 3 5 24

3 R 23 3 151 1

5 S 1 1 0 1

1 9 6 2 1 2

1 9 3 1 1 1 2

9 6 4

A 6 2 1 3

B 2 1

2.07 2.07 2.07

2.46 2.46 2.46

3.25 3.25 3.25

1.67 1.67 1.67

1.27 1.27 1.27

0.88 0.88 0.88

0.48 0.48 0.48

0.09 0.09 0.09

0.09 0.09 0.09

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PENNSYLVANIA

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934

rk

YAXIS=

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

0 DG + ET

0 A 5

8

4

2 1

1 2

2

0.09

0.48

0.88

1.27

1.67

2.07

2.46

2.86

3.25

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355

SOUTH CAROLINA

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MPPOINT X1FAN Y1FAN DEVA DEVB DEVC MODE NSIG-X NSIG-Y 79PERIODIC X-AXIS=DOY YAXIS=

37A 0.09 2.43 0.48 36.51 0.48 1.27 40.27 1.67 1 2.07 3.00 3.00 2.86 3.25

-0.31 100.00 96.18 94.27 90.45 88.64 84.73 82.91 79.09 75.27 71.45 67.63 63.81 60.00 56.18 52.36 48.54 44.72 40.90 37.08 33.26 29.44 25.62 21.80 17.98 14.16 10.34 6.52 2.70 -0.12

MPPOINT	X1FAN	Y1FAN	DEVA	DEVB	DEVC	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=																					
37A	0.09	2.43	0.48	36.51	0.48	1.27	40.27	1.67	1	2.07	3.00	3.00	2.86	3.25																		
-0.31	100.00	96.18	94.27	90.45	88.64	84.73	82.91	79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12			
100.00	96.18	94.27	90.45	88.64	84.73	82.91	79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12				
96.18	94.27	90.45	88.64	84.73	82.91	79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12					
94.27	90.45	88.64	84.73	82.91	79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12						
90.45	88.64	84.73	82.91	79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12							
88.64	84.73	82.91	79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12								
84.73	82.91	79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12									
82.91	79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12										
79.09	75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12											
75.27	71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12												
71.45	67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12													
67.63	63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12														
63.81	60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12															
60.00	56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																
56.18	52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																	
52.36	48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																		
48.54	44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																			
44.72	40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																				
40.90	37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																					
37.08	33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																						
33.26	29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																							
29.44	25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																								
25.62	21.80	17.98	14.16	10.34	6.52	2.70	-0.12																									
21.80	17.98	14.16	10.34	6.52	2.70	-0.12																										
17.98	14.16	10.34	6.52	2.70	-0.12																											
14.16	10.34	6.52	2.70	-0.12																												
10.34	6.52	2.70	-0.12																													
6.52	2.70	-0.12																														
2.70	-0.12																															
-0.12																																

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MPOINT	XMEAN	YMEAN	DEVX	DEVY	MOVE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=00Y	YAXIS=
-0.31	0.09	0.48	0.54439	1.27	1	3.000	3.000		
198.118	2.50	55.53	38.26271	1.67	4	2.40	2.86		3.25
95.217								H	9
92.245									
90.555									
86.573					E	7	8	3	4
82.491									
79.009									
75.118					1	4	5	3	1
71.336									
67.555									
63.773					2	8	3	2	2
59.991									
56.209									
52.427					1	3	4	1	1
48.645									
44.863					6	4	3	2	1
41.081									
37.299									
33.517					2	8	2	2	2
29.735									
25.953									
22.171					3	1	7	0	3
18.389									
14.607									
10.825					5	6	2	1	1
7.043									
3.261									
-0.521									
-0.31	0.09	0.48	1.27	1.67	1	2.07	2.46	2.86	3.25

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TEXAS

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MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
649	2.41	44.65	0.54249	33.89502	1	3.000	3.000			
-0.31	0.09	0.48	0.88	1.27	2.07	2.46	2.86			3.25
100.00					F 9 I	2	3 3			
96.16										
94.27										
90.45					7 2 6	1	5 9 8 9 12 1	2 2		
88.55										
86.64										
84.73										
82.82					5 3 6	5 8 7 6	5 2 5 5 3 2 1	1 1 1		
80.91										
79.00										
77.09										
75.18										
73.27										
71.36										
69.45										
67.54					1	1 4 5 3	5 1 8 5 9 5	3 3		
65.63										
63.72										
61.81										
59.90					2	8 3 2 1	4 1 1 3 6	A 3 3 3 5 5		
58.00										
56.09										
54.18										
52.27										
50.36										
48.45										
46.54										
44.63					1	8 F 1 4	3 1 1	A 8 2 3 3 5 3		
42.72										
40.81										
38.90										
37.00										
35.09					5 0	4	4 3	1 4 3		
33.18										
31.27										
29.36										
27.45					5 1 8		1	3 1 3		
25.54										
23.63										
21.72										
19.81										
17.90										
16.00										
14.09										
12.18										
10.27										
8.36										
6.45										
4.54										
2.63										
0.72										
-1.19										
-0.31	0.09	0.48	0.88	1.27	2.07	2.46	2.86			3.25

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MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
399	2.13	37.38	0.38228	37.91690	1	3.000	3.000	3.25	
-0.31	0.09	0.48	0.88	1.27	2	2.07	2.46		
100	0.09	0.48	0.88	1.27	4	2	1	1	
96	1.7	2.7	1.5	2.5	8	2	1	1	
92	2.5	4.5	2.5	4.5	2	1	2	1	
88	3.5	6.5	3.5	6.5	1	2	1		
84	4.5	8.5	4.5	8.5	1	2	1		
80	5.5	10.5	5.5	10.5	1	2	1		
76	6.5	12.5	6.5	12.5	1	2	1		
72	7.5	14.5	7.5	14.5	1	2	1		
68	8.5	16.5	8.5	16.5	1	2	1		
64	9.5	18.5	9.5	18.5	1	2	1		
60	10.5	20.5	10.5	20.5	1	2	1		
56	11.5	22.5	11.5	22.5	1	2	1		
52	12.5	24.5	12.5	24.5	1	2	1		
48	13.5	26.5	13.5	26.5	1	2	1		
44	14.5	28.5	14.5	28.5	1	2	1		
40	15.5	30.5	15.5	30.5	1	2	1		
36	16.5	32.5	16.5	32.5	1	2	1		
32	17.5	34.5	17.5	34.5	1	2	1		
28	18.5	36.5	18.5	36.5	1	2	1		
24	19.5	38.5	19.5	38.5	1	2	1		
20	20.5	40.5	20.5	40.5	1	2	1		
16	21.5	42.5	21.5	42.5	1	2	1		
12	22.5	44.5	22.5	44.5	1	2	1		
8	23.5	46.5	23.5	46.5	1	2	1		
4	24.5	48.5	24.5	48.5	1	2	1		
0	25.5	50.5	25.5	50.5	1	2	1		
-4	26.5	52.5	26.5	52.5	1	2	1		
-8	27.5	54.5	27.5	54.5	1	2	1		
-12	28.5	56.5	28.5	56.5	1	2	1		
-16	29.5	58.5	29.5	58.5	1	2	1		
-20	30.5	60.5	30.5	60.5	1	2	1		
-24	31.5	62.5	31.5	62.5	1	2	1		
-28	32.5	64.5	32.5	64.5	1	2	1		
-32	33.5	66.5	33.5	66.5	1	2	1		
-36	34.5	68.5	34.5	68.5	1	2	1		
-40	35.5	70.5	35.5	70.5	1	2	1		
-44	36.5	72.5	36.5	72.5	1	2	1		
-48	37.5	74.5	37.5	74.5	1	2	1		
-52	38.5	76.5	38.5	76.5	1	2	1		
-56	39.5	78.5	39.5	78.5	1	2	1		
-60	40.5	80.5	40.5	80.5	1	2	1		
-64	41.5	82.5	41.5	82.5	1	2	1		
-68	42.5	84.5	42.5	84.5	1	2	1		
-72	43.5	86.5	43.5	86.5	1	2	1		
-76	44.5	88.5	44.5	88.5	1	2	1		
-80	45.5	90.5	45.5	90.5	1	2	1		
-84	46.5	92.5	46.5	92.5	1	2	1		
-88	47.5	94.5	47.5	94.5	1	2	1		
-92	48.5	96.5	48.5	96.5	1	2	1		
-96	49.5	98.5	49.5	98.5	1	2	1		
-100	50.5	100.5	50.5	100.5	1	2	1		
-104	51.5	102.5	51.5	102.5	1	2	1		
-108	52.5	104.5	52.5	104.5	1	2	1		
-112	53.5	106.5	53.5	106.5	1	2	1		
-116	54.5	108.5	54.5	108.5	1	2	1		
-120	55.5	110.5	55.5	110.5	1	2	1		
-124	56.5	112.5	56.5	112.5	1	2	1		
-128	57.5	114.5	57.5	114.5	1	2	1		
-132	58.5	116.5	58.5	116.5	1	2	1		
-136	59.5	118.5	59.5	118.5	1	2	1		
-140	60.5	120.5	60.5	120.5	1	2	1		
-144	61.5	122.5	61.5	122.5	1	2	1		
-148	62.5	124.5	62.5	124.5	1	2	1		
-152	63.5	126.5	63.5	126.5	1	2	1		
-156	64.5	128.5	64.5	128.5	1	2	1		
-160	65.5	130.5	65.5	130.5	1	2	1		
-164	66.5	132.5	66.5	132.5	1	2	1		
-168	67.5	134.5	67.5	134.5	1	2	1		
-172	68.5	136.5	68.5	136.5	1	2	1		
-176	69.5	138.5	69.5	138.5	1	2	1		
-180	70.5	140.5	70.5	140.5	1	2	1		
-184	71.5	142.5	71.5	142.5	1	2	1		
-188	72.5	144.5	72.5	144.5	1	2	1		
-192	73.5	146.5	73.5	146.5	1	2	1		
-196	74.5	148.5	74.5	148.5	1	2	1		
-200	75.5	150.5	75.5	150.5	1	2	1		
-204	76.5	152.5	76.5	152.5	1	2	1		
-208	77.5	154.5	77.5	154.5	1	2	1		
-212	78.5	156.5	78.5	156.5	1	2	1		
-216	79.5	158.5	79.5	158.5	1	2	1		
-220	80.5	160.5	80.5	160.5	1	2	1		
-224	81.5	162.5	81.5	162.5	1	2	1		
-228	82.5	164.5	82.5	164.5	1	2	1		
-232	83.5	166.5	83.5	166.5	1	2	1		
-236	84.5	168.5	84.5	168.5	1	2	1		
-240	85.5	170.5	85.5	170.5	1	2	1		
-244	86.5	172.5	86.5	172.5	1	2	1		
-248	87.5	174.5	87.5	174.5	1	2	1		
-252	88.5	176.5	88.5	176.5	1	2	1		
-256	89.5	178.5	89.5	178.5	1	2	1		
-260	90.5	180.5	90.5	180.5	1	2	1		
-264	91.5	182.5	91.5	182.5	1	2	1		
-268	92.5	184.5	92.5	184.5	1	2	1		
-272	93.5	186.5	93.5	186.5	1	2	1		
-276	94.5	188.5	94.5	188.5	1	2	1		
-280	95.5	190.5	95.5	190.5	1	2	1		
-284	96.5	192.5	96.5	192.5	1	2	1		
-288	97.5	194.5	97.5	194.5	1	2	1		
-292	98.5	196.5	98.5	196.5	1	2	1		
-296	99.5	198.5	99.5	198.5	1	2	1		
-300	100.5	200.5	100.5	200.5	1	2	1		

