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BUD SELECTION.

By

R. E. Caryl, B.S.

Contents.

Pag	8
Introduction	1
Tree Census Records	2
Eureka Lemon, Rancho Sespe No. 24,	5
Eureka Lemon, Chase Ranch,	7
Lisbon Lemon, Linoneira Ranch 3	8
Ruby Blood Orange, Block 30, Call Estate . 4	Б
Individual Tree Performance Records 5	1
Block 24, Rancho Sespe, 6	0
Production Records 9	7
Correlation of Citrus Characters 10	1
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BUD SELECTION.

Ву

R. E. Caryl.

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For the past twelve years bud selection has been the most interesting, valuable, and generally-accepted horticultural practise that has claimed the attention of the citrus fruit growers of California. The work of bud selection was first started by Mr. A. D. Shamel of the U. S. Department of Agriculture in 1909, with a systematic study of bud variability in the Washington Navel orange and was later extended to include all the leading varieties of citrus fruits, such as the Valencia and Thompson Seedless oranges, the Bureka and Lisbon lemon varieties, and the Marsh Seedless grapefruit. The writer has been associated with Mr. Shamel in the work of securing individual lemon tree performance records of the Eureka and Lisbon varieties since November, 1914, first as lemon-picking foreman and individual tree performance record keeper on the Rancho Sespe, located at Sespe, California, one of the largest lemon groves in that State, and later in the work of the U.S. Department of Agriculture in California for the improvement of citrus fruits through bud selection.

Tree census records have been obtained from nearly all groves in which individual tree records have been kept for the purpose of locating the off-type or "sporting" trees and non-productive type trees, so that they could either be eliminated or re-budded to productive strains of the variety.

In nearly every instance where

non-productive trees have been cut back and re-budded with selected buds taken from productive type trees, the result has shown the importance and the success of bud selection.

Commercially, bud selection has been in general practise throughout the State, especially in the propagation of citrus trees. In 1917, a Bud Selection Department was established by the California Fruit Growers Exchange for the purpose of furnishing selected buds from superior trees of all the leading citrus varieties. The success of that department has resulted in the use of selected buds by practically all citrus nurserymen, as the growers are no longer willing to buy trees of uncertain parentage.

Bud selection is also being applied to the propagation of deciduous nursery trees and in time will doubtless be as well established as it is in the citrus but as yet not enough experimental work has been done in the old orchards to determine the amount of bud variability in the deciduous varieties nor have sufficient individual tree records been obtained to determine reliable sources of bud wood.

Tree Census Records.

The tree census records and the individual tree performance records presented in this thesis were secured by the writer in the course of his investigational work while with the Rancho Sespe and the U.S. Department of Agriculture. From a careful study of these tree census records of the various varieties, it will be seen

that the orchards from which they were taken are made up of a number of different strains which have been proven to have arisen from the propagation of bud variations.

tions may be clearly seen from the fact that quite a number of them are very unproductive as compared with the best and most productive strain of the variety, so that there is a considerable difference in the profit per acre in any grove where there is even a small percentage of trees which were propagated from bud variations. These poor-type trees came to be propagated by nurserymen because they were apparently the best trees in the grove and were selected for bud wood purposes on account of their size and luxuriant foliage and the large size buds which the tree produced, these being thought easier to work with in the budding operations.

Since the introduction of the practises of bud selection, all of this has been changed so that now only fruit wood buds are used for propagation. No bud stick is cut from any tree unless it has a typical fruit of the best strain of the variety attached to the stick. This is considered as a sort of trade mark by the bud cutter and the chances of a poor tree being grown from such a bud stick are very small, as the fruit which is attached is a very good indication of the kind of fruit that will be produced by the trees grown from that particular bud stick.

