

Nectarine Size Study

California Tree Fruit Agreement and University of California  
 Report by Rene Guillou and Eugene Mayer  
 February 1961

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In 1959 the California Tree Fruit Agreement, on behalf of the Nectarine Administrative Committee, requested the University of California to analyze size data collected by the Committee, with a view to devising size regulations. A report submitted in September 1959 suggested minimum net weights for cup-packed row sizes. The limited weighings of each size and variety did not show any significant differences between varieties. Nectarines packed in plastic trays ran lighter than those packed in paper cups, by around one pound per box. The range between lightest and heaviest boxes in each pack was from two to five pounds, however, indicating that elimination of the lighter plastic-tray boxes could make the two packs equivalent in weight.

Possible ring-size limits were also suggested, though the data for each size and variety were too limited for confident conclusions. In any case, the per cent of fruits passing a given ring is a poor size standard, because it takes no account of how much larger or smaller than the ring the fruits may be. Additional ring measurements in 1960 were too few to justify any further analysis of ring sizes.

Weights taken in 1960 are reasonably adequate for 14 of the 16 leading varieties and for 3 varieties of minor importance. Weights are inadequate or missing for 12 of the 28 varieties listed in the 1960 report of the Tree Fruit Agreement.

Weights by sizes, varieties, and packs are shown in tables 1 through 5, arranged for direct comparison between varieties and between cup pack and plastic tray pack. The same data are shown in figures 1 through 15, arranged for direct comparison between varieties only. Suggested minimum net weights per box are shown in table 6 and are also indicated in the other tables and on the figures. Corresponding weights per 100 nectarines, and number of nectarines in a 10-pound sample, are shown in table 7 and 8. These weights are estimated to accept the sizes of nectarines that were weighed in 1960, with a tolerance of 10 per cent of the containers in a lot allowed to be under minimum weight.

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It should be noted that if some lots have 10 per cent of the containers under a minimum, there will be other lots in which fewer or none of the containers will be under this minimum. Combined figures for a number of lots will, therefore, show considerably less than 10 per cent of the containers under such a minimum. Five per cent or less of all the containers weighed were under the minimums suggested here, which allows for some lots having had no containers under the minimum and others having had up to ten per cent under the minimum.

The additional weights taken in 1960, as compared with 1959, indicate probable differences between varieties. Actually the weights of different varieties were commonly taken in different packing houses. A variety that happened to be weighed at houses that put up a heavy pack might appear to be heavy, when it was really about average. Considering this situation, a simpler and perhaps adequate schedule of minimum required weights would be:

|                             |    |        |        |     |       |
|-----------------------------|----|--------|--------|-----|-------|
| Size                        | 80 | 88     | 96     | 108 | 4 x 4 |
| Standard pack minimum, lb   | 19 | 18 1/2 | 17 1/2 | 17  | 26    |
| Weights per 100 fruits, lb  | 24 | 21     | 18     | 16  | 15    |
| Fruits in a 10-pound sample | 42 | 48     | 55     | 64  | 68    |

All of the requirements suggested in this report are based on maintenance of sizes equal to those weighed in 1960. The effect of heavier requirements, if such are considered, can be seen by reference to the tables and charts.



Table-2 Numbers of Lugs by Net Weights  
Cup Pack - 88<sup>s</sup>

| Variety | Net wt.<br>lbs. | Numbers of Lugs |             |                 |                |                |           |            |                  |           |               | Numbers of Lugs <sup>s</sup> |                |                 |         |          |           |            |    |    |    |
|---------|-----------------|-----------------|-------------|-----------------|----------------|----------------|-----------|------------|------------------|-----------|---------------|------------------------------|----------------|-----------------|---------|----------|-----------|------------|----|----|----|
|         |                 | Grandeur        | Grand River | Le Grand, Early | Le Grand, Late | Princess, Late | Red Grand | Star Grand | Sun Grand, Early | Sun Grand | Sunrise Grand | Le Grand, Early              | Le Grand, Late | Sun Grand, Late | Sunrise | Princess | Red Grand | Star Grand |    |    |    |
| 18      |                 | 0               | 0           | 1               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 0              | 0               | 2       | 0        | 0         | 0          |    |    |    |
| 18 1/4  |                 | 0               | 0           | 1               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 0              | 0               | 2       | 0        | 0         | 0          |    |    |    |
| 18 1/2  |                 | 1               | 0           | 0               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 0              | 0               | 4       | 0        | 0         | 0          |    |    |    |
| 18 3/4  |                 | 1               | 0           | 0               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 0              | 0               | 6       | 0        | 0         | 0          |    |    |    |
| 19      |                 | 2               | 0           | 1               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 0              | 0               | 3       | 0        | 0         | 0          |    |    |    |
| 19 1/4  |                 | 3               | 1           | 2               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 0              | 0               | 0       | 0        | 0         | 0          |    |    |    |
| 19 1/2  |                 | 1               | 0           | 3               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 0              | 0               | 0       | 1        | 0         | 1          |    |    |    |
| 19 3/4  |                 | 6               | 0           | 8               | 0              | 2              | 1         | 2          | 5                | 1         | 1             | 0                            | 0              | 0               | 0       | 0        | 0         | 0          |    |    |    |
| 20      |                 | 3               | 3           | 9               | 0              | 3              | 6         | 0          | 5                | 6         | 1             | 1                            | 0              | 0               | 0       | 0        | 0         | 1          |    |    |    |
| 20 1/4  |                 | 5               | 3           | 9               | 4              | 3              | 6         | 1          | 8                | 2         | 2             | 3                            | 4              | 0               | 0       | 0        | 2         | 2          |    |    |    |
| 20 1/2  |                 | 1               | 4           | 9               | 8              | 2              | 6         | 3          | 6                | 1         | 0             | 4                            | 4              | 0               | 0       | 2        | 3         | 1          |    |    |    |
| 20 3/4  |                 | 3               | 5           | 10              | 7              | 2              | 7         | 1          | 5                | 1         | 0             | 4                            | 2              | 0               | 0       | 5        | 5         | 2          |    |    |    |
| 21      |                 | 4               | 4           | 10              | 12             | 3              | 6         | 2          | 2                | 0         | 1             | 1                            | 7              | 0               | 0       | 4        | 1         | 2          |    |    |    |
| 21 1/4  |                 | 3               | 7           | 8               | 12             | 5              | 2         | 2          | 0                | 2         | 0             | 0                            | 3              | 0               | 0       | 0        | 0         | 1          |    |    |    |
| 21 1/2  |                 | 4               | 2           | 6               | 7              | 4              | 3         | 1          | 0                | 0         | 0             | 4                            | 3              | 0               | 0       | 0        | 0         | 0          |    |    |    |
| 21 3/4  |                 | 4               | 2           | 7               | 6              | 1              | 2         | 1          | 0                | 0         | 0             | 3                            | 2              | 0               | 0       | 1        | 0         | 0          |    |    |    |
| 22      |                 | 1               | 1           | 4               | 3              | 2              | 1         | 0          | 0                | 0         | 0             | 1                            | 3              | 0               | 0       | 0        | 0         | 0          |    |    |    |
| 22 1/4  |                 | 0               | 1           | 1               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 2              | 0               | 0       | 0        | 0         | 0          |    |    |    |
| 22 1/2  |                 | 0               | 0           | 0               | 3              | 0              | 0         | 0          | 0                | 0         | 0             | 1                            | 1              | 0               | 0       | 0        | 0         | 0          |    |    |    |
| 22 3/4  |                 | 0               | 0           | 1               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 1              | 0               | 0       | 0        | 0         | 0          |    |    |    |
| 23      |                 | 0               | 0           | 0               | 0              | 0              | 0         | 0          | 0                | 0         | 0             | 0                            | 0              | 0               | 0       | 0        | 0         | 0          |    |    |    |
| Total   |                 | 15              | 28          | 48              | 32             | 89             | 62        | 24         | 40               | 21        | 170           | 43                           | 32             | 19              | 21      | 31       | 65        | 17         | 13 | 12 | 10 |

Each weight includes boxes up to the next quarter pound heavier; for example, boxes 20 pounds or over but under 20 1/4 pounds are included as 20 pounds.

Table 3. Numbers of Lugs by Net Weights  
Cup Pack - 96's Plastic Trays - 96's

| Variety     | Grand River    | Princess | Rose | Star Grand | Star Grand II | Sun Grand, Early | Sun Grand | Sunrise | Grand Haven | Grand River | Star Grand | Sun Grand, Early | Sun Grand | Sunrise |
|-------------|----------------|----------|------|------------|---------------|------------------|-----------|---------|-------------|-------------|------------|------------------|-----------|---------|
| Net Wt. lb. | Number of Lugs |          |      |            |               |                  |           |         |             |             |            |                  |           |         |
| 17          |                |          |      |            |               |                  |           | 1       |             |             |            |                  |           | 1       |
| 17 1/4      |                |          |      |            |               |                  |           |         |             |             |            |                  |           | 2       |
| 17 1/2      |                |          |      |            |               |                  |           | 4       |             |             |            |                  |           | 5       |
| 17 3/4      |                |          |      |            |               |                  |           |         |             |             |            |                  |           | 1       |
| 18          | 3              |          |      | 1          |               | 1                | 1         | 9       | 4           |             |            | 2                |           | 2       |
| 18 1/4      | 2              |          | 1    | 1          |               | 1                |           | 11      |             | 2           |            | 2                |           | 2       |
| 18 1/2      | 2              | 3        | 3    |            |               | 5                |           | 8       | 4           | 4           |            | 1                | 4         | 4       |
| 18 3/4      | 1              | 1        | 1    | 1          |               | 3                |           | 10      | 2           | 2           |            | 8                | 4         | 4       |
| 19          | 3              | 3        | 3    | 1          |               | 8                | 1         | 5       | 2           | 3           |            | 7                | 4         | 2       |
| 19 1/4      | 5              | 5        | 1    | 2          |               | 9                | 2         | 5       |             | 8           |            | 10               | 3         | 3       |
| 19 1/2      | 7              | 8        | 3    |            | 5             | 18               | 1         | 1       | 4           | 3           | 1          | 9                | 1         | 1       |
| 19 3/4      | 8              | 5        |      | 1          | 4             | 11               | 3         | 1       |             | 3           | 4          | 14               | 2         | 2       |
| 20          | 12             | 6        |      | 4          | 1             | 19               | 1         |         | 2           | 3           | 2          | 9                |           |         |
| 20 1/4      | 10             | 5        |      | 1          |               | 14               |           |         |             |             | 2          | 9                |           |         |
| 20 1/2      | 4              | 4        |      | 2          | 1             | 12               |           |         |             |             |            | 2                |           |         |
| 20 3/4      | 3              | 1        |      | 1          |               | 6                |           |         |             |             |            | 2                |           |         |
| 21          | 3              |          |      |            |               | 1                |           |         |             |             |            |                  |           |         |
| 21 1/4      | 1              |          |      |            |               | 1                |           |         |             |             |            |                  |           |         |
| Total       | 65             | 41       | 12   | 15         | 11            | 119              | 8         | 55      | 20          | 28          | 11         | 75               | 20        | 23      |

Lines show suggested minimum net weights  
Each weight includes boxes up to the next quarter pound heavier; for example, boxes 20 pounds or over but under 20 1/4 pounds are included as 20 pounds.

Table 4. Numbers of Lugs by Net Weights

| Variety        | Cup Pack - 108's |          |      |         | Plastic Trays - 108's |         |
|----------------|------------------|----------|------|---------|-----------------------|---------|
|                | Grand River      | Princess | Rose | Sunrise | Grand River           | Sunrise |
| Net Wt.<br>Lb. | Number of Lugs   |          |      |         | Number of Lugs        |         |
| 16 1/4         |                  |          |      |         |                       | 9       |
| 16 1/2         |                  |          |      |         |                       | 2       |
| 16 3/4         |                  |          |      |         |                       | 2       |
| 17             | 2                |          |      |         | 1                     | 4       |
| 17 1/4         | 1                |          |      | 3       | 1                     | 7       |
| 17 1/2         | 3                |          |      | 4       |                       | 2       |
| 17 3/4         | 3                |          | 1    | 3       |                       | 4       |
| 18             | 2                |          | 2    | 6       | 3                     | 2       |
| 18 1/4         | 5                | 2        | 1    | 6       | 3                     |         |
| 18 1/2         | 4                | 2        | 4    | 5       | 1                     |         |
| 18 3/4         | 5                |          | 1    | 1       | 3                     |         |
| 19             | 5                | 1        |      | 4       | 3                     |         |
| 19 1/4         | 6                | 3        | 1    | 2       | 7                     |         |
| 19 1/2         | 6                |          |      |         | 2                     |         |
| 19 3/4         | 5                |          |      |         | 5                     |         |
| 20             | 4                | 1        |      |         | 1                     |         |
| 20 1/4         | 1                | 1        |      |         |                       |         |
| 20 1/2         |                  |          |      |         |                       |         |
| 20 3/4         |                  | 1        |      |         |                       |         |
| Total          | 52               | 11       | 10   | 34      | 30                    | 32      |

Lines show suggested minimum net weights

Each weight includes boxes up to the next quarter pound heavier; for example, boxes 20 pounds or over but under 20 1/4 pounds are included as 20 pounds.