0-82  
362



MPOINT 337  
 -0.31  
 100.00  
 98.09  
 96.18  
 94.27  
 92.36  
 90.45  
 88.55  
 86.64  
 84.73  
 82.82  
 80.91  
 79.00  
 77.09  
 75.18  
 73.27  
 71.36  
 69.45  
 67.55  
 65.64  
 63.73  
 61.82  
 59.91  
 58.00  
 56.09  
 54.18  
 52.27  
 50.36  
 48.45  
 46.54  
 44.63  
 42.72  
 40.81  
 38.90  
 37.00  
 35.09  
 33.18  
 31.27  
 29.36  
 27.45  
 25.54  
 23.63  
 21.72  
 19.81  
 17.90  
 16.00  
 14.09  
 12.18  
 10.27  
 8.36  
 6.45  
 4.54  
 2.63  
 -0.28  
 -0.31

XMEAN 2.42  
 0.09  
 YMEAN 55.71  
 0.48  
 DEVX 0.50216  
 1.27  
 DEVY 37.74934  
 1.67  
 MODE 1  
 2.07  
 NSIG-X 3.000  
 2.46  
 NSIG-Y 3.000  
 2.86  
 79PERIODIC X-AXIS=00Y  
 3.25  
 YAXIS=

626 B B C2C E B C  
 5 7 2 1 4 1 8 1 3  
 3 1 4 3 3 1 1  
 1 6 1 4 4 2 1 3 2 1 2 2 1  
 1 2 1 1 1 1 1 2 3  
 3 2 1 1 1 1 5 5 1  
 1 4 5 1 3 1 1 1 1  
 1 2 3 3 2  
 2 0 5 1 1 1 1 3 2  
 8 4 1 2  
 0.09 0.48 0.88 1.27 1.67 2.07 2.46 2.86 3.25  
 -0.31

~~0.83~~  
 363

APPENDIX E

CROP GROWTH STAGE GRAPHS

~~E-1~~  
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ALABAMA

365

POINT X MEAN Y MEAN DEVI DEVI DEVI MSIG-X MSIG-Y 79PERIODIC X-AXIS=00Y YAXIS=  
 10A 0.09 2.03 0.48 3.72 0.44 0.45344 1.27 3.09506 1.67 2.07 3.000 2.46 3.000 3.25  
 -0.11 0.09 0.48 3.72 0.44 0.45344 1.27 3.09506 1.67 2.07 3.000 2.46 3.000 3.25

POINT	X MEAN	Y MEAN	DEVI	DEVI	DEVI	MSIG-X	MSIG-Y	79PERIODIC X-AXIS=00Y	YAXIS=						
7.00	0.09	2.03	0.48	3.72	0.44	0.45344	1.27	3.09506	1.67	2.07	3.000	2.46	3.000	3.25	
6.87															
6.75															
6.63															
6.49															
6.36															
6.24															
6.11															
5.98															
5.85															
5.73															
5.60															
5.47															
5.35															
5.22															
5.09															
4.96															
4.84															
4.71															
4.58															
4.45															
4.33															
4.20															
4.07															
3.95															
3.82															
3.69															
3.56															
3.44															
3.31															
3.18															
3.05															
2.93															
2.80															
2.67															
2.55															
2.42															
2.29															
2.16															
2.04															
1.91															
1.78															
1.65															
1.53															
1.40															
1.27															
1.15															
1.02															
0.89															
0.76															
0.64															
0.51															
0.38															
0.25															
0.13															
-0.31															

E-3  
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YAKIS=

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MOJF 1 2.07

DFVY 2.04

DFVX 1.27

YMEAN 4.12

X-MEAN 2.47

0.09

231

0.31

YAKIS	79PERIODIC X-AXIS=DOY	NSIG-Y	NSIG-X	MOJF	DFVY	DFVX	YMEAN	X-MEAN	0.09	231	0.31
0											
1											
2											
3											
4											
5											
6											
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98											
99											
100											

ES  
368

ARKANSAS

POINT X-MEAN Y-MEAN DEVI DEVI NSIG-X NSIG-Y 79PERIODIC X-AXIS=DOY YAXIS=  
 123 2.35 4.71 1.96286 3.000 3.000 3.000 3.25  
 0.09 0.44 0.54 1.27 2.07 2.46 2.86 3.25  
 -0.31 0.44 0.88 1.27 1.67 2.07 2.46 2.86 3.25

POINT	X-MEAN	Y-MEAN	DEVI	DEVI	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
7.00								
6.97								
6.75								
6.62								
6.49								
6.46								
6.24								
6.11								
5.94								
5.73								
5.60								
5.47								
5.35								
5.22								
5.09								
4.96								
4.71								
4.51								
4.35								
4.23								
4.09								
4.07								
3.95								
3.72								
3.56								
3.44								
3.31								
3.15								
3.03								
2.90								
2.77								
2.55								
2.42								
2.29								
2.16								
2.01								
1.72								
1.65								
1.40								
1.27								
1.15								
1.02								
0.74								
0.64								
0.51								
0.38								
0.25								
0.11								
-0.31								

ORIGINAL PAGE IS OF POOR QUALITY



YAXIS=

79PERIODIC X=AXIS=DOY

MSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVI 1.70303

UPER 0.00107

YAFBI 0.000

XAFBI 0.400

YAFBI 0.400

MOINT PAC 0.31

7.00  
 7.00  
 6.75  
 6.50  
 6.25  
 6.00  
 5.75  
 5.50  
 5.25  
 5.00  
 4.75  
 4.50  
 4.25  
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 3.75  
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 3.00  
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 2.25  
 2.00  
 1.75  
 1.50  
 1.25  
 1.00  
 0.75  
 0.50  
 0.25  
 0.00  
 -0.25  
 -0.50  
 -0.75  
 -1.00  
 -1.25  
 -1.50  
 -1.75  
 -2.00  
 -2.25  
 -2.50  
 -2.75  
 -3.00  
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 -3.75  
 -4.00  
 -4.25  
 -4.50  
 -4.75  
 -5.00  
 -5.25  
 -5.50  
 -5.75  
 -6.00  
 -6.25  
 -6.50  
 -6.75  
 -7.00

11 025 2

30 VV 90

V 1 0 2

3 0 1

C 4 N 1

4 12 N 0 F 3 H

X W E 5

C E

1

1

0.00 0.40 0.88 1.27 1.67 2.07 2.46 2.86 3.25  
 -0.31

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CALIFORNIA

~~E-10~~  
373

(7)

Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVT 1.44770

DEVX 0.52441

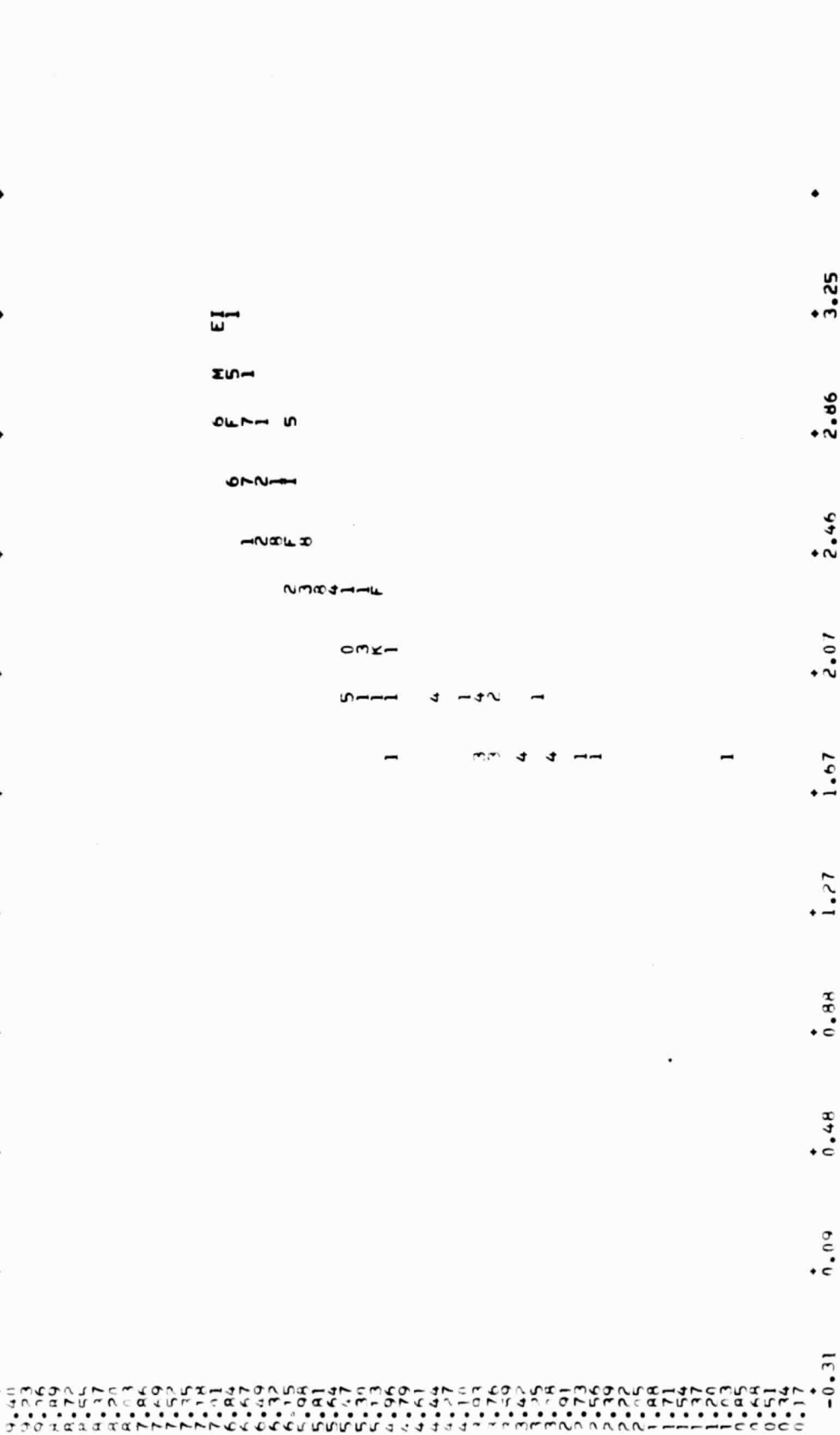
YMEAN 5.750

XMEAN 2.53

MPOINT 287

0.009

0.009    0.44    0.88    1.27    1.67    2.07    2.46    2.86    3.25  
 ↓       ↓       ↓       ↓       ↓       ↓       ↓       ↓       ↓