As the work of individual progeny tree performance records progresses and the fruit produced by them is compared with that of

the parent tree, it is becoming more and more evident that bud variations in the standard citrus varieties are heritable and that by the careful selection of buds from the best and most productive strains of the variety the uniformity of future citrus groves will be greatly increased.

thesis, are quite similar to those which have been secured for scientific and commercial purposes and consist of a systematic study of the individual trees in a given citrus orchard. Particular attention in tree census studies is given to such characters as the strain of the variety, the general shape and character of growth of the tree, the presence or absence of sporting or off-type fruits, the quality, shape, and size of the leaves, and the general appearance of productivity. A careful tree census study when backed up by two or three consecutive years of individual tree performance records is the most reliable method of indicating the productivity of a grove which has yet been divised.

These tree census records were secured in citrus groves of the standard citrus varieties in the two leading citrus producing sections of the State of California - viz., the Corona and the Santa Paula sections, an inland and a coast section, respectively.

Tree Census Records.

Block 24 Rancho Sespe

The following Tree Census Records were obtained from the Eureka Lemon grove on the Rancho Sespe, located at Sespe California and comprise the greater portion of the trees in the tract #24. The trees for which no records were obtained are ones which have been budded over or replanted since the freeze and hence are of a different size and age than the better portion of the grove. The freeze mentioned above was in the winter of 1912-1913, and was the worst in the history of the Citrus industry in California.

Row 16.

Tree Number.

- 1. Dense Unproductive type, rough fruit, crumpled leaves, a few sports, and a poor type of tree.
- 2. Eureka strain, productive type, dense, good fruit and leaves.
- 3. Eureka strain, poductive type, dense, very good tree.
- 4. .. Eureka strain, productive type, rough fruit, leaves medium to large.
- 5. Open strain, coarse fruit, small leaves, upright braches.
- 6. Eureka strain, good fruit, good leaves, upright spreading.
- 7. Eureka strain, good fruit, medium size leaves, few sports.
- 8. Eureka strain, good fruit, good leaves, spreading type tree.
- 9. Eureka strain, good fruit, large leaves, large tree, productive.
- 10. Bureka strain, productive type, good fruit, good leaves.
- 11. Dense productive, rough coarse fruits with a few sports, and good leaves.
- 12. Mureka strain, good fruit, good leaves, upright spreading.

Tree Census Records.

Row 17.

Tree Number.

- 1. Dense Unproductive type, rough coarse fruit, few sports.
- 2. Small Open type, good fruit, good leaves.
- 3. Dense Productive type, good fruit, good leaves, large spreading tree.
- 4. Eureka strain, very good tree, good fruit, good leaves.
- 5. Eureka strain, medium size tree, upright, good fruit.
- 6. Lureka strain, spreading, good fruit, good leaves, few sports.
- 7. Eureka strain, large spreading tree, good fruit and leaves.
- E. Dense Productive, large spreading tree, large leaves, few sports and coarse fruit.
- 9. Small Open, good fruit and small fine leaves,
- 10. Eureka strain, very uniform branching, good fruit, good medium size leaves.
- 11. Dense Productive, rough coarse fruit, crumpled leaves.
- 12. Small Open, few sporting fruits, fine leaves.
- 13. Eureka strain, upright soreading, large, good fruit.

Row. 18.

- 1. Small Open, rough fruit, small fine leaves.
- 2. Dense Productive, large spreading tree, coarse fruit and crumpled leaves.
- 3. Bureka strain, very good tree, good fruit.
- 4. hureka strain, productive type, good fruit, good leaves.
- 5. Small Open, coarse fruit with a few sports, fine leaves.
- 6. Eureka strain, coarse fruit, spreading tree, good leaves.
- 7. Eureka strain, good productive tree.
- 8. Eureka srain, good productive tree.

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Row 18.

Tree Number.

- 9. Eureka strain, good productive tree, good fruit, good leaves.
- 10. Eureka strain, Very good tree, upright spreading, good fruit.
- 11. Small Open, few sports and coarse fruits, small leaves.
- 12. Eureka strain, medium size leaves, good fruit.
- 13. Eureka strain, upright spreading, very good tree, fruit and leaves.

Row 19.