Table 5. Numbers of Grates by Net Weights

| Variety        | John River        | Grand River | Sunrise | Red River                        |
|----------------|-------------------|-------------|---------|----------------------------------|
| Size           | 4 X 4             | 4 X 4       | 4 X 4   | 4 x 4                            |
| No. Nectarine  | 176               | 176         | 176     | 176                              |
| Net Weight Lb. | Numbers of Grates |             |         | Net Wt. Lb.<br>Numbers of Grates |
| 26             |                   |             |         | 24                               |
| 26 1/4         | 1                 |             | 10      | 24 1/4                           |
| 26 1/2         | 1                 |             | 9       | 24 1/2                           |
| 26 3/4         | <u>1</u>          |             | 5       | 24 3/4                           |
| 27             | 2                 |             | 11      | 25                               |
| 27 1/4         | 1                 |             | 9       | 25 1/4                           |
| 27 1/2         | 4                 |             | 15      | 25 1/2                           |
| 27 3/4         | 10                | <u>2</u>    | 16      | 25 3/4                           |
| 28             | 9                 | 5           | 6       | 26                               |
| 28 1/4         | 10                | 10          | 12      | 26 1/4                           |
| 28 1/2         | 13                | 6           | 8       | 26 1/2                           |
| 28 3/4         | 14                | 14          | 6       | 26 3/4                           |
| 29             | 12                | 4           | 3       | 27                               |
| 29 1/4         | 15                | 8           | 4       | 27 1/4                           |
| 29 1/2         | 7                 | 12          | 4       | 27 1/2                           |
| 29 3/4         | 5                 | 16          | 2       | 27 3/4                           |
| 30             | 11                | 6           | 1       | 28                               |
| 30 1/4         | 3                 | 7           | 1       | 28 1/4                           |
| 30 1/2         | 1                 | 3           |         |                                  |
| 30 3/4         | 1                 | 3           | 1       |                                  |
| 31             |                   | 6           | 2       |                                  |
| 31 1/4         |                   | 2           |         |                                  |
| 31 1/2         |                   | 4           |         |                                  |
| 31 3/4         |                   | 5           |         |                                  |
| 32             |                   | 2           |         |                                  |
| Total          | 132               | 116         | 125     | 20                               |

Lines show suggested minimum weights

Each weight includes boxes up to the next quarter pound heavier; for example, boxes 20 pounds or over but under 20 1/4 pounds are included as 20 pounds.

Table 6. Suggested minimum required net weights of nectarines in lugs and crates, pounds

| Size             | 80 | 88 | 96 | 108 | 4 x 4 |
|------------------|----|----|----|-----|-------|
| Golden Grand     | 20 |    |    |     |       |
| Gold King        | 20 | 20 |    |     |       |
| Grandeur         | 20 | 20 |    |     |       |
| Grand River      |    | 19 | 18 | 17  | 28    |
| John Rivers      |    |    |    |     | 27    |
| Le Grand, Early  | 20 | 19 |    |     |       |
| Le Grand         | 20 | 19 |    |     |       |
| Le Grand, Late   | 20 | 20 |    |     |       |
| Princess         |    | 19 | 18 | 18  |       |
| Red Grand        | 20 | 19 |    |     |       |
| Red River        |    |    |    |     | 25    |
| Rose             |    |    | 18 | 17  |       |
| Star Grand       | 20 | 19 | 18 |     |       |
| Star Grand II    | 20 |    | 18 |     |       |
| Sun Grand, Early | 20 | 19 | 18 |     |       |
| Sun Grand        | 19 | 18 | 18 |     |       |
| Sunrise          | 19 | 18 | 17 | 17  | 26    |

Table 7. Weights of 100 nectarines, corresponding to lug and crate weights as shown.

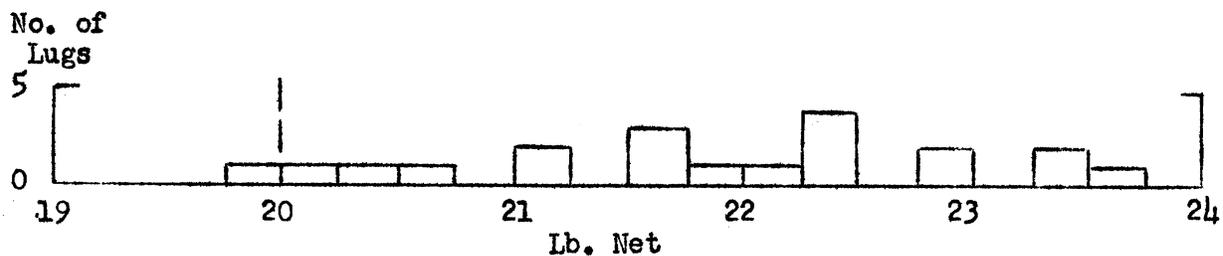
| Lug net weight, lb | Lug pack |        |        |        | 4 x 4 crate net weight, lb | Weight of 100 nectarines |
|--------------------|----------|--------|--------|--------|----------------------------|--------------------------|
|                    | 80       | 88     | 96     | 108    |                            |                          |
| 16                 | 20       | 18     | 16 1/2 | 15     | 24                         | 13 1/2                   |
| 16 1/2             | 20 1/2   | 19     | 17     | 15 1/2 | 24 1/2                     | 14                       |
| 17                 | 21       | 19 1/2 | 18     | 16     | 25                         | 14                       |
| 17 1/2             | 22       | 20     | 18 1/2 | 16     | 25 1/2                     | 14 1/2                   |
| 18                 | 22 1/2   | 20 1/2 | 19     | 16 1/2 | 26                         | 15                       |
| 18 1/2             | 23       | 21     | 19 1/2 | 17     | 26 1/2                     | 15                       |
| 19                 | 24       | 21 1/2 | 20     | 17 1/2 | 27                         | 15 1/2                   |
| 19 1/2             | 24 1/2   | 22     | 20 1/2 | 18     | 27 1/2                     | 15 1/2                   |
| 20                 | 25       | 23     | 21     | 18 1/2 | 28                         | 16                       |
| 20 1/2             | 25 1/2   | 23 1/2 | 21 1/2 | 19     | 28 1/2                     | 16                       |
| 21                 | 26       | 24     | 22     | 19 1/2 | 29                         | 16 1/2                   |
| 21 1/2             | 27       | 24 1/2 | 22 1/2 | 20     | 29 1/2                     | 17                       |

Table 8. Numbers of nectarines in a 10-pound sample, corresponding to lug and crate weights as shown.

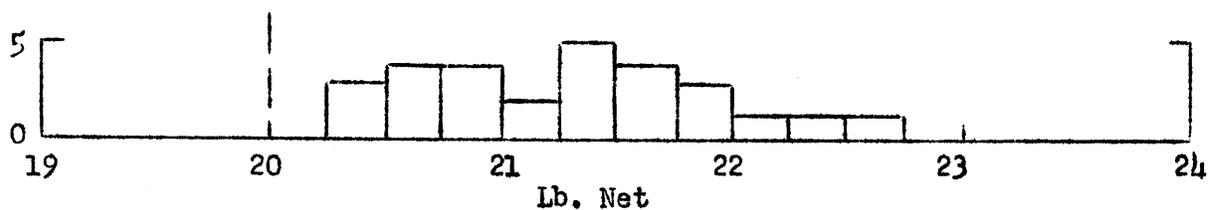
| Lug net<br>weight, lb | Lug pack                                  |    |    |     | 4 x 4 crate<br>net weight,<br>lb | Number of<br>nectarines<br>in a 10-lb<br>sample |
|-----------------------|---|----|----|-----|----------------------------------|---|
|                       | 80  | 88 | 96 | 108 |                                  |   |
|                       | Number of nectarines in a 10-pound sample |    |    |     |                                  |   |
| 16                    | 50  | 55 | 60 | 68  | 24                               | 73  |
| 16 1/2                | 48  | 53 | 58 | 65  | 24 1/2                           | 72  |
| 17                    | 47  | 52 | 56 | 64  | 25                               | 70  |
| 17 1/2                | 46  | 50 | 55 | 62  | 25 1/2                           | 69  |
| 18                    | 44  | 49 | 53 | 60  | 26                               | 68  |
| 18 1/2                | 43  | 48 | 52 | 58  | 26 1/2                           | 66  |
| 19                    | 42  | 46 | 50 | 57  | 27                               | 65  |
| 19 1/2                | 41  | 45 | 49 | 55  | 27 1/2                           | 64  |
| 20                    | 40  | 44 | 48 | 54  | 28                               | 63  |
| 20 1/2                | 39  | 43 | 47 | 53  | 28 1/2                           | 62  |
| 21                    | 38  | 42 | 46 | 51  | 29                               | 61  |
| 21 1/2                | 37  | 41 | 45 | 50  | 29 1/2                           | 60  |

Figure 1. Number of Lugs by Net Weights

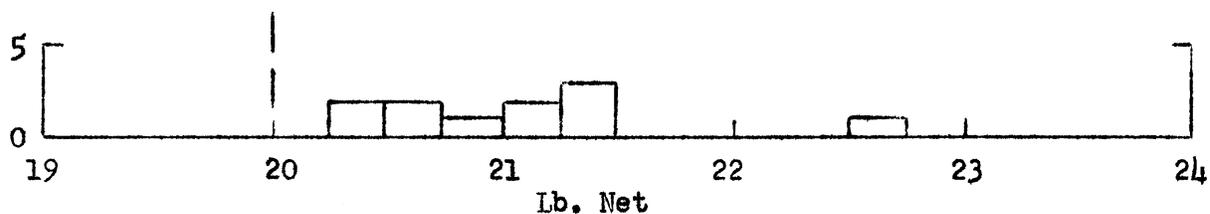
Dotted lines show suggested minimums



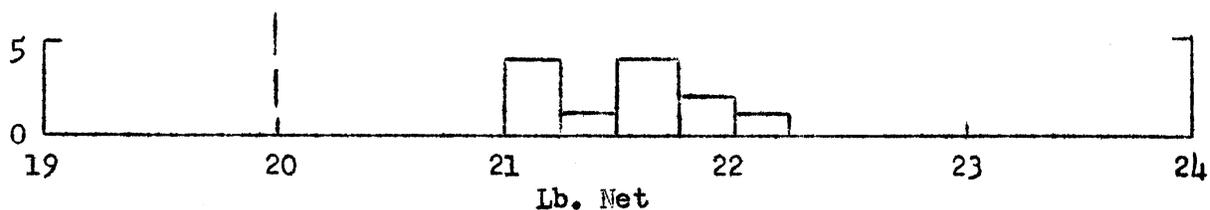
Golden Grand Cup Pack - 80's 20 L. A. Lugs