6 7 1 5  
 6 2 1 1  
 2 2 1 1  
 0 3 1  
 5 1 1 4  
 1 3 4 4 1  
 1

POINT	X MEAN	Y MEAN	DEV X	DEV Y	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
-0.31	0.09	2.44	0.44	1.27	1	3.000	3.000	3.25	
7.007				1.57					
2.075									
6.629									
6.449									
6.334									
6.111									
5.985									
5.773									
5.647									
5.522									
5.399									
4.066									
4.444									
4.771									
4.545									
4.433									
4.220									
4.007									
3.892									
3.649									
3.556									
3.441									
3.321									
3.105									
2.990									
2.877									
2.652									
2.429									
2.316									
2.101									
1.785									
1.653									
1.427									
1.115									
0.990									
0.764									
0.541									
0.328									
0.225									
0.013									
-0.31	0.110	0.48	0.88	1.27	1	2.46	2.86	3.25	

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GEORGIA

~~E-13~~  
376

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
0.00	0.09	0.48	0.88	1.27	1	3.00	3.00	3.25	
0.07	2.48	5.59	0.50	2.24	1	2.07	2.86		
0.75	2.48	5.59	0.50	2.24	1	2.07	2.86		
0.49	2.48	5.59	0.50	2.24	2	4 4 2 8	Y 3A 6	DM 10 5	DT 1 S
0.36	2.48	5.59	0.50	2.24	1	4 2 8	6		
0.11	2.48	5.59	0.50	2.24	1	4 2	1		
0.85	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.69	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.47	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.22	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.96	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.71	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.58	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.37	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.05	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.89	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.56	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.31	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.18	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.93	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.80	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.65	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.52	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.29	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.16	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.91	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.78	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.53	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.40	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.27	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.15	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.89	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.76	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.64	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.51	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.38	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.25	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.13	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
0.00	2.48	5.59	0.50	2.24	3	4 3 D 8	1		
-0.31	0.09	0.48	0.88	1.27	1	2.07	2.86	3.25	

MPOINT XMEAN YMEAN DEVM DEVA DEVS MODE NSIG-X NSIG-Y 79PERIODIC X-AXIS=DOY YAXIS=

MPOINT	XMEAN	YMEAN	DEVM	DEVA	DEVS	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
-0.31	0.09	2.56	0.48	0.88	1.27	1	3.000	3.000	3.25	01	C
0.07											
0.75											
6.42											
6.49											
6.74											
6.71											
6.55											
5.73											
5.67											
5.43											
5.29											
5.20											
5.19											
4.96											
4.84											
4.71											
4.55											
4.43											
4.42											
4.42											
4.30											
4.29											
3.82											
3.56											
3.43											
3.31											
3.18											
3.05											
2.90											
2.55											
2.42											
2.16											
1.97											
1.53											
1.47											
1.21											
1.09											
0.76											
0.61											
0.53											
0.25											
0.00											
-0.31	0.09	0.48	0.88	1.27	1.67	2	2.46	2.86	3.25		

16 30 8  
 10 10 1  
 14 27 8  
 14 27 8  
 09 1 4 6 6 5 5 0  
 2 7 0 2 2 2 1  
 4 1 5 2 M 1 4  
 9 4 1 6 1 1 C  
 1 2

ILLINOIS

~~E-16~~  
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INDIANA

C-~~J~~

~~E-19~~  
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MPPOINT	XMFAN	YMFAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=00Y	YAKIS=
7.00	0.09	0.44	0.88	1.76	1	3.000	3.000		
6.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
6.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
6.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
6.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
5.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
5.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
5.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
5.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
4.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
4.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
4.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
4.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
3.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
3.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
3.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
3.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
2.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
2.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
2.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
2.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
1.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
1.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
1.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
1.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
0.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
0.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
0.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
0.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
-0.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
-0.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
-0.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
-1.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
-1.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
-1.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
-1.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
-2.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
-2.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
-2.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
-2.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
-3.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
-3.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
-3.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
-3.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
-4.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
-4.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
-4.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
-4.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
-5.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
-5.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
-5.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
-5.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
-6.00	0.09	0.44	0.88	1.76	1	2.46	2.86		
-6.25	2.45	4.50	0.487	1.967	1	2.46	2.86		
-6.50	0.09	0.44	0.88	1.76	1	2.46	2.86		
-6.75	2.45	4.50	0.487	1.967	1	2.46	2.86		
-7.00	0.09	0.44	0.88	1.76	1	2.46	2.86		

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MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
0.31	2.39	4.09	0.4533	1.92492	1	3.000	3.000	3.25	
0.07	0.44	0.44	1.27	1.67	1	2.46	2.86	3.25	
6.75									
6.62									
6.49									
6.36									
6.24									
5.98									
5.73									
5.60									
5.47									
5.35									
5.22									
5.10									
4.96									
4.84									
4.71									
4.58									
4.45									
4.33									
4.20									
4.07									
3.95									
3.82									
3.69									
3.56									
3.44									
3.31									
3.18									
3.05									
2.93									
2.80									
2.67									
2.55									
2.42									
2.30									
2.16									
2.04									
1.91									
1.78									
1.65									
1.53									
1.40									
1.27									
1.15									
1.02									
0.99									
0.86									
0.74									
0.61									
0.48									
0.35									
0.25									
0.13									
-0.31	0.09	0.48	1.27	1.67	2	2.46	2.86	3.25	

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MPOINT	X-MEAN	Y-MEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	Y-AXIS=
1714	2.39	4.44	1.52830	1.74885	1	3.000	3.000			
0.31	0.09	0.44	0.88	1.67	2.07	2.46	2.86	3.25		
0.0										
0.075										
0.15										
0.225										
0.3										
0.375										
0.45										
0.525										
0.6										
0.675										
0.75										
0.825										
0.9										
0.975										
1.05										
1.125										
1.2										
1.275										
1.35										
1.425										
1.5										
1.575										
1.65										
1.725										
1.8										
1.875										
1.95										
2.025										
2.1										
2.175										
2.25										
2.325										
2.4										
2.475										
2.55										
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9.525										
9.6										
9.675										
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9.925										
10.0										

Y AXIS =

79 PERIODIC X-AXIS = 00Y

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 1.66531

DEVX 0.46296

YMEAN 4.85

XMEAN 2.41

MPOINT 1639

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5.82

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MPPOINT	KMEAN	YMEAN	UFVK	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
540	2.56	5.01	0.52401	2.02773	1	3.000	3.000			
-0.31	0.09	0.44	0.44	1.27	2.07	2.46	2.86		3.25	
7.07										
6.75										
6.42										
6.09										
5.76										
5.43										
5.10										
4.77										
4.44										
4.11										
3.78										
3.45										
3.12										
2.79										
2.46										
2.13										
1.80										
1.47										
1.14										
0.81										
0.48										
0.15										
-0.18										
-0.51										

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79PERIODIC X-Axis=DOY      YAxis=

MPDINT	X-MEAN	Y-MEAN	DEVA	DEVY	MODE	MSIG-X	NSIG-Y	79PERIODIC X-Axis=DOY	YAxis=
-0.31	0.00	0.44	0.34	2.53671	1	3.000	3.000	3.25	
1.07	0.27	0.40	0.33	1.07	4	2.46	2.86	0	8
4.75	0.27	0.40	0.33	1.07	2	3.000	3.000	1	
5.62	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
6.39	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
6.36	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
6.24	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
5.94	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
5.85	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
5.73	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
5.60	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
5.47	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
5.35	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
5.22	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
5.00	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
4.86	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
4.71	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
4.54	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
4.45	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
4.33	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
4.20	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
4.07	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
3.95	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
3.82	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
3.69	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
3.56	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
3.44	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
3.31	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
3.14	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
3.05	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
2.90	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
2.77	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
2.65	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
2.52	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
2.40	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
2.27	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
2.16	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
2.04	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
1.91	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
1.78	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
1.65	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
1.53	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
1.40	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
1.27	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
1.15	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
1.02	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
0.89	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
0.76	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
0.64	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
0.51	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
0.38	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
0.25	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
0.13	0.27	0.40	0.33	1.07	4	3.000	3.000	1	
-0.31	0.00	0.48	0.88	1.07	2.07	2.46	2.86	3.25	