- Dense Unproductive, shade tree type, small tree, large leaves, coarse fruit.
- 2. Dense Productive, rough coarse fruit, crumples leaves.
- 3. Eureka strain, good fruit, good leaves, spreading tree.
- 4. Dense Productive, large spreading tree, coarse fruit, large leaves.
- 5. Eureka strain, good tree, fruit and leaves, spreading.
- 6. Dense Productive, somewhat soreading, large leaves.
- 7. Eureka strain, fine leaves, sood fruit, but tree bears in alternate years.
- 8. Eureka strain, good tree, small leaves, few sports.
- 9. Eureka strain, large spreading productive tree, good fruit.
- 10. Eureka strain, rough coarse fruit, fine leaves, spreading.
- 11. Eureka strain, very good tree, fine leaves and fruit.
- 12. Eureka strain, very good tree, fine leaves and fruit.
- 13. Eureka strain, spreading type, ridged fruit, course leaves.
- 14. Small Open, few sports, crumples leaves.

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Row 20.

Tree Number.

- 1. Small Open, dense and upright tree, rough coarse fruit, crumpled leaves.
- 2. Dense productive, dense spreading tree, good fruit and leaves.
- 3. Eureka strain, good tree, fair fruit, small leaves.
- 4. Dense Productive, large spreading tree, coarse fruit.
- 5. Dureka strain, well shaped tree, productive, few sports.
- 6. Dense Productive, large upright spreading tree, coarse fruit, crumpled leaves.
- 7. Gureka strain, spreading, good fruit and leaves.
- 6. Eureka strain, good tree, productive.
- 9. Dense Productive, large spreading, coarse fruit.
- 10. Eureka strain, very good tree, good fruit, good leaves.
- 11. Eureka strain, very good tree, good fruit, good leaves.
- 12. Mureka strain, productive, few sports.
- 13. Eureka strain, productive, coarse fruit, spreading.
- 14. Bureka strain, productive, good fruit, good leaves.

Row 21.

- 1. Small Open, fine leaves, coarse fruit.
- 2. Small Open, spreading, fine leaves, good fruit.
- 3. Bureka strain, spreading, coarse fruit, productive.
- 4. Hureka strain, upright spreading, good fruit.
- 5. Eureka strain, productive, good fruit, good leaves.
- 6. Eureka strain, productive, coarse rough fruit.

Row 21.

Tree Number.

- 7. Shade Tree, unproductive, large spreading, coarse fruit with many sports, crumpled leaves.
- 8. Eureka strain, productive, good fruit, good leaves.
- 9. Shade Tree, unproductive, spreading coarse fruit, large leaves.
- 10. Eureka strain, good fruit and leaves, productive.
- 11. Eureka strain, productive, spreading, some coarse fruit.
- 12. Eureka strain, productive, upright spreading, good fruit.
- 13. Eureka strain, productive, very good tree.
- 14. Eureka strain, good fruit and leaves, productive type.

Row 22.

- 1. Small Open, some coarse fruit, small leaves.
- 2. Dense unproductive, spreading, crampled leaves, coarse fruit.
- 3. Dense Productive, large tree, spreading, coarse ridged fruit.
- 4. Eureka strain, productive, good fruit and leaves.
- 5. Small Open, productive, good fruit, small leaves.
- 6. Small Open, slightly spreading, coarse fruit.
- 7. Small Open, productive, good frait, small leaves, upright.
- 8. Small Open, productive, good fruit, small leaves.
- 9. Small Open, productive, good fruit, few sports, small leaves.
- 10. dureka strain, productive, spreading, good fruit.
- 11. Sureka strain, coarse fruit, one branch crumpled leaves.
- 12. Eureka strain, productive, soreading, good fruit.

Row 22.

Tree Number.

- 13. Bureka strain, productive, good fruit, good leaves.
- 14. Eureka strain, productive, few crumpled leaves, good fruit.

Row 23.