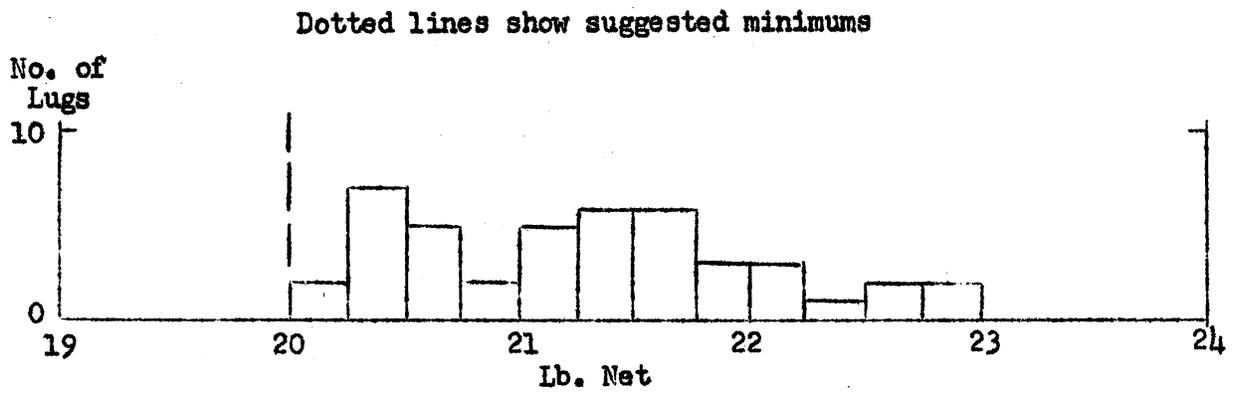
Gold King Cup Pack - 50's 28 L. A. Lugs



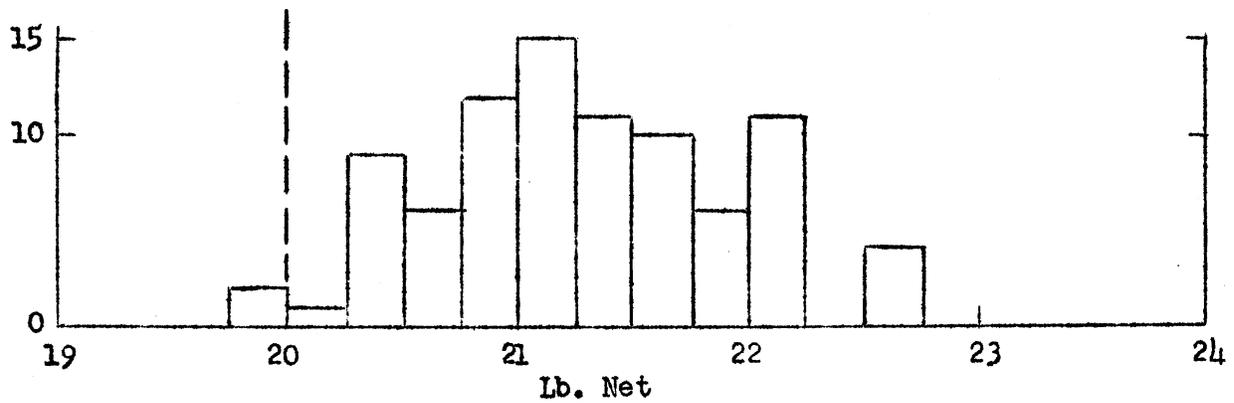
Grandeur Cup Pack - 80's 11 L. A. Lugs



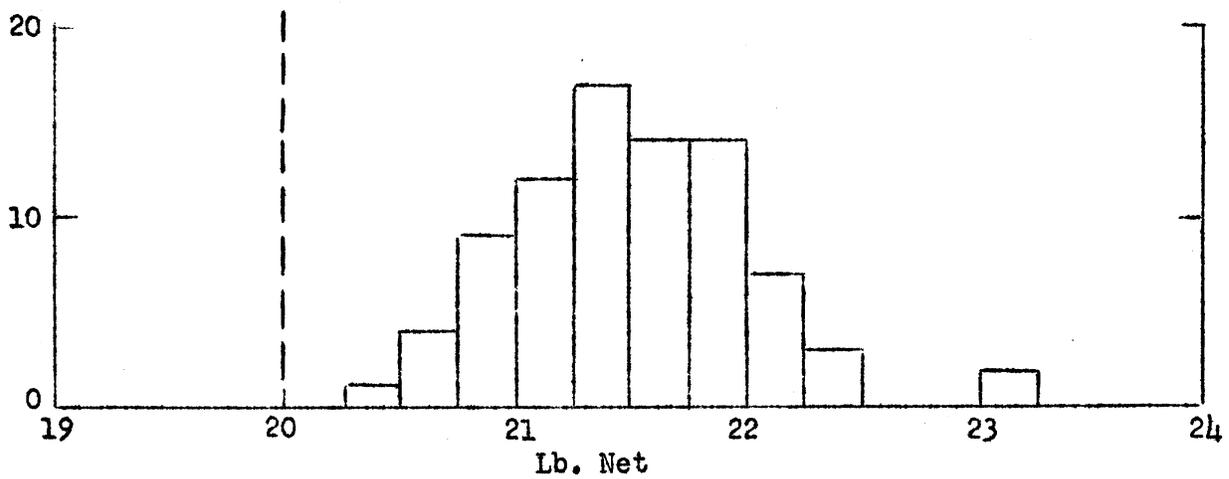
Red Grand Cup Pack - 80's 12 L. A. Lugs



Early Le Grand Cup Pack - 80's 44 L. A. Lugs



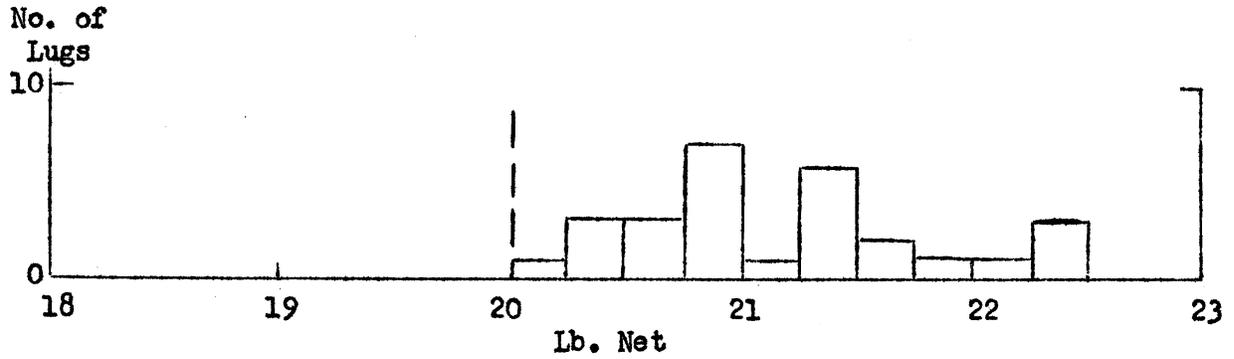
Le Grand Cup Pack - 80's 87 L. A. Lugs



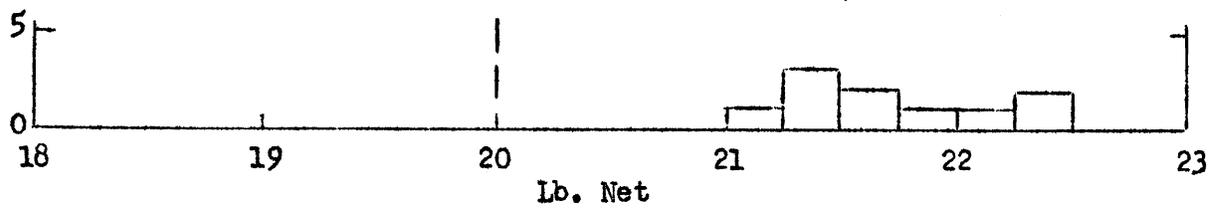
Late Le Grand Cup Pack - 80's 83 L. A. Lugs

**Figure 3. Number of Lugs by Net Weights**

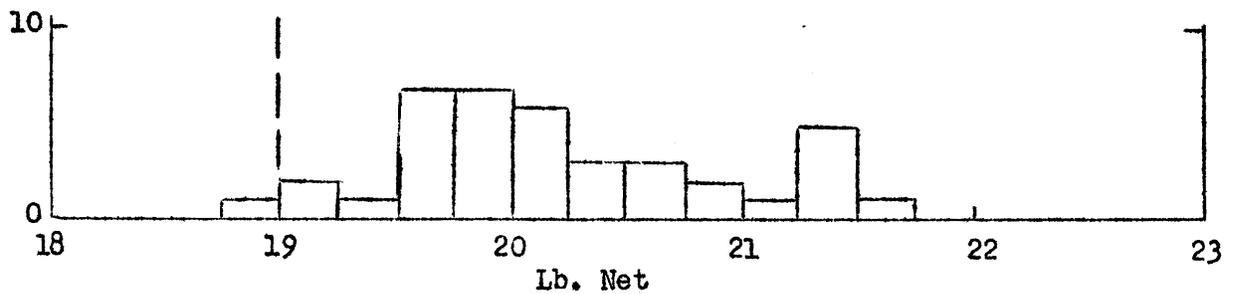
Dotted lines show suggested minimums



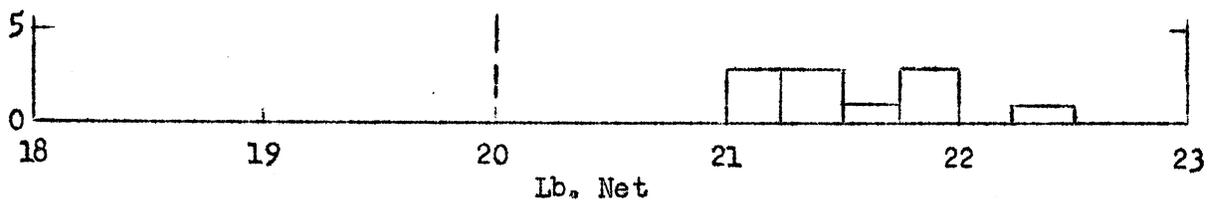
Early Sun Grand Cup Pack - 80's 28 L. A. Lugs



Star Grand Cup Pack - 80's 10 L. A. Lugs



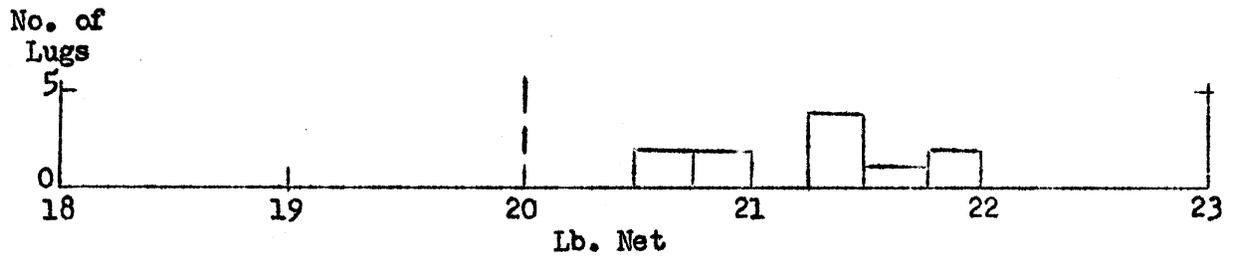
Sun Grand Cup Pack - 80's 39 L. A. Lugs



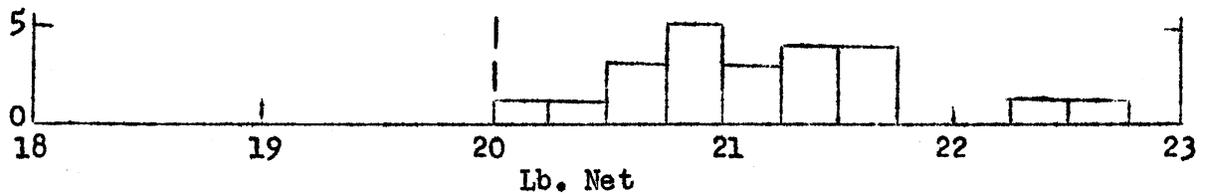
Star Grand II Cup Pack - 80's 11 L. A. Lugs

Figure 4. Number of Lugs by Net Weights

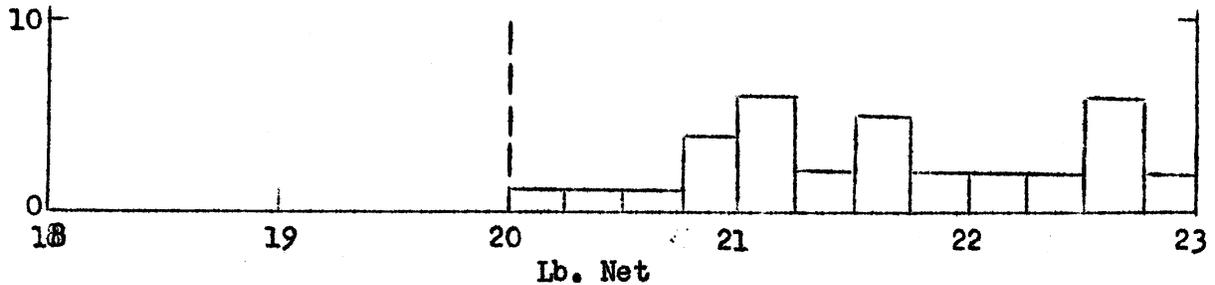
Dotted lines show suggested minimums



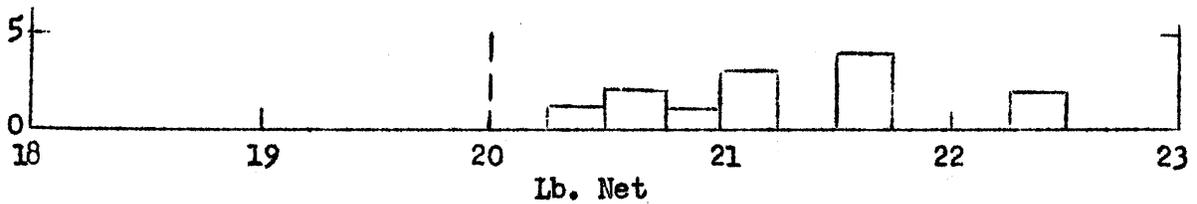
Gold King Plastic Tray - 80's 11 L. A. Lugs