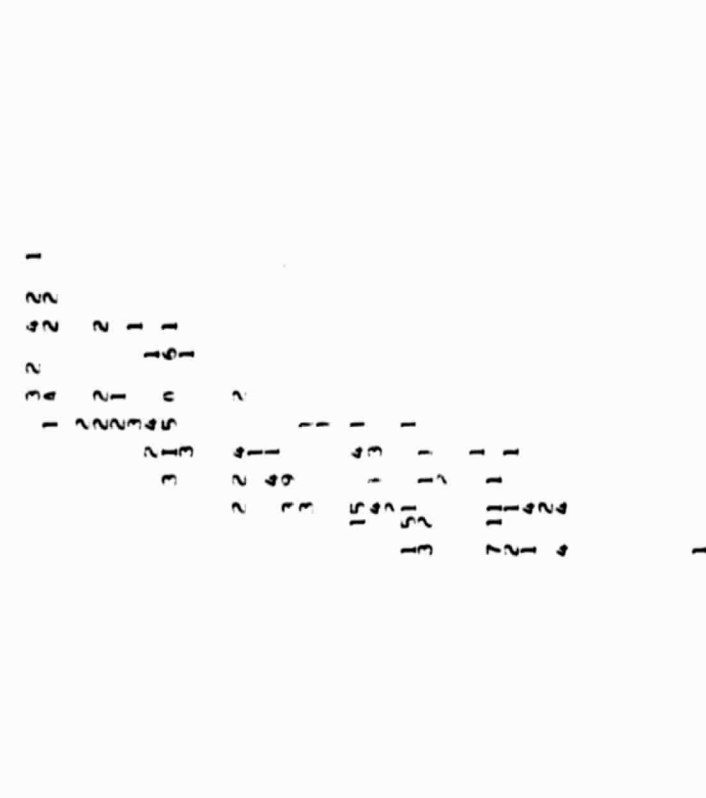
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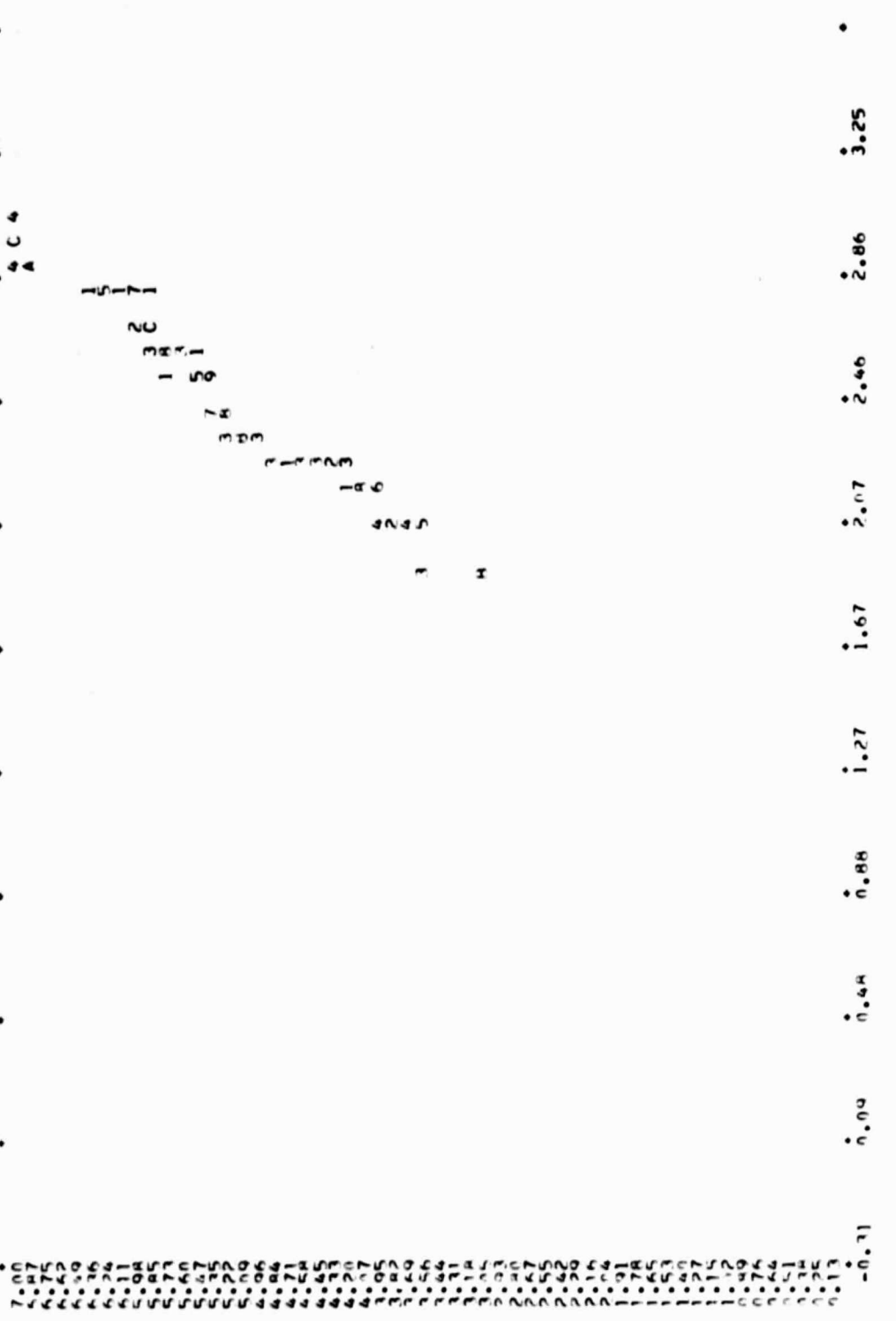
MPOINT 347  
 0.00 2.00 4.00 6.00 8.00 10.00 12.00 14.00 16.00 18.00 20.00 22.00 24.00 26.00 28.00 30.00 32.00 34.00 36.00 38.00 40.00 42.00 44.00 46.00 48.00 50.00 52.00 54.00 56.00 58.00 60.00 62.00 64.00 66.00 68.00 70.00 72.00 74.00 76.00 78.00 80.00 82.00 84.00 86.00 88.00 90.00 92.00 94.00 96.00 98.00 100.00  
 X-AXIS=DOY 74PERIODIC X-AXIS=DOY Y-AXIS=



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MPOINT    XMEAN    YMEAN    DEVI    DEVI    DEVI    MODE    NSIG-X    NSIG-Y    79PERIODIC X-AXIS=DOY    YAXIS=  
 20    2.00    4.00    1.80793    1.80793    1.80793    1    2.07    3.000    3.000    3.000    2.86    3.25  
 -0.31    0.00    0.04    0.12    0.44    0.44    2.46    2.46    2.46    2.86    3.25  
          0.00    0.04    0.12    0.44    0.44    2.46    2.46    2.46    2.86    3.25

MPOINT    XMEAN    YMEAN    DEVI    DEVI    DEVI    MODE    NSIG-X    NSIG-Y    79PERIODIC X-AXIS=DOY    YAXIS=  
 20    2.00    4.00    1.80793    1.80793    1.80793    1    2.07    3.000    3.000    3.000    2.86    3.25  
 -0.31    0.00    0.04    0.12    0.44    0.44    2.46    2.46    2.46    2.86    3.25  
          0.00    0.04    0.12    0.44    0.44    2.46    2.46    2.46    2.86    3.25



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MPPOINT 170 XMEAN 2.38 YMEAN 3.90 DEVI 1.91 NSIG-X 3.000 NSIG-Y 3.000 79PERIODIC X-AXIS=DOY YAXIS=

MPPOINT	XMEAN	YMEAN	DEVI	MODE	NSIG-X	NSIG-Y	79PERIODIC
-0.31	0.09	0.44	1.27	1	2.07	2.86	3.25
7.00							
6.87							
6.75							
6.62							
6.49							
6.36							
6.24							
6.11							
5.98							
5.85							
5.73							
5.60							
5.47							
5.35							
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0.32							
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-0.13							

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YAKIS=

79PERIODIC X-AXIS=00Y

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 1.94326

DEVX 0.33672

YMEAN 4.33

XMEAN 2.19

MPOINT 774

-0.31

79PERIODIC X-AXIS=00Y 3.25

NSIG-Y 3.000 3.2.86

NSIG-X 3.000 3.2.46

MODE 1 2.07 2.07

DEVY 1.94326 1.67

DEVX 0.33672 1.27

YMEAN 4.33 0.48

XMEAN 2.19 0.48

MPOINT 774 0.00

-0.31 0.48

7.00 1.67

6.87 1.27

6.75 0.88

6.62 0.48

6.49 0.00

6.36 0.48

6.24 1.27

6.11 1.67

5.98 2.07

5.85 2.46

5.73 2.86

5.60 3.25

5.47 3.25

5.35 3.25

5.22 3.25

5.09 3.25

4.96 3.25

4.84 3.25

4.71 3.25

4.58 3.25

4.45 3.25

4.33 3.25

4.20 3.25

4.07 3.25

3.95 3.25

3.82 3.25

3.69 3.25

3.56 3.25

3.44 3.25

3.31 3.25

3.18 3.25

3.05 3.25

2.93 3.25

2.80 3.25

2.67 3.25

2.55 3.25

2.42 3.25

2.30 3.25

2.17 3.25

2.04 3.25

1.92 3.25

1.79 3.25

1.65 3.25

1.53 3.25

1.40 3.25

1.27 3.25

1.15 3.25

1.02 3.25

0.89 3.25

0.76 3.25

0.64 3.25

0.51 3.25

0.38 3.25

0.25 3.25

0.13 3.25

-0.31 3.25

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397

Y AXIS =

79 PERIODIC X-AXIS = 00Y

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVI 1.34553

DEVX 0.51707

YMEAN 5.35

XMEAN 2.50

MPOINT 749

0.00 0.44 1.27 1.67 2.07 2.46 2.86 3.25

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3

2 PC 3 0 1 2 6 1 2 1 8 1 7

1 8 1 E J C 3 5 4 C

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8 E D H 4

3 2 8 8 4

4 M 7 2

0.00 0.44 1.27 1.67 2.07 2.46 2.86 3.25

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E-35  
398

50

MPOINT 1222  
 XMEAN 2.42  
 YMEAN 4.56  
 DEVK 0.5024  
 DEVM 1.27  
 DEVX 1.74010  
 MODE 1  
 NSIG-X 3.000  
 NSIG-Y 3.000  
 NSIG-Z 3.000  
 79PERIODIC X-AXIS=DOY  
 YAKIS=

MPOINT	XMEAN	YMEAN	DEVK	DEVM	DEVX	MODE	NSIG-X	NSIG-Y	NSIG-Z	79PERIODIC X-AXIS=DOY	YAKIS=
-0.31	0.09	0.44	0.44	0.44	1.57	1	2.07	2.45	2.86	3.25	
0.00											
0.72											
0.54											
0.14											
0.00											
0.42											
0.46											
0.10											
0.92											
0.74											
0.56											
0.28											
0.20											
0.22											
0.66											
0.66											
0.30											
0.12											
0.58											
0.40											
0.22											
0.46											
0.46											
0.50											
0.32											
0.14											
0.06											
0.78											
0.60											
0.42											
0.24											
0.08											
0.70											
0.52											
0.34											
0.16											
0.98											
0.80											
0.62											
0.44											
0.26											
0.08											
0.00											
0.07											
0.00											
0.54											
0.36											
0.18											
-0.31	0.09	0.44	0.88	1.27	1.67	2.07	2.46	2.86	3.25		

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K00

MPPOINT XMEAN YMEAN DEVM DEVM DEVM NSIG-X NSIG-Y 79PERIODIC X-AXIS=00Y YAXIS=

MPPOINT	XMEAN	YMEAN	DEVM	DEVM	DEVM	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=00Y	YAXIS=											
-0.31	0.09	2.44	0.44	4.41	0.44	1.55	1.27	2.10	1.67	1	2.07	3.000	2.46	3.000	2.86	5	F	Z	E	3.25	
7.00																					
6.75																					
6.50																					
6.25																					
6.00																					
5.75																					
5.50																					
5.25																					
5.00																					
4.75																					
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2.00																					
1.75																					
1.50																					
1.25																					
1.00																					
0.75																					
0.50																					
0.25																					
0.00																					
-0.31	0.09	0.48	0.88	1.27	1.67	2.07	2.46	2.86	3.25												

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OF POOR QUALITY.