- 1. Dense Productive, large spreading tree, coarse fruit, some crumpled leaves, fair tree.
- 2. Dense Productive, large spreading tree, good fruit.
- 3. Small Open, good fruit, small fine leaves, productive.
- 4. Eureka strain, productive, good fruit, good leaves.
- 5. Eureka strain, good fruit, few sports, good leaves, productive.
- 6. Eureka strain, productive, spreading, good fruit.
- 7. Eureka strain, productive, good fruit, few sports, one branch crumpled leaves.
- 8. Eureka strain, productive, good tree.
- 9. Eureka strain, productive, spreading, coarse fruit.
- 10. Eureka strain, productive, very good tree, good fruit.
- 11. hreka strain, productive, very good tree, good fruit.
- 12. Eureka strain, good fruit, good leaves, productive.
- 13. Eureka strain, productive, good fruit, good leaves.
- 14. Eureka strain. productive. few sports, coarse fruit.

Row 24.

Tree Number.

- 1. Small Open, spreading, coarse fruit, fine leaves.
- 2. Dense Unproductive, spreading, large crumpled leaves, coarse fruit.

Row 24.

Tree Number.

- 4. Dense Productive, large spreading tree, large leaves, coarse fruit, few sports.
- 5. Shade Tree, spreading, unproductive, large crumpled leaves. coarse fruit, few sports.
- 6. Eureka strain, productive, good fruit, good leaves, upright.
- 7. Eureka strain, productive, coarse fruit, large leaves.
- 8. Dense Unproductive, large spreading, coarse fruit, crumpled leaves, few sports.
- 9. Dense Productive, spreading, coarse fruit, large leaves.
- 10. Eureka strain, good fruit, good leaves, spreading, productive.
- 11. Eureka strain, good fruit, good leaves, productive.
- 12. Eureka strain, good fruit, few sports, productive.
- 13. Eureka strain, productive, very good tree.
- 14. Eureka strain, productive, good fruit, good leaves, spreading.

Row 25.

- 1. Tree out.
- 2. Small Open. productive, coarse fruit, small leaves.
- 3. Dense Unproductive, spreading, large leaves, coarse fruit.
- 4. Eureka strain, productive, good fruit, good leaves.
- 5. Eureka strain, productive, coarse fruit, few sports.
- 6. Eureka strain, productive, good fruit, good leaves.
- 7. Shade tree, unproductive, large spreading tree, coarse fruit, few sports, large crumpled leaves.
- 8. Dense Productive, large leaves, coarse fruit, few sports,

Row 25.

Tree Number.

- 9. Eureka strain, productive, good fruit, good leaves.
- 10. Eureka strain, productive, few sports, good leaves, spreading.
- 11. Eureka strain, productive, upright spreading, good fruit.
- 12. Eureka strain, productive, good fruit, good leaves.
- 13. Dense Productive, spreading, few sports and crumpled leaves.
- 14. Eureka strain, productive, spreading, good fruit, good leaves.
- 15. Eureka strain, productive, good fruit, good leaves.

Row 26.

Tree Number.

- 1. Eureka strain, productive, coarse fruit, good leaves.
- 2. Eureka strain, productive, coarse fruit, spreading, few sports.
- 3. Eureka strain, productive, very good tree.
- 4. Eureka strain, productive, good tree, some coarse fruit.
- 5. Eureka strain, productive, good fruit, good leaves.
- 6. Eureka strain, productive, coarse fruit, few sports.
- 7. Dense Unproductive. large crumpled leaves, coarse fruit.
- 8. Eureka strain, productive, good fruit, good leaves.
- 9. Young replanted tree, Eureka strain.
- 10. Eureka strain, coarse fruit, large leaves, spreading.
- 11. Eureka strain, productive, good fruit, good leaves.
- 12. Eureka strain, productive, coarse fruit, good leaves.
- 13. Eureka strain, productive, good fruit, good leaves.
- 14. Eureka strain. productive, some coarse fruit, good leaves.

Row 27.

Tree Number.