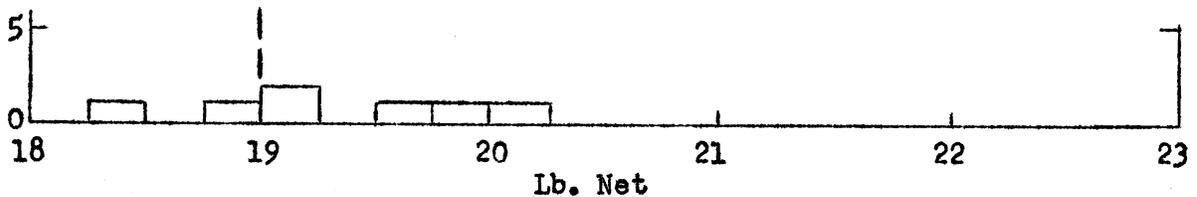
Le Grand Plastic Tray - 80's 23 L. A. Lugs



Late Le Grand Plastic Tray - 80's 34 L. A. Lugs

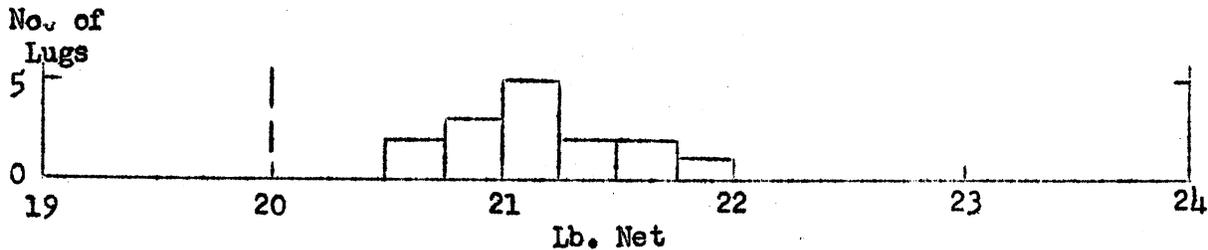


Red Grand Plastic Tray - 80's 13 L. A. Lugs

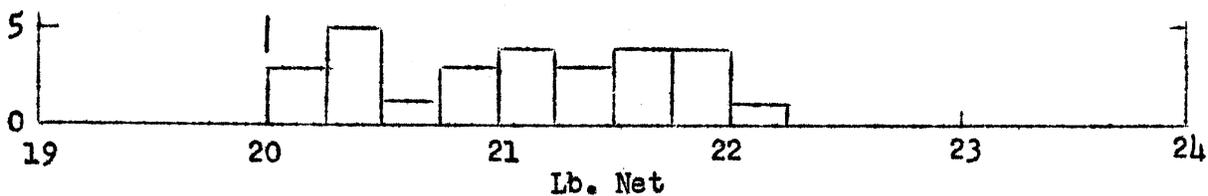


Sunrise Plastic Tray - 80's 7 L. A. Lugs

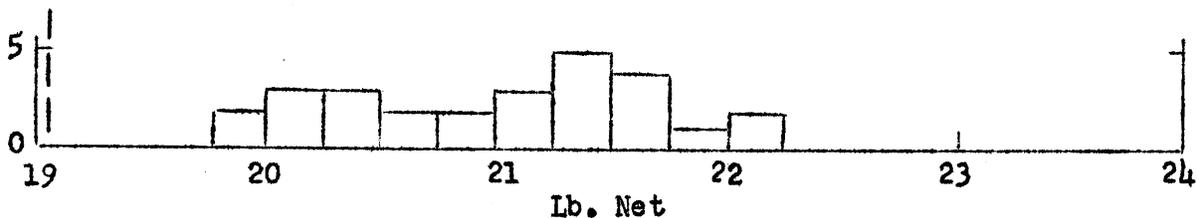
Dotted lines show suggested minimums



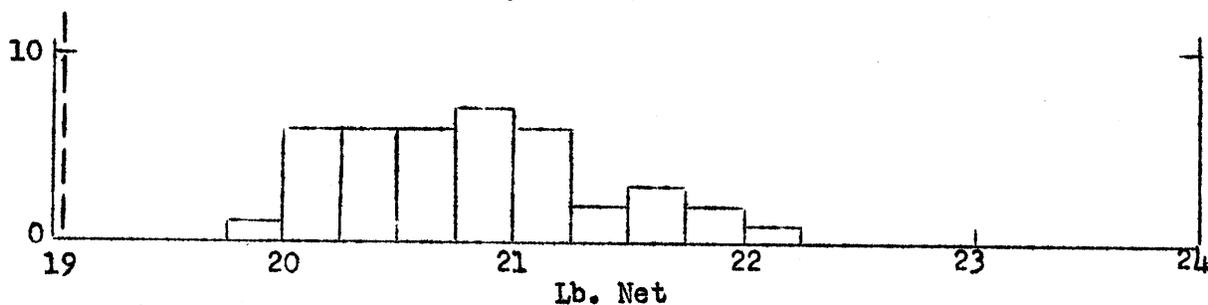
Gold King Cup Pack - 88's 15 L. A. Lugs



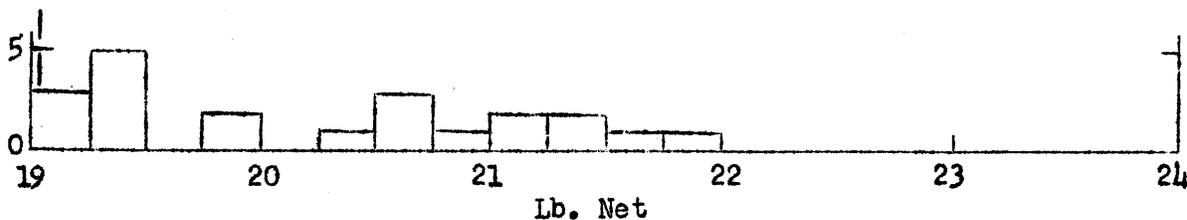
Grandeur Cup Pack - 88's 28 L. A. Lugs



Princess Cup Pack - 88's 27 L. A. Lugs

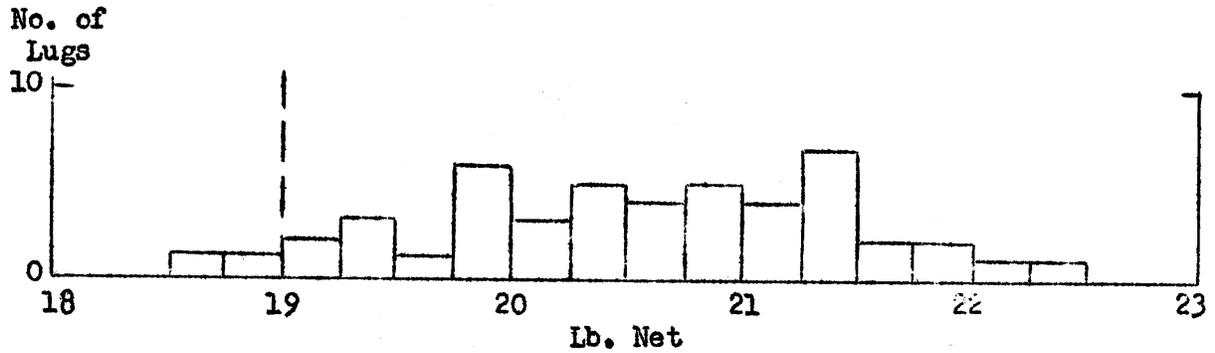


Red Grand Cup Pack - 88's 40 L. A. Lugs

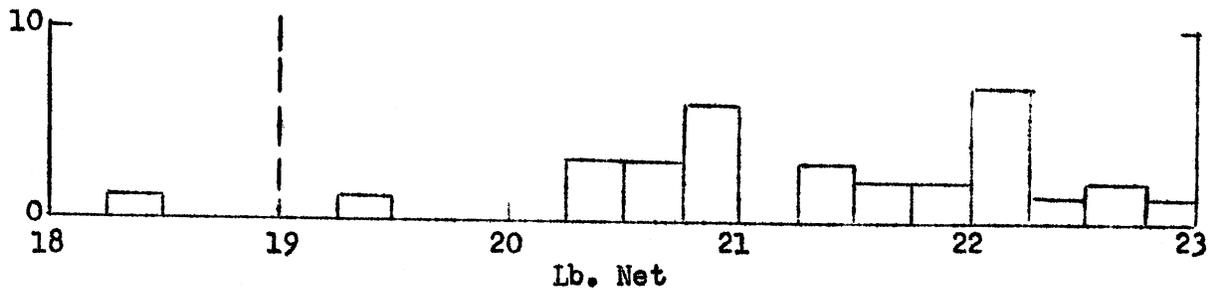


Star Grand Cup Pack - 88's 21 L. A. Lugs

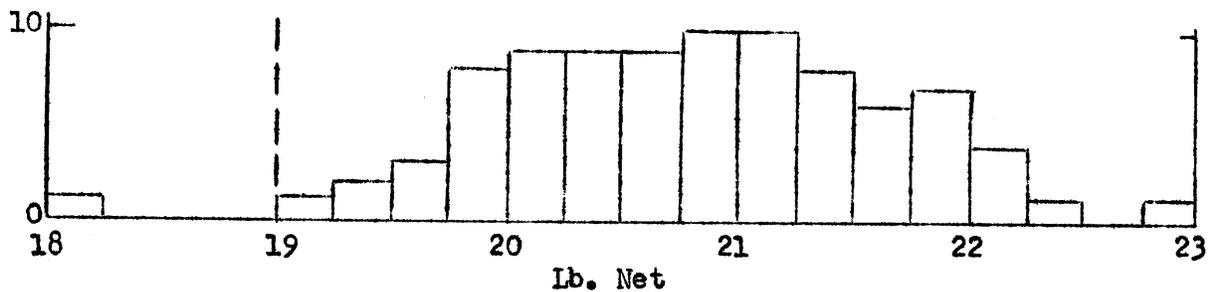
Dotted lines show suggested minimums



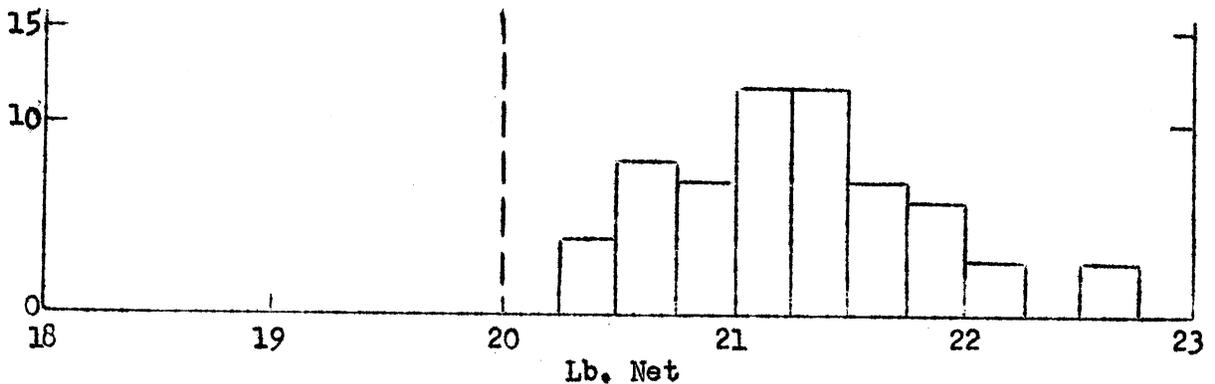
Grand River Cup Pack - 88's 48 L. A. Lugs