MPOINT X-MEAN Y-MEAN DEVI X-DEVI DEVI NSIG-X NSIG-Y 79PERIODIC X-AXIS=00Y YAXIS=  
 512 0.09 2.46 0.44 4.51 0.88 0.49197 1.27 1.96253 1.67 2.07 3.000 2.46 3.25  
 -0.31 0.09 2.46 0.44 4.51 0.88 0.49197 1.27 1.96253 1.67 2.07 3.000 2.46 3.25

MPOINT	X-MEAN	Y-MEAN	DEVI	X-DEVI	DEVI	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=00Y	YAXIS=			
7.00	0.09	2.46	0.44	4.51	0.88	0.49197	1.27	1.96253	1.67	2.07	3.000	2.46	3.25
6.97													
6.75													
6.49													
6.36													
6.24													
6.11													
6.08													
5.85													
5.73													
5.67													
5.43													
5.25													
5.20													
5.06													
4.94													
4.71													
4.58													
4.45													
4.30													
4.27													
4.05													
3.86													
3.66													
3.44													
3.30													
3.20													
3.07													
2.90													
2.75													
2.53													
2.30													
2.20													
2.07													
1.91													
1.75													
1.52													
1.29													
1.09													
0.97													
0.76													
0.64													
0.51													
0.38													
0.25													
0.13													
-0.31													

F-39  
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NEBRASKA

~~E-40~~

403

5

Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

Y-MEAN

X-MEAN

MPOINT

1.27

3.25

MPOINT	X-MEAN	Y-MEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	Y AXIS =
-0.31	0.09	0.68	0.84	1.67	1	3.000	3.000	3.25	
7.97	2.67	4.93	0.61764	2.03334	1	3.000	3.000	3.25	
6.75									
6.49									
6.36									
6.24									
6.11									
5.98									
5.85									
5.73									
5.60									
5.47									
5.35									
5.22									
5.09									
4.96									
4.84									
4.71									
4.58									
4.45									
4.33									
4.20									
4.07									
3.95									
3.82									
3.69									
3.56									
3.44									
3.31									
3.18									
3.03									
2.90									
2.75									
2.62									
2.49									
2.36									
2.24									
2.11									
1.98									
1.85									
1.73									
1.60									
1.47									
1.35									
1.22									
1.09									
0.96									
0.84									
0.71									
0.58									
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0.33									
0.20									
0.07									
-0.06									
-0.19									
-0.31									

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E-41

404



Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVI

DEVX

Y-MEAN

X-MEAN

MPOINT

487

3.25

MPOINT	X-MEAN	Y-MEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	Y AXIS =
-0.31	0.09	2.61	0.45	1.52	1	3.00	3.00	111 F3 6 A22 2A	3.25
7.00	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
6.75	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
6.50	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
6.25	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
6.00	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
5.75	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
5.50	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
5.25	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
5.00	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
4.75	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
4.50	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
4.25	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
4.00	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
3.75	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
3.50	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
3.25	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
3.00	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
2.75	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
2.50	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
2.25	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
2.00	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
1.75	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
1.50	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
1.25	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
1.00	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
0.75	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
0.50	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
0.25	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
0.00	2.61	4.67	0.45	1.52	1	3.00	3.00	1	3.25
-0.31	0.09	2.61	0.45	1.52	1	3.00	3.00	1	3.25

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K05

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Y AXIS =

79PERIODIC X-AXIS=00Y

NSIG-Y

NSIG-K

MODE

DEVY

DEVX

Y-ERR

MEAN

MPPOINT

AT

MPPOINT	AT	MEAN	Y-ERR	DEVX	DEVY	MODE	NSIG-K	NSIG-Y	79PERIODIC	X-AXIS=00Y	Y AXIS =
7.00											
6.87		2.20	3.13	0.44	1.77396	1	3.000	3.000			
6.75											
6.63											
6.50											
6.38											
6.25											
6.13											
6.00											
5.88											
5.75											
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0.09

E-23  
406

NORTH CAROLINA

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K07



MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC	X-AXIS=DOY	YAXIS=
551	2.78	4.97	0.4534	1.66879	1	3.000	3.000	L	F0	
0.31	0.09	0.48	1.27	1.67	2	2.46	2.86	4	4	
7.00	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.87	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.75	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.62	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.49	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.36	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.24	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.11	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.98	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.85	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.73	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.60	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.47	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.35	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.22	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
6.09	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
5.96	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
4.84	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
4.71	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
4.58	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
4.45	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
4.32	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
4.20	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
4.07	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
3.95	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
3.82	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
3.70	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
3.57	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
3.44	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
3.32	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
3.20	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
3.07	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
2.95	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
2.82	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
2.70	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
2.57	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
2.44	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
2.32	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
2.20	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
2.07	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
1.95	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
1.82	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
1.70	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
1.57	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
1.44	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
1.32	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
1.20	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
1.07	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
0.95	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
0.82	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
0.70	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
0.57	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
0.44	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
0.32	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
0.20	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
0.07	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
-0.05	0.09	0.48	1.27	1.67	1	2.07	3.000	2		
-0.31	0.09	0.48	1.27	1.67	1	2.07	3.000	2		

E-46  
K09

NORTH DAKOTA

~~EAT~~  
410

Y AXIS =

79 PERIODIC X - AXIS = DOY

NSIG-X NSIG-Y NSIG-Z  
3.000 3.000 3.000  
2.46 2.86 3.25  
MODE 1 2.07 2.04 1 2 5  
DEVT 2.147 1.57  
DEVT 1.27  
DEVT 0.28 1.47  
Y-FAV 4.44  
X-MEAN 2.15  
0.44 0.44 0.44

POINT

957 0.31  
7.00  
6.97  
6.75  
6.62  
6.49  
6.36  
6.24  
6.11  
5.98  
5.85  
5.73  
5.61  
5.48  
5.35  
5.22  
5.09  
4.96  
4.84  
4.71  
4.58  
4.45  
4.33  
4.20  
4.07  
3.95  
3.82  
3.70  
3.56  
3.44  
3.31  
3.18  
3.05  
2.93  
2.80  
2.67  
2.55  
2.42  
2.30  
2.17  
2.04  
1.91  
1.79  
1.65  
1.53  
1.40  
1.27  
1.15  
1.02  
0.90  
0.76  
0.64  
0.51  
0.38  
0.25  
0.13

111 2 3276 2  
5 1  
4 6 92 2  
1 1  
2 412 9F7E X32 91  
71 2 1  
8 56UBIC H  
2 11  
3 6237HN 1  
1 6 3  
1 1  
7 2148  
A A 1  
1 1  
1 3  
1 2 K 1

ORIGINAL PAGE IS  
OF POOR QUALITY

E-AB

41

Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y 3.000

NSIG-X 3.000

MODE 1

DEVY 1.73213

DEVX 0.30502

YMEAN 4.42

XMEAN 2.21

MPONT 840

3.25

2.86

2.46

2.07

1.67

1.27

0.88

0.48

0.09

-0.31

3.25

1 314583 A 3 K

1 314583 A 3 K

11

E1324 C K0

1 15 1

316 0 2

24 1 2

1 2 AAD4H

3 7 4

50HS11 E6 1

3 27 1

725570 22

R27 15

33 1

2 12 E3962

6

2 9 0 2

17 1

7

7.00

6.87

6.75

6.62

6.49

6.36

6.24

6.11

5.98

5.85

5.73

5.60

5.47

5.35

5.22

5.09

4.96

4.84

4.71

4.58

4.45

4.32

4.20

4.07

3.95

3.82

3.69

3.56

3.44

3.31

3.18

3.05

2.93

2.80

2.67

2.55

2.42

2.29

2.16

2.04

1.91

1.78

1.65

1.53

1.40

1.27

1.15

1.02

0.89

0.76

0.64

0.51

0.38

0.25

0.13

0.00

-0.13

-0.25

-0.38

-0.51

-0.64

-0.76

-0.89

-1.02

-1.15

-1.27

-1.40

-1.53

-1.65

-1.78

-1.91

-2.04

-2.16

-2.29

-2.42

-2.55

-2.67

-2.80

-2.93

-3.05

-3.18

-3.31

-3.44

-3.56

-3.69

-3.82

-3.95

-4.07

-4.20

-4.32

-4.45

-4.58

-4.71

-4.84

-4.96

-5.09

-5.22

-5.35

-5.47

-5.60

-5.73

-5.85

-5.98

-6.11

-6.24

-6.36

-6.49

-6.62

-6.75

-6.87

-7.00

-7.13

-7.26

-7.39

-7.52

-7.65

-7.78

-7.91

-8.04

-8.17

-8.30

-8.43

-8.56

-8.69

-8.82

-8.95

-9.08

-9.21

-9.34

-9.47

-9.60

-9.73

-9.86

-10.00

-10.13

-10.26

-10.39

E 49  
412



MPOINT 1712 0.09 2.17 0.48 4.53 0.88 0.2734 1.27 1.92 1.34 1.67 2.07 3.000 2.46 3.000 2.86 79PERIODIC X-AXIS=DOY 3.25 YAXIS=

G 28 7H 8 0

2 32 1

2 59DUZ 4 B1

F2 153

R72 77 1

1 11 1

1 84 1

1 B43EC

21 0 1J 22

1 36 21

2 10 21

816AM AR H3

4 N9 0

1 F7 B22 41

053 A2

G C

H B6191

G S3

9 18

4 91 1

0.00  
 7.95  
 7.71  
 7.56  
 7.42  
 7.27  
 7.13  
 6.98  
 6.84  
 6.69  
 6.55  
 6.40  
 6.25  
 6.11  
 5.96  
 5.82  
 5.67  
 5.53  
 5.38  
 5.24  
 5.09  
 4.95  
 4.80  
 4.65  
 4.51  
 4.36  
 4.22  
 4.07  
 3.93  
 3.78  
 3.64  
 3.49  
 3.35  
 3.20  
 3.05  
 2.91  
 2.76  
 2.62  
 2.47  
 2.33  
 2.18  
 2.04  
 1.89  
 1.75  
 1.60  
 1.46  
 1.31  
 1.16  
 1.02  
 0.87  
 0.73  
 0.58  
 0.44  
 0.29  
 0.15  
 -0.00