- 1. Small Open strain, small leaves, coarse fruit, upright.
- 2. Dense Productive, large crumpled leaves, coarse rough fruit.
- 3. Eureka strain, productive, good fruit, good leaves, spreading.
- 4. Small Open strain, good fruit, small leaves, upright.
- 5. Eureka strain, productive, very good tree.
- 6. Eureka strain, productive, coarse fruit, spreading.
- 7. Eureka strain, productive, good fruit, one branch crumpled leaves, spreading.
- 8; Eureka strain, productive, good fruit, good leaves, upright.
- 9. Eureka strain, productive, good fruit, good leaves.
- 10. Eureka strain, productive, coarse frait, good leaves, upright.
- 11. Eureka strain, productive, spreading, coarse fruit.
- 12. Eureka strain, very good tree.
- 13. Eureka strain, productive, good fruit, good leaves.
- 14. Sureka strain, coarse fruit, few sports, good leaves.
- 15. Young replanted tree, some coarse rough fruit, good leaves.

Row 28.

- 1. Small Open, productive, coarse fruit, few sports, good leaves.
- 2. Dense Unproductive, large spreading tree, coarse fruit.
- 3. Dense Unproductive strain, spreading, crumpled leaves, coarse fruit, few sports.
- 4. Dense Productive, spreading, large leaves, good fruit.
- 5. Dense Productive, spreading, some crumpled leaves, good fruit.
- 6. Eureka strain, productive, good fruit, good leaves.
- 7. Eureka strain, good fruit, few sports, good leaves.

Row 28.

Tree Number.

- 8. Eureka strain, productive, coarse frait, good leaves, upright.
- 9. Eureka strain, productive, good fruit, good leaves, spreading, very good tree.
- 10. Eureka strain, productive, good fruit, good leaves.
- 11. Eureka strain, productive, good fruit, good leaves, upright.
- 12. Eureka strain, productive, coarse fruit, few sports.
- 13. Eureka strain, productive, very good tree.
- 14. Eureka strain, productive, good fruit, good leaves, spreading.
- 15. Dense Productive, large leaves, coarse fruit.
- 16. Eureka strain, productive, coarse fruit, good leaves, upright.

Row 29.

- Dense Unproductive, spreading, coarse fruit with some sports, crumpled leaves, poor type tree.
- 2. Eureka strain, productive, good fruit, good leaves.
- 3. Eureka strain, productive, coarse fruit, spreading.
- 4. Shade tree strain, unproductive, coarse fruit, crumpled leaves.
- 5. Dense Productive, spreading, good fruit, large leaves.
- 6. Eureka strain, productive, good fruit, good leaves.
- 7. Eureka strain, productive, coarse fruit, spreading.
- 8. Eureka strain, productive, spreading, good fruit, good leaves.
- 9. Eureka strain, productive, few sports, large leaves.
- 10. Eureka strain, productive, coarse fruit, good leaves.
- 11. Eureka strain, productive, good fruit, upright spreading.
- 12. Dense Productive, spreading, coarse fruit, large leaves.

Row 29.

Tree Number.

- 13. Eureka strain, productive, spreading, good fruit, few sports.
- 14. Small Open, productive, small leaves, good fruit.
- 15. Eureka strain, productive, good fruit, good leaves.
- 16. Small Open strain, productive, good fruit, good leaves.

Row 30.

- 1. Dense Unproductive strain, large crumpled leaves, coarse rough fruit, many off typefruits, crumpled leaves.
- 2. Small Open, productive, good fruit, small fine leaves.
- 3. Dense Productive, spreading, large leaves, coarse fruit.
- 4. Eureka strain, productive, good fruit, good leaves.
- 5. Eureka strain, spreading, productive, good fruit, good leaves.
- 6. Small Open strain, upright, productive, coarse fruit.
- 7. Eureka strain, productive, coarse fruit, good leaves, upright.
- 8. Eureka strain, productive, good fruit, few sports, upright.
- 9. Bureka strain, productive, good fruit, good leaves.
- 10. Dense Productive, large leaves, coarse rough fruit.
- 11. Dense productive strain, good fruit, large leaves.
- 12. Eureka strain, productive, good fruit, good leaves, spreading.
- 13. Eureka strain, productive, coarse fruit, good leaves.
- 14. Eureka strain, productive, very good tree.
- 15. Eureka strain, very good tree.
- 16. Eureka strain, fine fruit, small leaves, very good tree.