Early Le Grand Cup Pack - 88's 32 L. A. Lugs



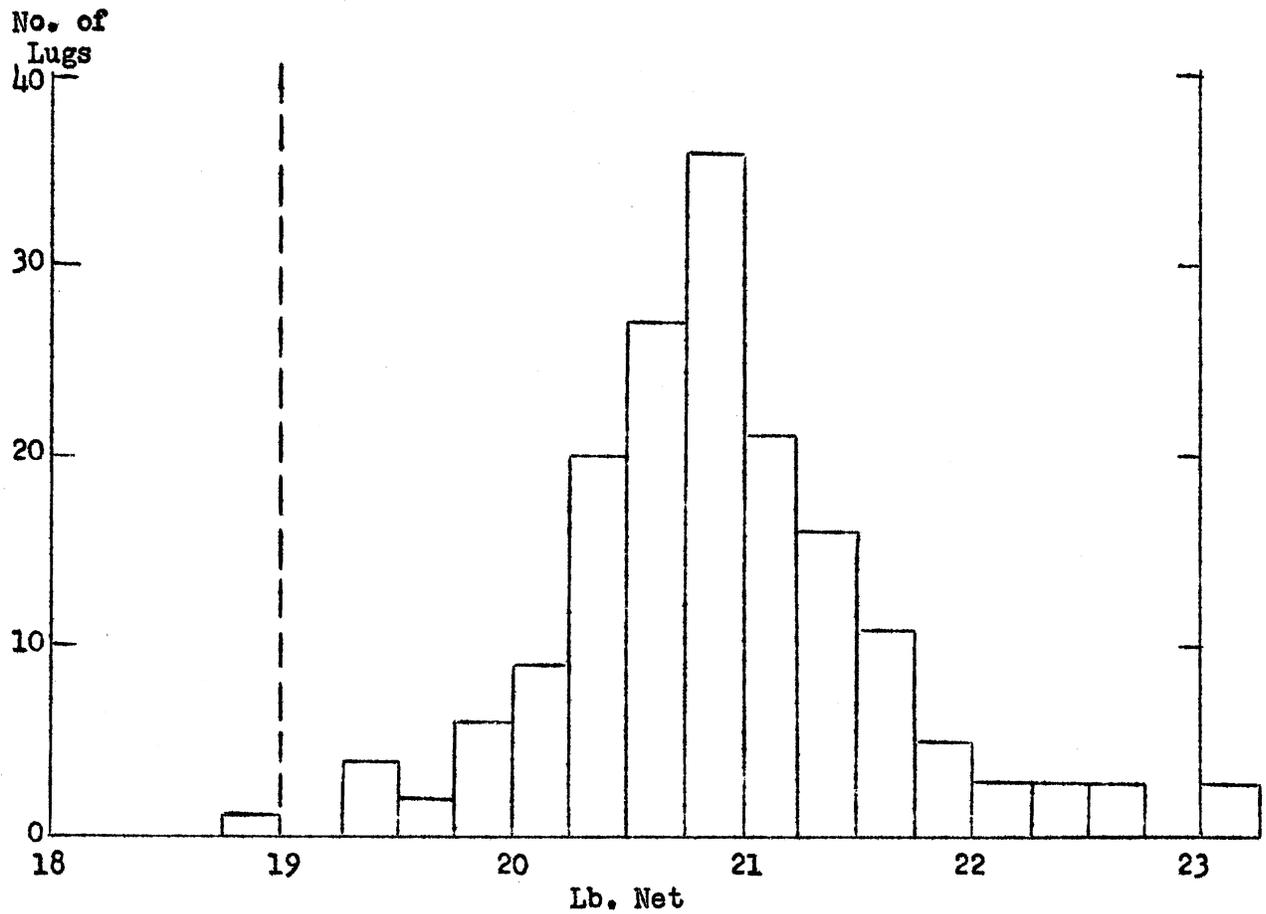
Le Grand Cup Pack - 88's 89 L. A. Lugs



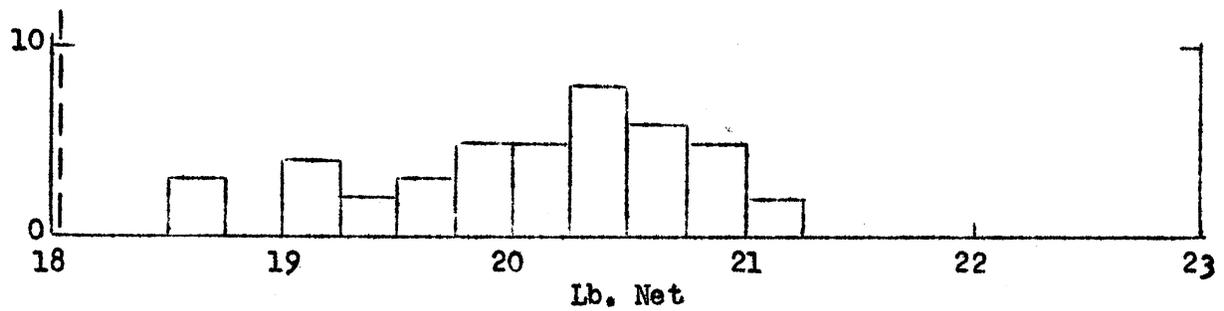
Late Le Grand Cup Pack - 88's 62 L. A. Lugs

Figure 7. Number of Lugs by Net Weights

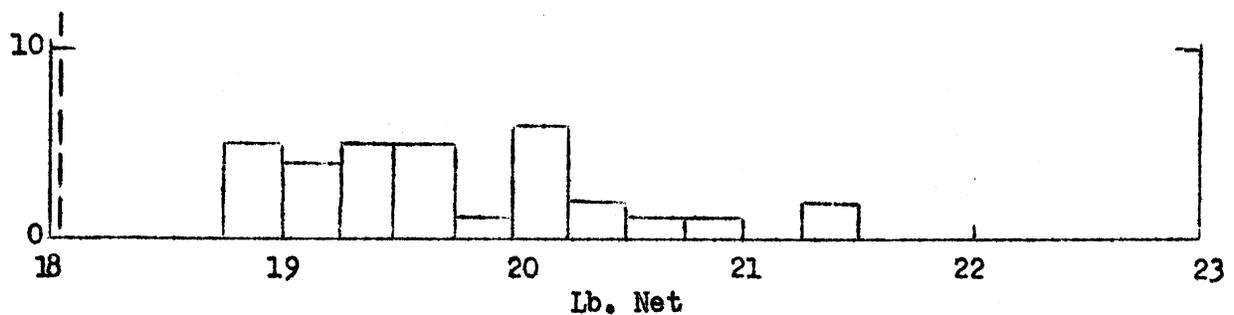
Dotted lines show suggested minimums



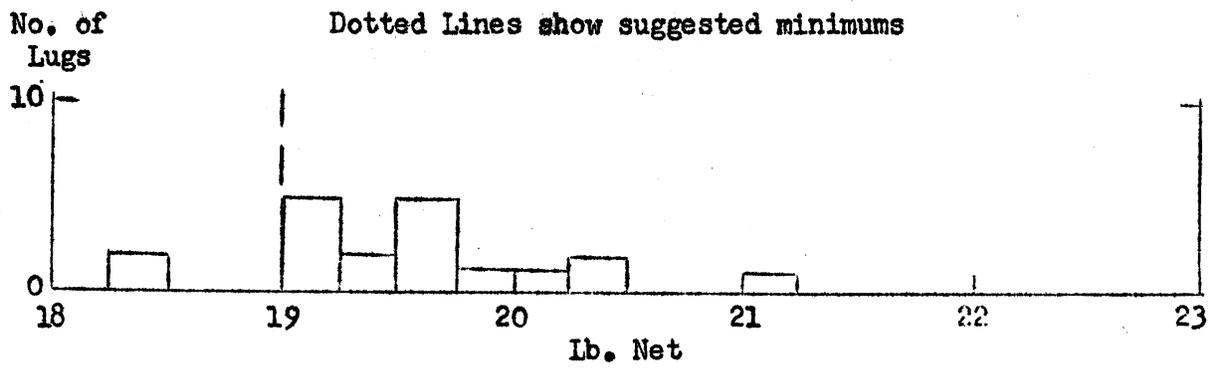
Early Sun Grand Cup Pack - 88's 170 L. A. Lugs



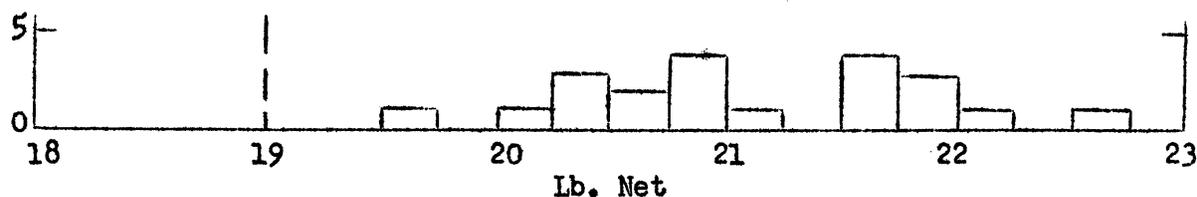
Sun Grand Cup Pack - 88's 43 L. A. Lugs



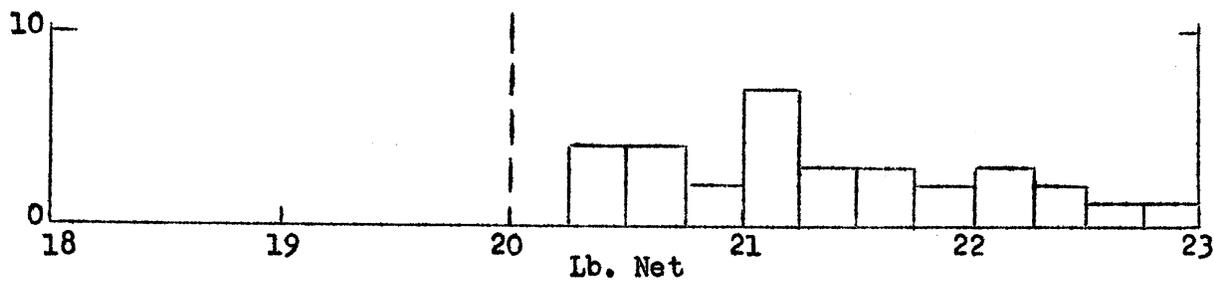
Sun Rise Cup Pack - 88's 32 L. A. Lugs



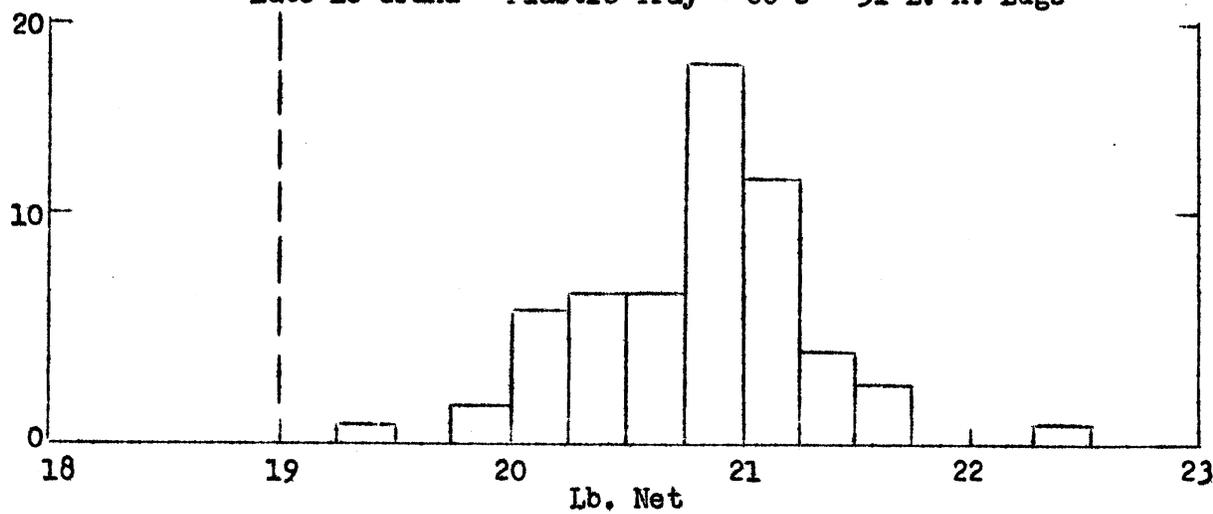
Early Le Grand Plastic Tray - 88's 19 L. A. Lugs