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 413

OHIO

~~E-57~~  
414

CR

MPPOINT XMEAN YMEAN DEVX DEVY MODE NSIG-X NSIG-Y 79PERIODIC X-AXIS=DOY YAXIS=

-0.31 0.09 2.61 0.48 4.68 0.88 1.27 2.13784 2.07 3.000 3.000 3.25

7.50 7.26 7.23 7.09 6.85 6.82 6.68 6.55 6.41 6.27 6.14 6.00 5.86 5.73 5.59 5.45 5.32 5.18 5.01 4.91 4.77 4.60 4.45 4.33 4.20 4.05 3.92 3.78 3.65 3.51 3.37 3.27 3.00 2.86 2.73 2.59 2.45 2.32 2.17 2.01 1.87 1.74 1.60 1.46 1.32 1.18 1.05 0.92 0.78 0.64 0.51 0.37 0.23 0.10 0.00

3 22 12 0C 95 31 1 2 63 43 08 9 94 1 1 2 5 6 8 6 12 17 07 53 7 1 1 1 6 3 3 4 1 5 3 1 2 4 1 3 3 1 5 1 1

H SF F B S N I 2.86 2.46 2.07 1.67 1.27 0.88 0.48 0.09 3.25

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAKIS=
-0.31	0.09	4.03	0.88	1.67	1	3.000	3.000	3.25	
7.00	0.44	0.52076	1.27	2.13763	1	2.07	2.86	3.25	
6.87									
6.75									
6.62									
6.49									
6.36									
6.24									
6.11									
5.98									
5.85									
5.73									
5.60									
5.47									
5.35									
5.22									
5.09									
4.96									
4.84									
4.71									
4.58									
4.45									
4.33									
4.20									
4.07									
3.95									
3.82									
3.69									
3.56									
3.44									
3.31									
3.18									
3.05									
2.92									
2.79									
2.65									
2.52									
2.39									
2.26									
2.13									
2.00									
1.87									
1.74									
1.61									
1.48									
1.35									
1.22									
1.09									
0.96									
0.84									
0.71									
0.58									
0.45									
0.33									
0.20									
0.07									
-0.06									
-0.19									

ESS  
416

PENNSYLVANIA

~~E-54~~  
417



SOUTH CAROLINA

~~E-56~~  
419

MPPOINT	XMEAN	YMEAN	DEVI	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=00Y	YAXIS=
17A	2.43	0.12	1.12	1	3.000	3.000		
-0.31	0.09	0.44	1.27	2.07	2.46	2.86	3.25	
1.00								
6.75								
6.62								
6.49								
6.36								
6.24								
6.11								
5.98								
5.85								
5.73								
5.60								
5.47								
5.35								
5.22								
5.09								
4.96								
4.84								
4.71								
4.58								
4.45								
4.33								
4.20								
4.07								
3.95								
3.82								
3.69								
3.56								
3.44								
3.31								
3.18								
3.05								
2.92								
2.80								
2.67								
2.54								
2.42								
2.29								
2.16								
2.04								
1.91								
1.78								
1.65								
1.53								
1.40								
1.27								
1.15								
1.02								
0.90								
0.76								
0.64								
0.51								
0.39								
0.27								
0.15								
-0.31	0.09	0.44	1.27	2.07	2.46	2.86	3.25	

E-57  
420



MPPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=00Y	YAXIS=
56A	2.50	4.34	0.5443	1.57844	1	3.000	3.000	3.25	
0.31	0.00	0.48	0.88	1.67	2.07	2.46	2.86	3.25	X
7.00									
6.75									
6.50									
6.25									
6.00									
5.75									
5.50									
5.25									
5.00									
4.75									
4.50									
4.25									
4.00									
3.75									
3.50									
3.25									
3.00									
2.75									
2.50									
2.25									
2.00									
1.75									
1.50									
1.25									
1.00									
0.75									
0.50									
0.25									
0.00									
0.31	0.00	0.48	0.88	1.67	2.07	2.46	2.86	3.25	

TEXAS

~~F 59~~  
422



Y AXIS =

79PERIODIC X-AXIS=DOY

NSIG-Y

NSIG-X

MODE

DEVY

DEVX

YMEAN

XMEAN

MPOINT

1052

3.25

3.000

3.000

1

2.49590

1.27

3.62

2.47

0.48

0.09

0.31

3.25

2.86

3 1 1

1.67

1.27

0.88

0.48

0.09

0.88

0.31

4 8 37

2.46

3 1 1

1.67

1.27

0.88

0.48

0.09

0.88

0.31

0 F 0 36E 2 9 1 1 3 14 J M 7 2

5 7 0 223 3 5 2 2

1 2 J 8 L 3 4 1 1 1 B D 4 E 4 2

B 7 H 3 E 4 3 1 2 5 4 6 2 5 1

1 0 4 4 5 1 1 4 9 0 9 6 1

1 4 1 6 3 1 8 6 0 3

C V 1 A 6 2 P G 6 3

B

2

3.25

2.86

2.46

2.07

1.67

1.27

0.88

0.48

0.09

0.31

424

MPOINT	XMEAN	YMEAN	DEVX	DEVY	MODE	NSIG-X	NSIG-Y	79PERIODIC X-AXIS=DOY	YAXIS=
399	2.13	3.29	0.3828	2.68937	1	3.000	3.000	3.25	
-0.31	0.09	0.48	0.6A	1.27	8 E	2.07	2.46		
7	0.07								
07									
6	0.75								
6	0.49								
6	0.36								
6	0.24								
6	0.19								
5	0.85								
5	0.73								
5	0.67								
5	0.55								
5	0.52								
5	0.6								
4	0.87								
4	0.71								
4	0.53								
4	0.43								
4	0.20								
4	0.95								
3	0.82								
3	0.66								
3	0.56								
3	0.41								
3	0.3								
3	0.53								
3	0.25								
3	0.2								
2	0.14								
2	0.91								
1	0.78								
1	0.53								
1	0.47								
1	0.21								
1	0.87								
0	0.64								
0	0.51								
0	0.38								
0	0.25								
0	0.13								
-0.31	0.09	0.48	0.88	1.27	1.67	2.07	2.46	2.86	3.25

E-62  
425



APPENDIX F  
COMPUTER PROGRAM LISTING





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FILE: WEIRD FORTRAN A PURDUE/LARS 3031

```
EMRGD(IFLD)=LDDUM
IF (SEEDY(IFLD).LT.1) GO TO 4
IF (IMD1.EQ. IMD2) RMDTH(IFLD) = -2
JOK=JOK+1
Z1(JOK)=EMRGD(IFLD)
Z2(JOK)=PLTD(IFLD)
DUCK(JOK) = SEEDY(IFLD)
DUMMY(JOK) = RMDTH(IFLD)
GO TO 532
531 IF (ILO.FO.NLO) GO TO 533
532 CONTINUE
IF (MONTH(I).LT.1.OR.IDAY(I).LT.1) GO TO 4
COMMENT: IF ALL FIELDS ARE TO BE PLOTTED UPON TAPE READ,
C MAKE FOLLOWING STATEMENT A COMMENT CARD.
C *****
C IF (PLD(IFLD).LT.1.OR.EMRGD(IFLD).LT.1) GO TO 4
C *****
C *****
1241 PLNTZ(I)=10*IDUM(2)+IDUM(3)+100*IDUM(1)
IF (PLNTZ(I).GT.998) GO TO 4
COVER(I)=10*IDUM(5)+IDUM(6)
CRPSTG(I)=FLOAT(IDUM(9))*FLOAT(IDUM(10))/10.0
532 CONTINUE
IF (ILQ.EQ.KK5) GO TO 4
IF (COVER(I).GT.10.0) WRITE (6,666) NSEG
IF (CRPSTG(I).GE.10.0) COVER(I)=COVER(I)/10.0+5
IF (CRPSTG(I).GE.10.0) WRITE (6,667) NSEG
IF (CRPSTG(I).GE.10.0) SEGMENT=14+HAS_CROP_STAGE.GF.10+1
IF (CRPSTG(I).GE.10.0) CRPSTG(I)=CRPSTG(I)/10.0
666 FORMAT (1H,SEGMENT,14,HAS_CROP_STAGE.GF,10)
C THE ABOVE STATEMENTS ARE TO CORRECT ENUMERATORS THAT USE % IN PLACE
C OF THE 1-10 CODE OR THAT FAIL TO PUT A DECIMAL IN THE CROP STAGE
IF (I.EQ.9995) GO TO 44
GO TO 5
44 D1=10
D2=120
XX(I)=IDY(MONTH(I),IDAY(I))
COMMENT: NORMALIZATION OF PLANT HEIGHT AND GROUND COVER BY
C PLANTING OR EMERGENCE DATE CAN ONLY BE DONE FOR 1 SEGMENT
C AT A TIME WITH THE PRESENT PROGRAM.
C *****
IF (INPROC.EQ.9999.AND.PLTD(FIELD(I)).GT.0) XX(I)=XX(I)
*PLTD(FIELD(I))
IF (INPROC.EQ.9999.AND.EMRGD(FIELD(I)).GT.0) XX(I)=XX(I)
*EMRGD(FIELD(I))
YY(I)=PLNTZ(I)
INFO(I)=LWR(I)
WRITE (6,700) I,FIELD(I),XX(I),YY(I)
700 FORMAT (1H,*,I=,15,XX,*,FIELD=,15,*, XX=,F10.3,*, YY=,F10.3)
C 20 CONTINUE
DO 9173 I=1,JOK
9173 WRITE (6,9174) I,I1,XZ(IIII),Z2(IIII),DUCK(IIII),DUMMY(IIII)
FORMAT (1H,*,I=,10,4F15.5)
CALL HIS1 (X,JOK,10,XMIN,XMAX,F,TITLE,0,0,0,6,ISEG,NSAM,ICRP)
CALL HIS1 (Z,JOK,10,XMIN,XMAX,F,TITLE,0,0,0,6,ISEG,NSAM,ICRP)
CALL HIS1 (DUCK,JOK,10,XMIN,XMAX,F,TITLE,0,0,0,6,ISEG,NSAM,ICRP)
CALL HIS1 (DUMMY,JOK,10,XMIN,XMAX,F,TITLE,0,0,0,6,ISEG,NSAM,ICRP)
NNN=0
IF (YY(IFL) = 1.Y) .OR. (XX(IFL) .LT. 0.01)) GO TO 620
NNN = NNN + YY(IFL)
Z2(MNN) = XX(IFL)
XX(IFL) = XX(IFL)/100.0
620 CONTINUE
XX(N+1)=1.5
YY(N+1)=1.0
YY(N+2)=5.0
IF (INPROC.EQ.9999) XX(N+1)=0.0
NNN=N+2
CALL TPIC7 (XX,YY,INFO,NNN,XCENT,YCENT,3.0,3.0,55.100,1.1,2.
```