Row 31.

Tree Number.

- 1. Eureka strain, productive, few sports, coarse fruit.
- 2. Eureka strain, productive, good fruit, good leaves, spreading.
- 3. Eureka strain, productive, good fruit, good leaves.
- 4. Eureka strain, productive, good fruit, good leaves, upright.
- 5. Eureka strain, productive, good fruit, few sports.
- 6. Eureka strain, productive, spreading, branch crumpled leaves.
- 7. Dense Productive, large leaves, coarse fruit, spreading.
- 8. Dense Productive strain, rough fruit, large leaves.
- 9. Eureka strain, productive good fruit, good leaves.
- 10. Eureka strain, productive, good fruit, few sports, spreading.
- 11. Eureka strain, productive, coarse fruit, large leaves.
- 12. Eureka strain, productive, good fruit, good leaves, upright.
- 13. Mureka strain, productive, good fruit, large leaves.
- 14. Eureka strain, productive, good fruit, good leaves.
- 15. Eureka strain, very good tree, fine fruit.
- 16. Eureka strain, productive, very good tree.

ROW 32.

- 1. Small Open strain, productive, small leaves, good fruit.
- 2. Small Open strain, productive, good fruit, good leaves.
- 3. Small Open strain, productive, few sports, small leaves.
- 4. Dense Productive strain, large crumpled leaves, rough fruit.
- 5. Dense Productive strain, coarse fruit, few sports, spreading.

Row 32.

Tree Number.

- 6. Dense Unproductive, spreading, coarse fruit, crumpled leaves.
- 7. Eureka strain, productive, good fruit, large leaves, upright.
- 8. Shade Tree, unproductive, large crumpled leaves, spreading, coarse rough fruit and many sports.
- 9. Eureka strain, productive, upright, good fruit, good leaves.
- 10. Fureka strain, productive, good fruit, good leaves.
- 11. Eureka strain, productive, good fruit, good leaves, upright.
- 12. Eureka strain, productive, coarse fruit, large leaves.
- 13. Eureka strain. productive, good fruit, good leaves.
- 14. Eureka strain, productive, good fruit, spreading.
- 15. Eureka strain, productive, good fruit, good leaves.
- 16. Eureka strain, spreading, sporting branch of rough fruit.
- 17. Eureka strain, productive, good fruit, good leaves, upright.

Row 33.

- 1. Small Open strain, upright, productive, good fruit, small leaves.
- 2. Small Open strain, good fruit, small leaves, productive.
- 3. Dense Productive strain, coarse fruit, large leaves, upright.
- 4. Dense Unproductive, large crumpled leaves, coarse fruit.
- 5. Small Open strain, productive, coarse fruit, small leaves.
- 6. Small Open strain, good fruit, good leaves.
- 7. Small Open, productive, upright, good fruit, small leaves.
- 8. Small Open, productive, good fruit, small leaves.
- 9. Small Open strain, good fruit, small leaves, upright.

Row 33.

Tree Number.

- 10. Bureka strain, productive, good fruit, good leaves.
- 11. Eureka strain, productive, good fruit, spreading.
- 12. Eureka strain, productive, good tree.
- 13. Eureka strain, productive, coarse fruit, spreading.
- 14. Eureka strain, productive, few sports, small leaves.
- 15. Small Open strain, productive, good fruit, small leaves.
- lo. Eureka strain, productive.
- 17. Eureka strain, productive, good tree.

Row 34.