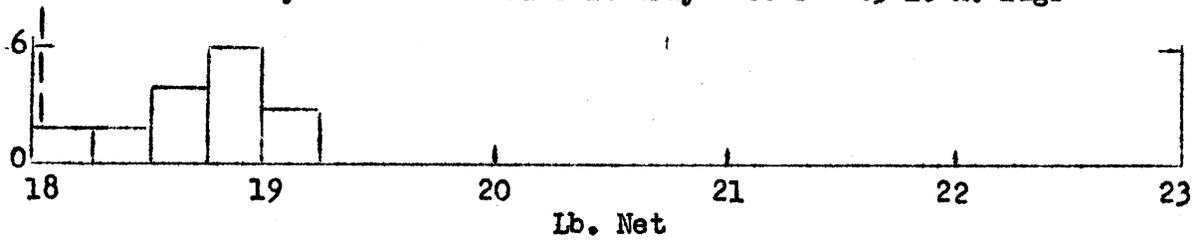
Le Grand Plastic Tray - 88's 21 L. A. Lugs



Late Le Grand Plastic Tray - 88's 31 L. A. Lugs



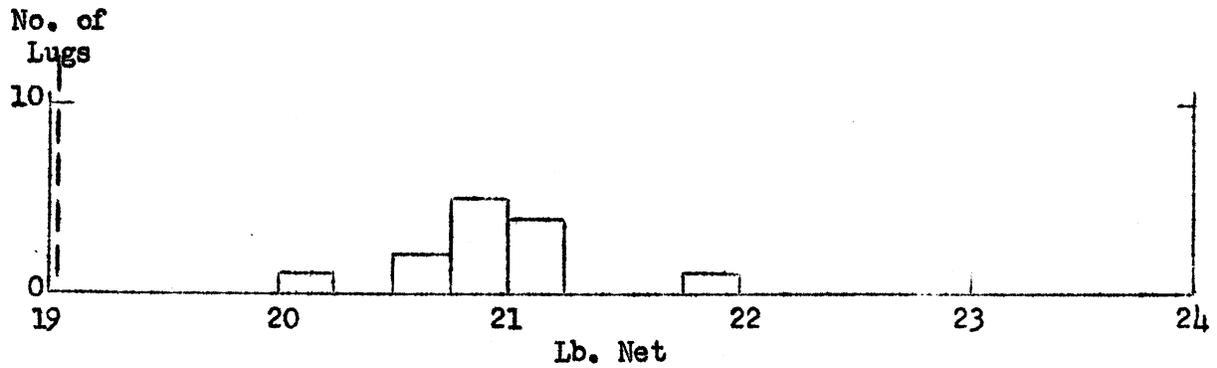
Early Sun Grand Plastic Tray - 88's 65 L. A. Lugs



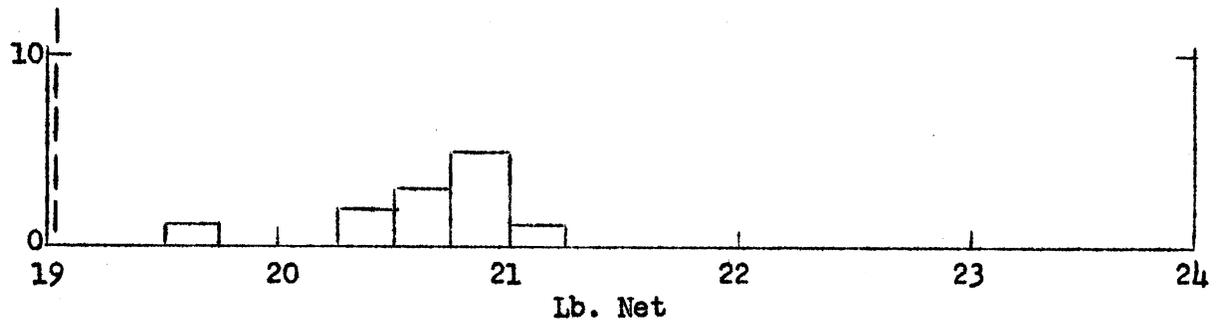
Sunrise Plastic Tray - 88's 17 L. A. Lugs

Figure 9. Number of Lugs by Net Weights

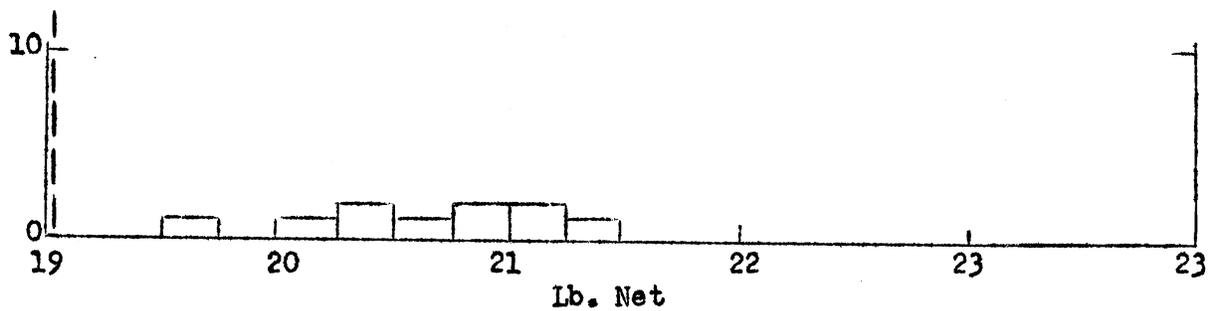
Dotted lines show suggested minimums



Princess Plastic Tray - 88's 13 L. A. Lugs

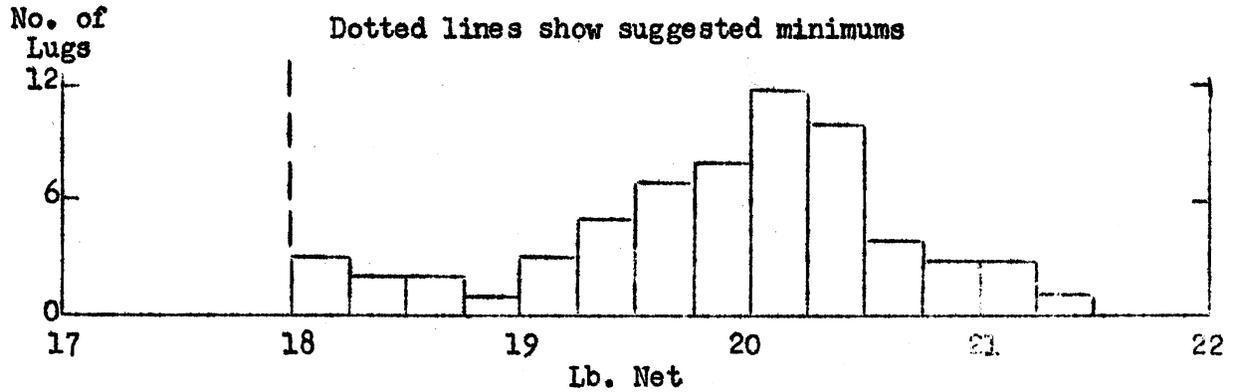


Red Grand Plastic Tray - 88's 12 L. A. Lugs

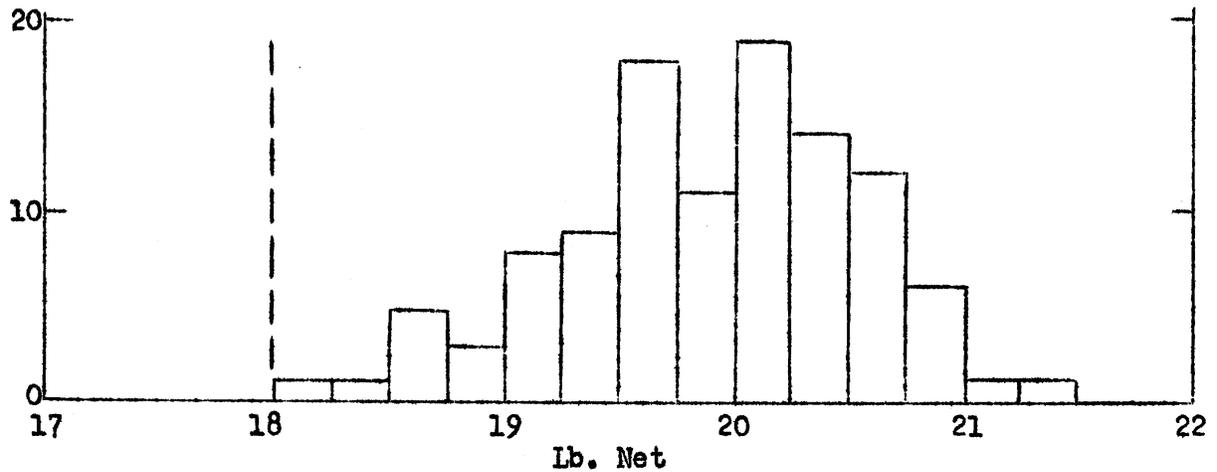


Star Grand Plastic Tray - 88's 10 L. A. Lugs

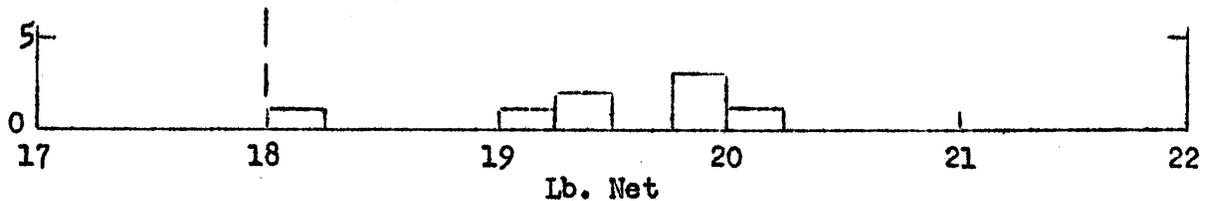
**Figure 10. Number of Lugs by Net Weights**



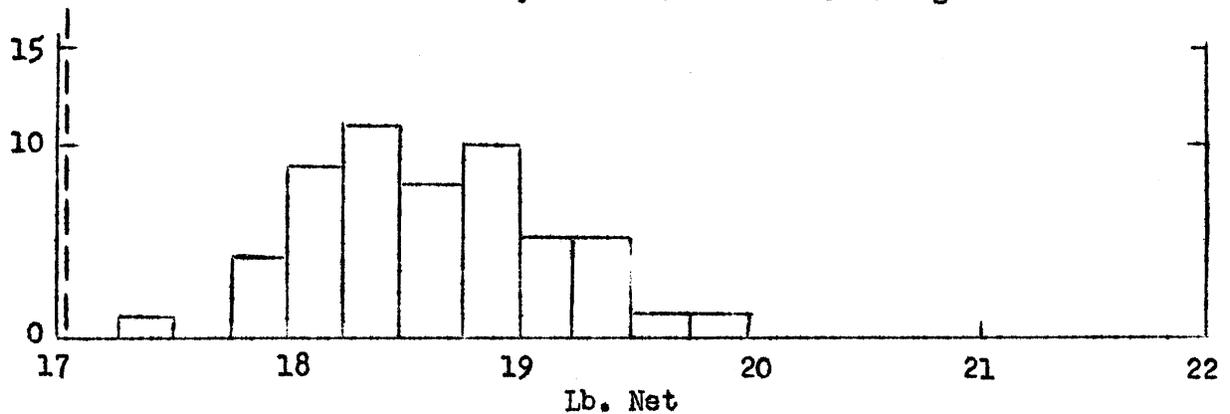
**Grand River Cup Pack - 96's 65 L. A. Lugs**



**Early Sun Grand Cup Pack - 96's 119 L. A. Lugs**



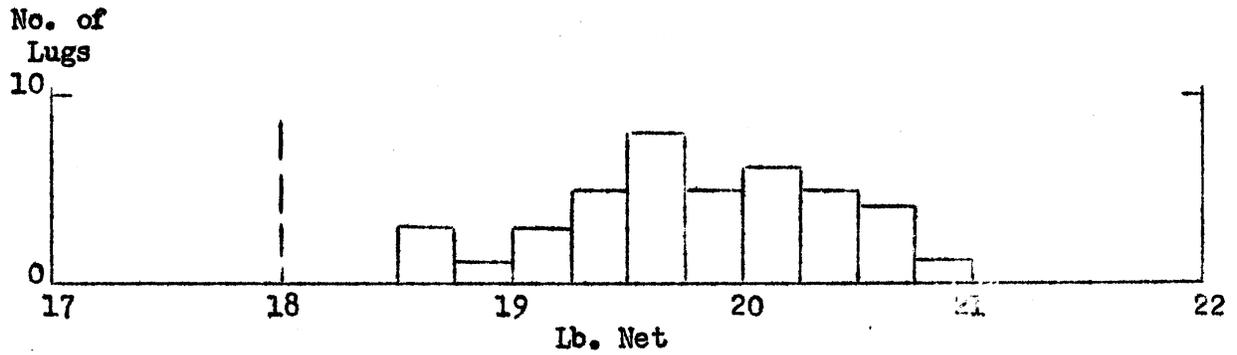
**Sun Grand Cup Pack - 96's 8 L. A. Lugs**