429

FILE: WFIPD FORTPAN A PURDUE/LARS 3031

```

C 600 ALABEL(6)
C 600 DO 600 I=1,MNN
C 600 Z7(I)=ALOG(Z7(I))
C 640 CONTINUE
C 640 XCHI=200
C 640 FLAMDA=1.E-03
C 600 LA=0
C 600 LA=LA+1
C COMMENT: FOR THE GIVEN SET OF DATA ONLY 100 ITERATIONS ARE
C NECESSARY FOR CONVERGENCE. THE LIMIT MAY BE NEEDED
C TO BE CHANGED FOR A DIFFERENT SET OF DATA VALUES.
C
C IF (LA.GE.10) GO TO 601
C CALL CURFIT (XZ,ZZ,DUMMY,MNN,3.0,A,DUCK,SIGMAA,FLAMDA,YFIT,
C &CHISQR)
C XDFI = XCHI - CHISQR
C XTH = (3.*E-04)*CHISQR
C IF (ABS(XDFI).LE.XTH) GO TO 601
C XCHI = CHISQR
C GO TO 600
C 601 CONTINUE
C 27 WRITE (6,27) (A(I),I=1,3),(SIGMAA(I),I=1,3),CHISQR
C 27 FORMAT (14.5X,A=,3(1PE15.3,2X),7.5X,SIGMAA = ,3(F9.3,2X),/,
C 65X,CHISQR = ,1PE15.6)
C WRITE (6,35) (I,XZ(I),YFIT(I),Z7(I),I=1,MNN)
C 35 FORMAT (5X,I=,15.5X,XZ = ,F10.3,YFIT = ,F10.3,5X,
C DO 29 I=1,MNN
C YFIT=COVER(I)
C INFO(1)=ELWR(2)
C 29 CONTINUE
C MNN=0
C DO 645 IFL=1,M
C IF (YFIT(I).LT.1.0) .OR. (XX(IFL).LT.0.01)) GO TO 645
C MNN=MNN+1
C Z7(MNN)=YFIT(I)
C XZ(MNN)=XX(IFL)
C 645 CONTINUE
C YFIN(1)=-1.0
C YFIN(2)=10.0
C CALL TPICT7 (XX,YY,INFO,MNN,XCENT,YCENT,3.0,3.0,55,100,1.1,2,
C DO 650 I=1,MNN
C Z7(I)=ALOG(Z7(I))
C 650 CONTINUE
C XCHI=200
C FLAMDA=1.E-03
C 602 LA=LA+1
C COMMENT: THE ITERATION LIMIT MAY BE ADJUSTED DEPENDING
C ON THE SET OF DATA USED.
C
C IF (LA.GE.10) GO TO 603
C CALL CURFIT (XZ,ZZ,DUMMY,MNN,3.0,A,DUCK,SIGMAA,FLAMDA,YFIT,
C &CHISQR)
C XDFI = XCHI - CHISQR
C XTH = (3.*E-04)*CHISQR
C IF (ABS(XDFI).LE.XTH) GO TO 603
C XCHI = CHISQR
C GO TO 602
C 603 CONTINUE
C WRITE (6,30) (A(I),I=1,3),(SIGMAA(I),I=1,3),
C &CHISQR
C 30 FORMAT (14.5X,A=,3(1PE15.3,2X),7.5X,SIGMAA = ,3(F9.3,2X),/,
C 65X,CHISQR = ,1PE15.6)
C CALL TPICT7 (XX,YY,INFO,MNN,XCENT,YCENT,3.0,3.0,55,100,1.1,2,ALABEL
C 41 65,27) (I,XZ(I),YFIT(I),Z7(I),I=1,MNN)
C 41 FORMAT (5X,I=,14.5X,XZ = ,F10.3,YFIT = ,F10.3,
C DO 28 I=1,MNN
C YFIT=COVER(I)
C INFO(1)=ELWR(3)
C 28 CONTINUE
C YFIN(1)=1.0E-04
C YFIN(2)=1.0E-04
C CALL TPICT7 (XX,YY,INFO,MNN,XCENT,YCENT,3.0,3.0,55,100,1.1,2,ALABEL
C 1,6)
C 1,5 STOP

```

4  
430

FILE: WFIRD FORTRAN A PURDUE/FLAPS 3031

```

C.....
C
END
FUNCTION IDOY(MONTH, IDAY)
  IF (MONTH.GE.1) GO TO 3
  IDOY=MONTH*31-31*IDAY
  RETURN
3 IDOY=4HS(MONTH*70.6-32.3*IDAY)
  RETURN
END

SUBROUTINE GMRBAD (KLO,T1,NSAM,ISEG)
  DIMENSION ISEG(160),Y(11)
  EQUIVALENCE (MLQ,X(1)),(J2,J1(1)),(K2,K1(1))
  INTEGER*2 J2,K2
  LOGICAL*1 A(R0),T1,X(2),J1(2),K1(2)
  INTEGER*2 MLQ,KLO
  DATA YA/, 0.0,0.1,0.2,0.3,0.4,0.5,0.6,0.7,0.8,0.9/
  DATA IY/0.0,1.2,3.4,5.6,7.8,9/
  J1(2)=T1
  K1(2)=T1
  MAX=0
  DO 5 K=1,NSAM
    IF (ISEG(K).GT.MAX) MAX=ISEG(K)
  WRITE (16,77) NSAM,MAX
77 FORMAT (1H,2I5)
5 CONTINUE
  LCOUNT=800
  CALL OPND (5,ICOUNT,IEGRR,0)
  IF (LERROR.EQ.1) GO TO 55
  IF (LERROR.LA.1) IEGRR=199
  WRITE (14,66) IEGRR
66 FORMAT (1H,1I4)
  IEGRR=199
  DO 10 I=1,10
    LO=(I-1)*80
    CALL MOVBYT (0,LO,1,A,0,1,80)
    X(1)=A(1)
    NSFG=0
    DO 102 K=1,4
      DO 100 KK=1,11
        J1(1)=A(K*1)
        K1(1)=Y(A(KK))
        IF (J2.EQ.K2) NSEG=NSEG+IY(KK)*(10**(4-K))
      100 CONTINUE
      IF (NSEG.GT.MAX) GO TO 66
      IF (KLO.EQ.NLO) GO TO 888
      DO 3 J=1,NSAM
        IF (ISEG(J).EQ.NSEG) WRITE (7,1) (A(I),I=1,80)
      3 CONTINUE
      60 GO TO 2
      65 GO TO 2
      67 WRITE (11) (A(I),I=1,80)
      1 FORMAT (80A1)
      RETURN
      55 GO TO 2
      END

```



```

C
23 WRITE (NT,23) ((I,I = KVI,KV,KVT)
   FORMAT (23X,10(IH,9H*****),1H,/8X,10HPERCENTAGE,
   WRITE (NT,24)
24 FORMAT (14//)
   WRITE (NT,24) XND
24 FORMAT (23X,9HIN,3X,10F7.2)
25 WRITE (NT,25) (F(100),100=1,NG)
   FORMAT (19X,9CONTENT,3X,10F7.2)
   RETURN
   END

C
SUBROUTINE PLOT3 (IND,IS,X,F,N,NT)
DIMENSION F(1)
INTEGER*2 H,P,RWR
EQUIVALENCE (HWR,LWR),(RWR,KWR)
LOGICAL*1 LWR,KWR
LOGICAL*1 SYMBL1,SYMBL2,ONE,ZERO,STAR,PLUS,AXIS
DATA BLANK /' ',AXIS/'!',PLUS/'+',STAR/'*',ZERO/'0'/'
ONE/'1'/'
A(I,IND) = AXIS(0) A(101) = PLUS
IF (I) GO TO 1
DO 1 I = 1,100
  A(I) = BLANK
  IF (IND.EQ.0) A(I) = PLUS
  GO TO 6
  IF (IND.EQ.1) GO TO 3
  SYMBL1 = PLUS
  SYMBL2 = STAR
  GO TO 4
  SYMBL1 = AXIS
  SYMBL2 = BLANK
  DO 5 I = 1,91
  A(I) = SYMBL1
  DO 5 J = 1,9
  A(I+J) = SYMBL2
  DO 7 I = 1,N
  J = F(I) + 1.5
  IF ((J.LT.1) .OR. (J.GT. 101)) GO TO 7
  LWR = A(J)
  KWR = BLANK
  IF (HWP.NE. RWR) GO TO 9
  A(J) = ONE
  GO TO 7
  A(J) = ZERO
  CONTINUE
  IF (IND.EQ.0) GO TO 10
  IF (IND.EQ.1) A
  FORMAT (23X,101A1)
  RETURN (NT,25) X,A
  WRITE (NT,25) X,A
  RETURN
  END)

C C
SUBROUTINE GROUP (X,N,NG,XMIN,XMAX,F,IND)
DIMENSION X(1),F(1)
IF (IND.EQ. 1) GO TO 2
Z = X(1)
ZK = X(1)
DO 1 I = 1,N
  Z = X(I)
  IF (X(I) .GT. ZK) ZK = X(I)
  CONTINUE
S = (ZK - Z)/FLOAT(NG)
XMIN = Z - 5 * S - 1.0E-06
XMAX = ZK + 5 * S + 1.0E-06
STEP = (XMAX - XMIN)/NG - 1)
IF (STEP .GT. 0.0) GO TO 2-0
DUM = X(1)
IF (XMAX.EQ.XMIN) DUM = 1.0
STEP = DUM/FLOAT(NG)

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```
250 XMAX = X(1) * DIM/2.0  
6 DO 6 I = 1,NG  
F(I) = 0.0  
DO 9 I = 1,N  
K = (X(I) - XMIN)/STEP * 1.5  
IF (A(I) .EQ. (XMAX + 0.5 * STEP)) K = NG  
IF (K .LE. 0) K = 1  
IF (K .GT. NG) K = NG  
C 102 WRITE (5,102) K = 0.13  
9 FORMAT (5X,1) = 0.13,5X,K = 0.13  
CONTINUE  
C 25 CONTINUE (FIX) K=1,NG  
FORMAT (10X,CONTENT,10P,2)  
RETURN  
END
```

```
HS01590  
HS01600  
HS01610  
HS01620  
HS01630  
HS01640  
HS01650  
HS01660  
HS01670  
HS01680  
HS01690  
HS01700  
HS01710  
HS01720  
HS01730  
HS01740  
HS01750
```

```

SUBROUTINE TPIC77(X,Y,INFO,MPOINT,XCENT,YCENT,
1 SIGN,SGYN,NLINE,NCOL,MODE1,MODE2,MODE3,ALABEL,10)
LOGICAL L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12,L13,L14,L15,L16,L17,L18
INTEGER I,J,K,L,M,N,P,Q,R,S,T,U,V,W,X,Y,Z
DIMENSION XPTS(17),YPTS(17),MH(120,60)
REAL ALABEL(5)
DATA XPTS(1:17),YPTS(1:17),MH(1:120,1:60) /
1 20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,20.15,
2 17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,17.0,
3 19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,19.0,
4 21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,21.0,
DATA RLANK(7) /
X AND Y ARE DATA TO BE PLOTTED
MPOINT= NUMBER OF POINTS
INFO=1 IS A VECTOR FOR MPOINTS, ASSIGNING CODE FOR EACH POINT. P=80, *R1
XCENT= DUMMY VARIABLE FOR DEFAULT SCALING. OTHERWISE ASSIGN CENTER OF
YCENT= DUMMY VARIABLE FOR DEFAULT SCALING. OTHERWISE ASSIGN CENTER OF
SIGN=3 FOR PLUS AND MINUS 3 STANDARD DEVIATIONS
NLINE=55 NORMALLY. SIZE OF GRAPH ON PRINTOUT
NCOL=110 NORMALLY. SIZE OF GRAPH ON PRINTOUT
MODE1=0. THEN SCALING IS USING MEAN AND STANDARD DEVIATION
MODE2=0. THEN SCALING IS USING MEAN AND STANDARD DEVIATION
MODE3=2. THEN SCALING IS USING MAX AND MIN
ALABEL= TITLE OF GRAPH, 345
IO= ONLY NUMBER FOR PRINTOUT
MODEAL= NCOL*Y
MODEAL= MPOINT
LONE= 1.0
SUMX= 0.0
SUMY= 0.0
SUMX2= 0.0
SUMY2= 0.0
XH= -1.0F10
YH= -1.0F10
XS= 1.0F10
YS= 1.0F10
DO 1400 I=1,MPOINT
IF(X(I).GT.XH) XH=X(I)
IF(X(I).LT.XS) XS=X(I)
IF(Y(I).GT.YH) YH=Y(I)
IF(Y(I).LT.YS) YS=Y(I)
IF (MODE3.EQ.2) MPOINT=MPOINT-2
IF (MODE3.EQ.2) MPOINT=MPOINT-2
SUMX=SUMX+X(I)
SUMY=SUMY+Y(I)
SUMX2=SUMX2 + X(I)*X(I)
SUMY2=SUMY2 + Y(I)*Y(I)
CONTINUE
XMEAN=SUMX/MPOINT
YMEAN=SUMY/MPOINT
XMEAN=XMEAN+XCENT
YMEAN=YMEAN+YCENT
IF (MODE1.EQ. 0) XCENT=XMEAN
IF (MODE1.EQ. 0) YCENT=YMEAN
XVAR = (SUMX2 - 2.*XMEAN*SUMX + XMEAN*XMEAN*MPOINT) / MPOINT
YVAR = (SUMY2 - 2.*YMEAN*SUMY + YMEAN*YMEAN*MPOINT) / MPOINT
DEVX = SQRT(XVAR)
DEVY = SQRT(YVAR)
IF (DEVX.LT.1.E-10) OR (DEVY.LT.1.E-10) MODE3=1
IF (XCENT.GT. 0) SIGX=DEVX
IF (YCENT.GT. 0) SIGY=DEVY
SMALXCENT = SIGX*DEVY
SMALYCENT = SIGY*DEVX
IF (MODE3.EQ.2) SMALXKXS
IF (MODE3.EQ.2) SMALYKYS
IF (MODE3.EQ.2) SMALYKXS
IF (MODE3.EQ.2) SMALXKYS
DX= (R1GX-SMALX)/NCOL
DY= (R1GY-SMALY)/NLINE
IF (MODE3.EQ.1) DY=DX*1.50
IF (MODE3.EQ.1) R1GY=YCENT + NLINE/2*DY
IF (MODE3.EQ.1) SMALY=YCENT - NLINE/2*DY
DO 1400 J=1,120

```

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```

C
C
C      SUBROUTINE CURFIT (X,Y,SIGMA,NPTS,NTERMS,MODE,A,DELTA,
C      ISIGMA,FLAMDA,YFIT,CHISQP)
C
C *****
C COMMENT: THIS PROGRAM NORMALIZES THE DATA FOR THE PROGRAMMER.
C THIS FEATURE IS A MODIFICATION TO THE ORIGINAL
C BASHAW PROGRAM.
C *****
C MAKE A LEAST-SQUARE FIT TO A NON-LINEAR FUNCTION
C WITH AN ARRAY OF DATA POINTS
C Y-ARRAY OF DEPENDENT VARIABLE
C SIGMA ARRAY OF ERRORS
C NPTS = NO. OF DATA POINTS
C MODE = 0 DETERMINES THE METHOD OF WEIGHTING
C MODE = +1 WEIGHT(I)=1./SIGMA(I)**2
C MODE = -1 WEIGHT(I)=1./Y(I)
C A DELTA ARRAY OF PARAMETERS
C FLAMDA PROPORTION OF INCREMENTS FOR A
C YFIT ARRAY OF FITTED VALUES
C CHISQR RESIDUALS
C REQUIRE THE FOLLOWING FUNCTIONS
C FUNCTN(X,I,A) DELTA, NTERMS, DERIV)
C FOR(SAY,SIGMA,NPTS,NFRF,MODE,YFIT)
C DOUBLE PRECISION TERMS
C MAIN PROGRAM OF PARAMETERS ALIGNED AND FLAMDA SHOULD
C BE SET AT 0.01 AT THE BEGINNING OF SEARCH. INITIAL VALUES
C OF ARRAY SHOULD BE GUESSED AT AND SUPPLIED.
C IT IS RESPONSIBILITY OF THE MAIN PROGRAM TO DETERMINE
C CONVERGENCE OF THE FIT.
C DIMENSION X(1),Y(1),SIGMA(1),A(1),DELTA(1),SIGMAA(1),
C YFIT(1)
C 1 APRAY(10,10),H(10)
C IF(NF=NPTS-NTERMS)
C   CHISQR=0.
C GO TO 110
C EVALUTE WEIGHTS
C DO 30 I=1,NPTS
C   IF(MODE) 22,27,29
C   WGT(I)=1./Y(I)
C   WEIGHT(I)=1./(-Y(I))
C GO TO 30
C WEIGHT(I)=1.
C GO TO 30
C WEIGHT(I)=1./SIGMA(I)**2.
C CONTINUE
C EVALUTE ALPHA AND BETA MATRICES
C DO 34 J=1,NTERMS
C   BETA(J)=0.
C DO 34 K=1,J
C   ALPHA(J,K)=0.
C DO 50 Y=1,NPTS
C   CALL FUFRIV (X,I,A,DELTA,NTERMS,DERIV)
C DO 46 J=1,NTERMS
C   BETA(J)=BETA(J)+WEIGHT(I)*(Y(I)-FUNCTN(X,I,A))*DERIV(J)
C   HFNC = FUNCTN(X,I,A)
C DO 45 K=1,J
C   ALPHA(J,K)=ALPHA(J,K)+WEIGHT(I)*DERIV(J)*DERIV(K)
C CONTINUE
C DO 53 Y=1,NTERMS
C   ALPHA(K,J)=ALPHA(J,K)
C EVALUTE CHI SQUARE AT STARTING POINT
C DO 61 I=

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TPI00010  
 TPI00020  
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22 IF (MODE)22*27*29
23 IF (Y(I))25*27*23
24 WEIGHT=1./Y(I)
25 GO TO 30
26 WEIGHT=1./(-Y(I))
27 GO TO 30
28 WEIGHT=1.
29 GO TO 30
30 WEIGHT=1./SIGMA(I)**2
31 CHISO = CHISO + WEIGHT * ((Y(I) - YFIT(I))/(YFIT(I)))**2
32 ZCHISO=DLOG(CHISO)
33 IF (ABS(7*CHISO).GT.10.) CHISO=1.E10
34 FREE=NFREE
35 FCHISO=CHISO/FREE
36 RETURN
37 ENF.

C
C
C
10 SUBROUTINE MATINV (ARRAY,NORDER,DET)
11 DOUBLE PRECISION ARRAY,AMAX,SAVE
12 DIMENSION ARRAY(10,10),IK(10),JK(10)
13 DET=1.
14 DO 100 I=1,NORDER
15 FIND LARGEST ELEMENT ARRAY(I,J) IN REST OF MATRIX
16 AMAX=0
17 DO 30 J=1,NORDER
18 IK(I)=J
19 IF (ABS(ARRAY(I,J))-DABS(ARRAY(I,J))) 2*+24*30
20 AMAX=ARRAY(I,J)
21 JK(I)=I
22 JK(I)=J
23 CONTINUE
24 INTERCHANGE ROWS AND COLUMNS TO PUT AMAX IN ARRAY(K,K)
25 IF (AMAX)41*32*41
26 DFT=0
27 GO TO 140
28 I=IK(I)
29 J=JK(I)
30 IF (I-K)21*51*43
31 DO 50 J=1,NORDER
32 SAVE=ARRAY(K,J)
33 ARRAY(K,J)=ARRAY(I,J)
34 ARRAY(I,J)=SAVE
35 J=JK(I)
36 IF (J-K)21*41*53
37 DO 60 I=1,NORDER
38 SAVE=ARRAY(I,K)
39 ARRAY(I,K)=ARRAY(I,J)
40 ARRAY(I,J)=SAVE
41 CONTINUE
42 ACCUMULATE ELEMENTS OF INVERSE MATRIX
43 DO 70 I=1,NORDER
44 IF (I-K)43*70*63
45 ARRAY(I,K)=-ARRAY(I,K)/AMAX
46 CONTINUE
47 DO 40 I=1,NORDER
48 DO 40 J=1,NORDER
49 IF (I-K)74*80*75
50 AMAX(I,J)=ARRAY(I,J)+ARRAY(I,K)*ARRAY(K,J)
51 DO 60 I=1,NORDER
52 IF (J-K)51*90*83
53 ARRAY(K,J)=ARRAY(K,J)/AMAX
54 CONTINUE
55 ARRAY(K,K)=1./AMAX
56 DFT=DET*AMAX
57 RESTORE ORDERING OF MATRIX
58 DO 130 I=1,NORDER
59 K=NORDER-L+1
60 J=IK(I)
61 IF (J-K)111*111*105

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```
105  DO 110 I=1,NORDER
      SAVE=ARRAY(I,K)
      ARRAY(I,K)=ARRAY(I,J)
110  APRAY(I,J)=SAVE
      IF(JK(IK) 130,130,113
113  DO 120 J=1,NORDER
      SAVE=ARRAY(K,J)
      ARRAY(K,J)=ARRAY(I,J)
120  CORRAT(I,J)=SAVE
130  CONTINUE
140  GETUPH
      END
```

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TPI02450
TPI02460
TPI02470
TPI02480
TPI02490
TPI02500
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