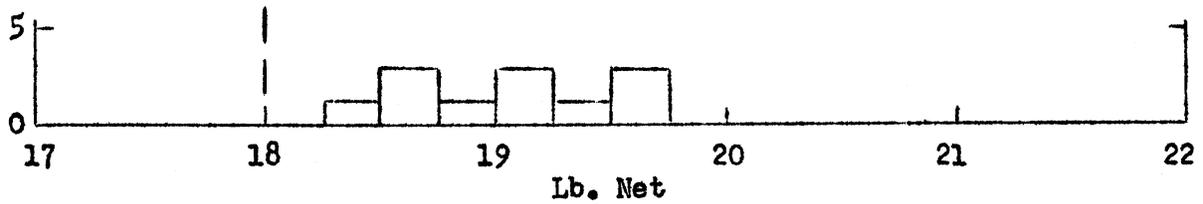
**Sunrise Cup Pack - 96's 55 L. A. Lugs**

Figure 11. Number of Lugs by Net Weights

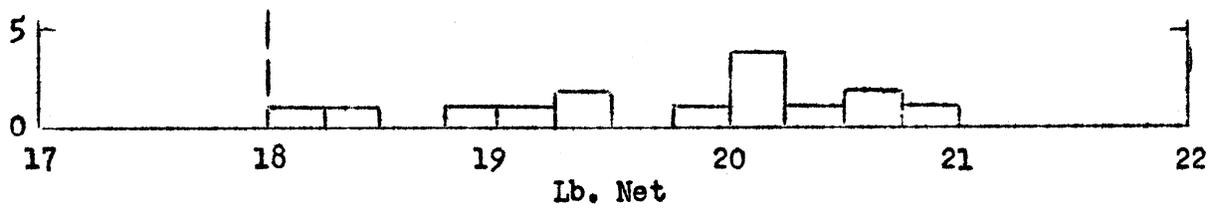
Dotted lines show suggested minimums



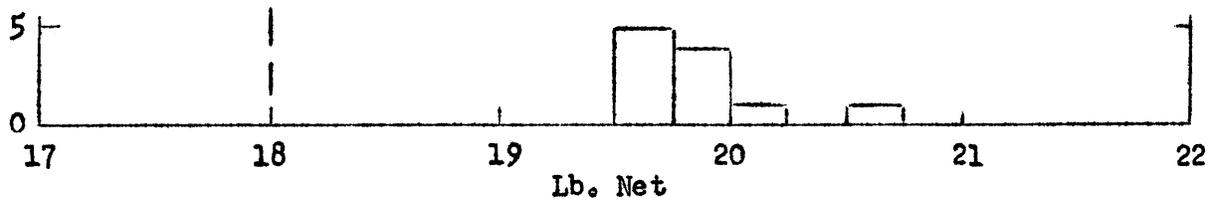
Princess Cup Pack - 96's 41 L. A. Lugs



Rose Cup Pack - 96's 12 L. A. Lugs



Star Grand Cup Pack - 96's 15 L. A. Lugs



Star Grand II Cup Pack - 96's 11 L. A. Lugs

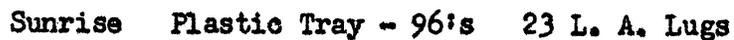
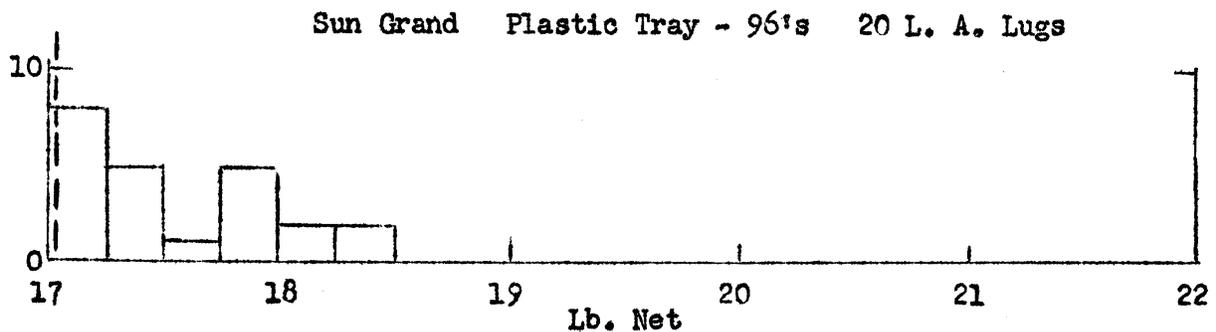
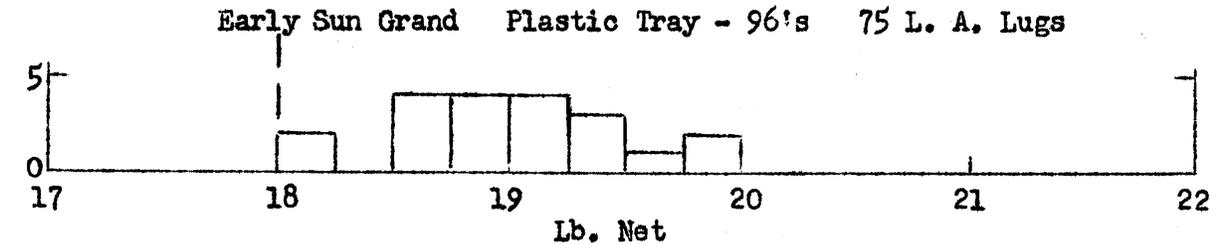
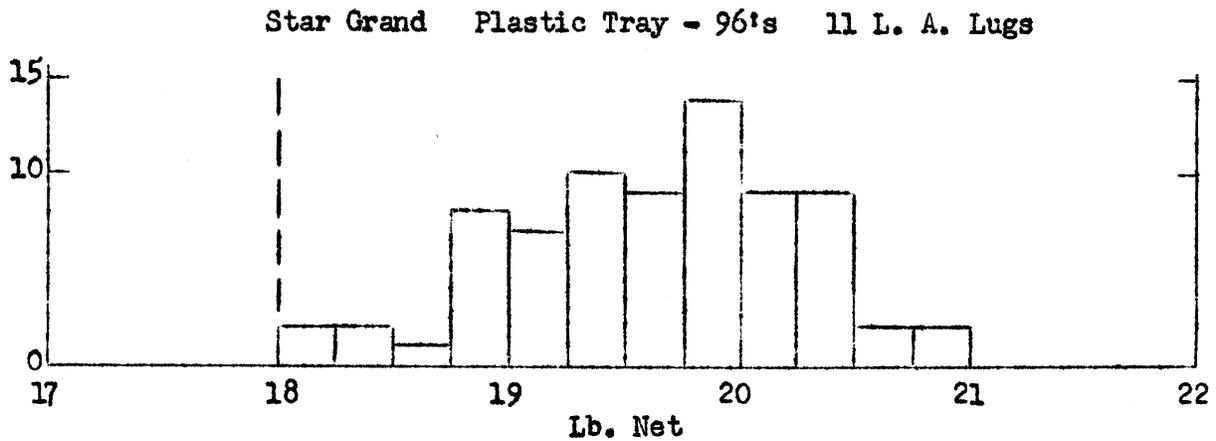
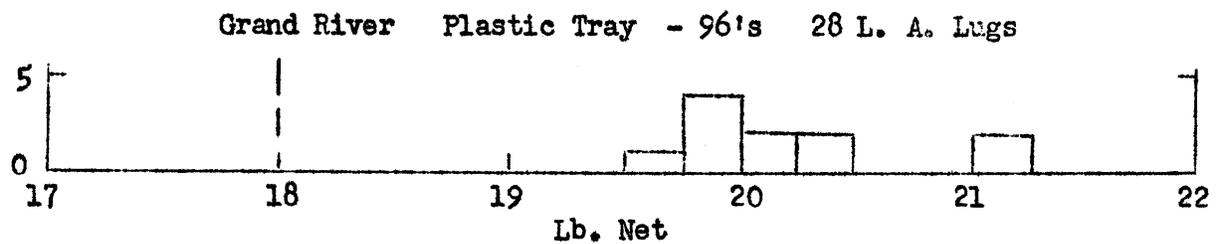
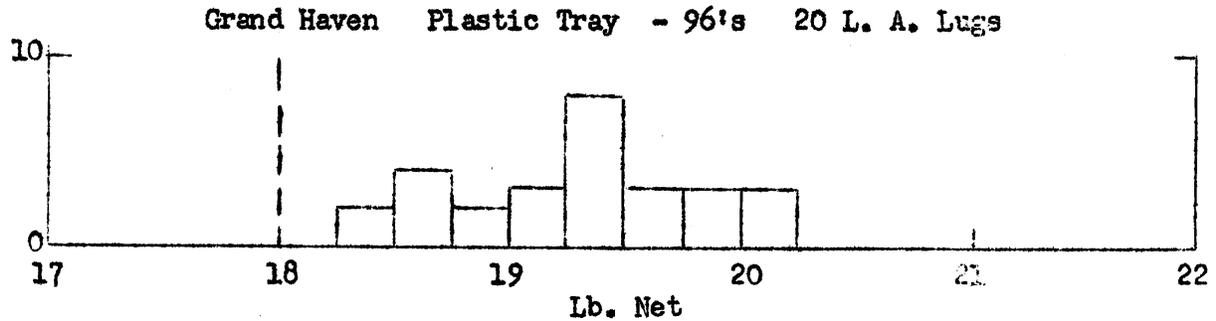
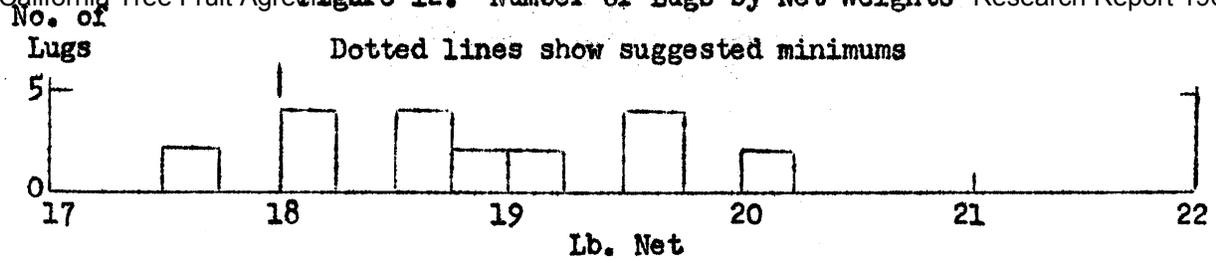
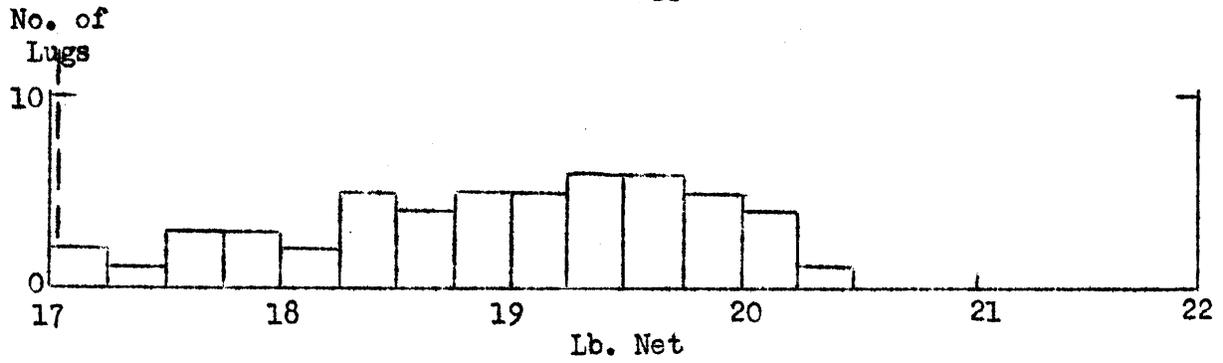
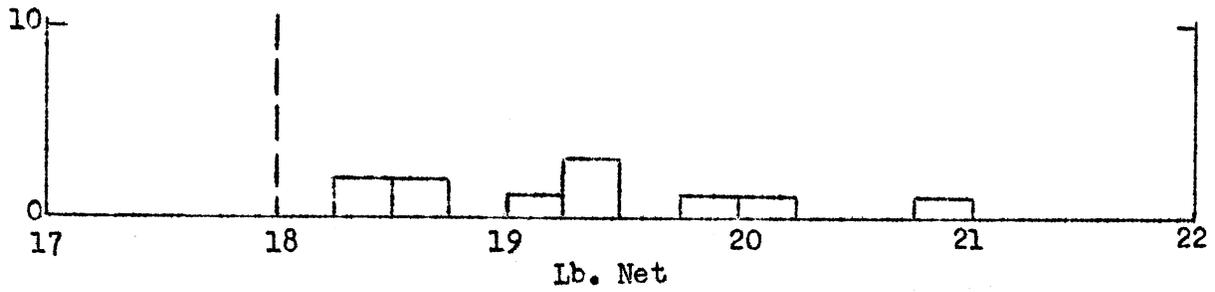


Figure 13. Number of Lugs by Net Weights

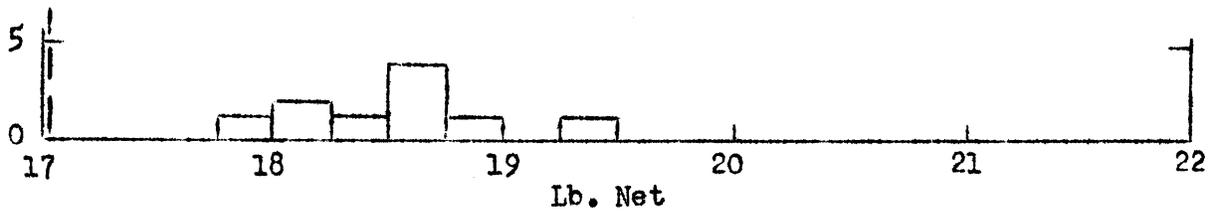
Dotted lines show suggested minimums



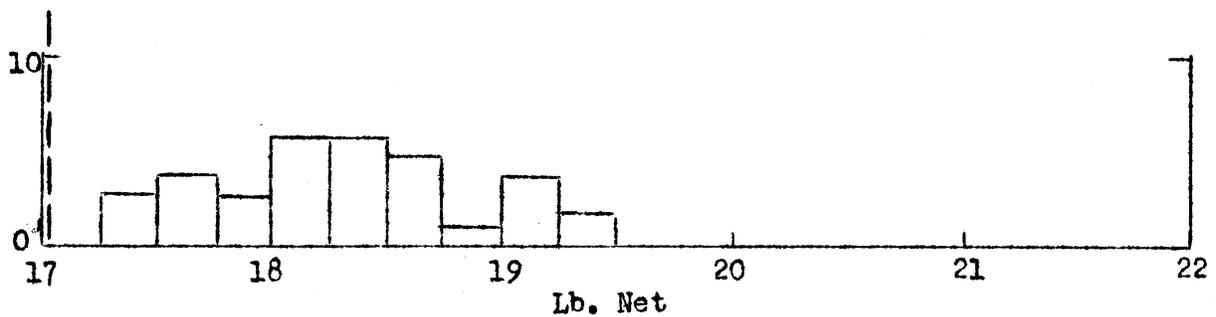
Grand River Cup Pack - 108's 52 L. A. Lugs



Princess Cup Pack - 108's 11 L. A. Lugs



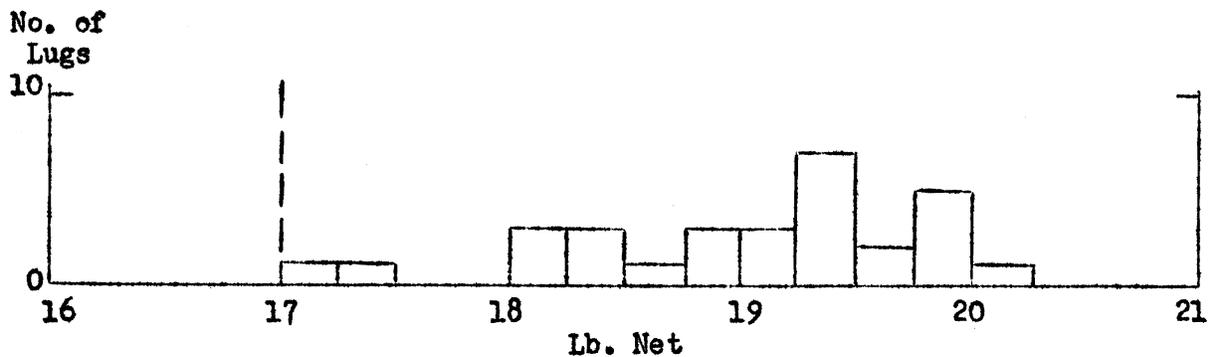
Rose Cup Pack - 108's 10 L. A. Lugs



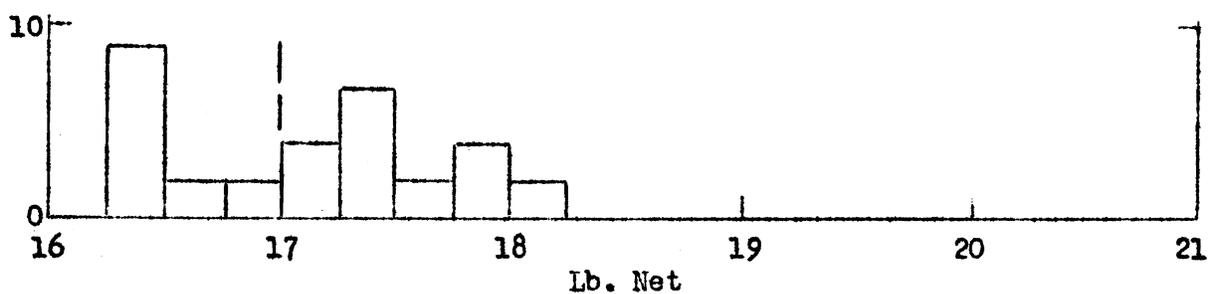
Sunrise Cup Pack - 108's 34 L. A. Lugs

Figure 14. Number of Lugs by Net Weights

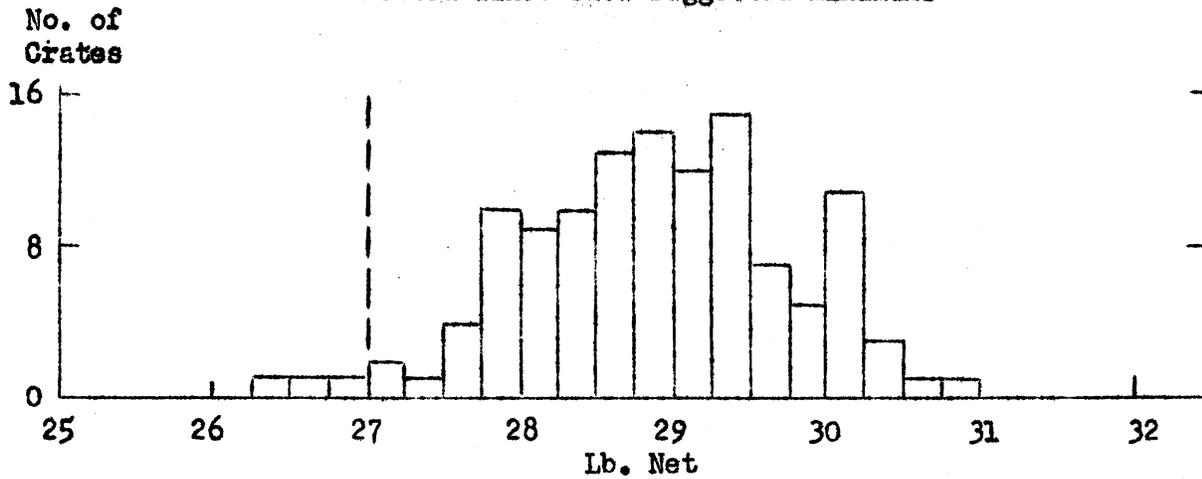
Dotted lines show suggested minimums



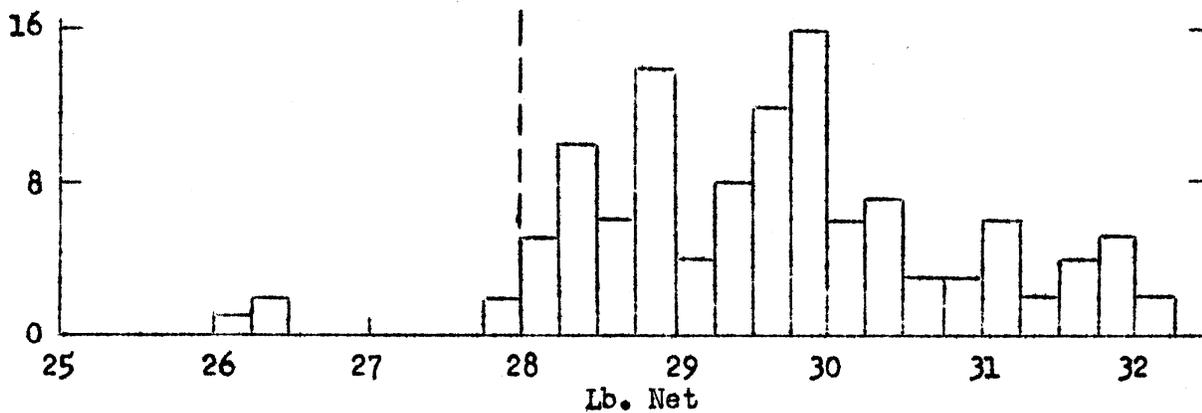
Grand River Plastic Tray - 108's 30 L. A. Lugs



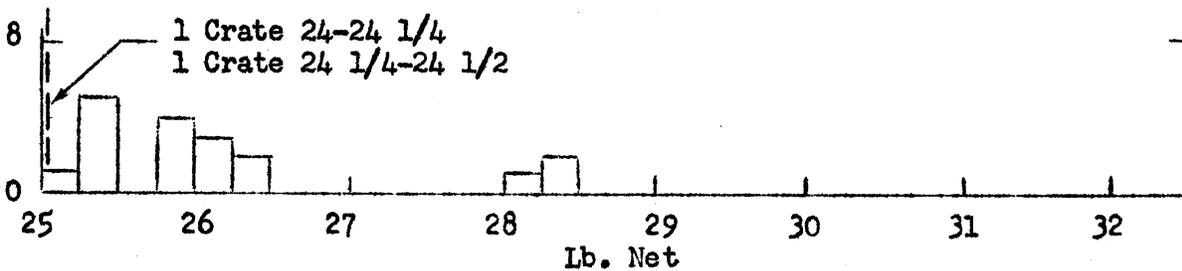
Sunrise Plastic Tray - 108's 32 L. A. Lugs



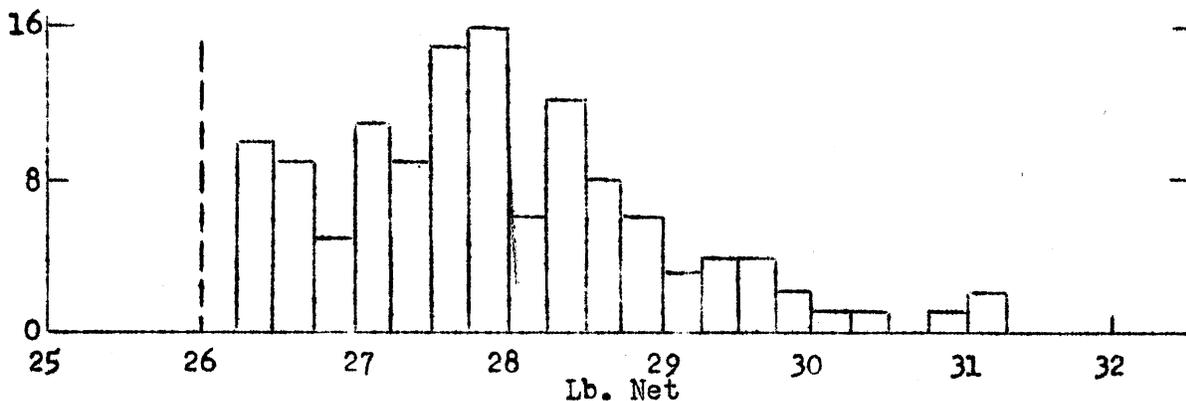
John River 4 X 4 (176) 123 Crates



Grand River 4 X 4 (176) 116 Crates



Red River 4 X 4 (176) 20 Crates



Sunrise 4 X 4 (176) 125 Crates