- 1. Tree out.
- 2. Small Open strain, productive, upright, good fruit.
- 3. Dense Productive, spreading, large leaves, coarse fruit.
- 4. Eureka strain, productive, good fruit, spreading.
- 5. Dense Unproductive strain, large crumpled leaves, few sports.
- 6. Dense Unproductive strain, spreading, coarse fruit, large crumpled leaves.
- 7. Small Open strain, productive, good fruit, good leaves.
- 8. Shade tree strain, very poor tree, unproductive, coarse fruit.
- 9. Eureka strain. productive, good fruit, few sports.
- 10. Small Open strain, productive, upright, good fruit.
- 11. Eureka strain, spreading, good fruit, and leaves.
- 12. Zureka strain, productive, spreading, sporting branch.
- 13. Eureka strain, very good tree.
- 14. Eureka strain, upright spreading, coarse fruit good leaves.

Row 34.

Tree Number.

- 15. Eureka strain, productive, good fruit, good leaves.
- 16. Dense Unproductive, large crumpled leaves, coarse fruit.
- 17. Dense Productive, coarse fruit, large leaves, spreading.

Row 35.

- 3. Small Open strain, productive, small leaves, good fruit.
- 4. Small Open, productive, good fruit, few sports.
- 5. Small Open, productive, small leaves, good fruit, upright.
- 6. Small Open, upright, productive, good fruit, good leaves.
- 7. Shade Tree, very unproductive, coarse fruit, sports, large crumpled leaves. Poor type tree.
- 8. Shade Tree, unproductive, coarse rough fruit, spreading.
- 9. Small Open strain, productive, small leaves, good fruit.
- 10. Small Open strain, fairly good tree.
- 11. Eureka strain, productive, good fruit, good leaves.
- 12. Eureka strain, productive, coarse fruit, spreading.
- 13. Eureka strain, productive, good fruit, few sports, upright.
- 14. Eureka strain, spreading, good fruit, good leaves.
- 15. Eureka strain, productive, good fruit, good leaves.
- 16. Eureka strain, productive, good tree.
- 17. Eureka strain, productive, coarse fruit, large leaves.

Row 36.

- 5. Small Open strain, productive, good fruit, small leaves.
- 6. Dense Productive, soreading, large leaves, good fruit.
- 7. Eureka strain, productive, good fruit, good leaves.
- 8. Shade Tree, poor unproductive type, coarse fruit.

Row 36.

Tree Number.

- 9. Dense Productive, large crumpled leaves, few sporting fruits.
- 10. Eureka strain, productive, good fruit, good leaves.
- 11. Eureka strain, spreading to upright, coarse fruit, good leaves.
- 12. Eureka strain, soreading, dense, coarse fruit.
- 13. Eureka strain, productive, rough fruit, large leaves.
- 14. Eureka strain, productive, good fruit, good leaves,
- 15. Eureka strain, productive, spreading, large tree.
- 16. Eureka strain, upright, productive, good fruit, few sports.
- 17. Dense Unproductive, spreading, large crumpled leaves.

Row 37.

- 6. Small Open strain, productive, good fruit, small leaves.
- 7. Eureka strain, productive, good fruit, good leaves.
- 8. Young tree.
- 9. Dense Productive, spreading, large leaves, coarse fruit.
- 10. Dense Productive, spreading, rough fruit, sporting branch.
- 11. Dense Productive, coarse rough fruit, large leaves upright.
- 12. Eureka strain, productive, upright, few sports, coarse fruit.
- 13. Eureka strain, productive, good fruit, good leaves.
- 14. Eureka strain, good fruit, few sports, large leaves .
- 15. Eureka strain, productive, coarse fruit.
- 16. Eureka strain, productive, good tree, good fruit.
- 17. Eureka strain, productive, good fruit, spreading.

Row 38.

Tree Number.

- 8. Eureka strain, good fruit and leaves, productive.
- 9. Eureka strain, spreading, good frit, good leaves, productive.
- 10. Eureka strain, productive, good fruit, good leaves.
- 11. Eureka strain, productive, spreading, coarse fruit.
- 12. Eureka strain, productive, very good tree.
- 13. Young tree. Coarse fruit.
- 14. Bureka strain, sporting branch, coarse fruit, good leaves.
- 15. Eureka strain, productive, good fruit, good leaves.
- 16. Eureka strain, productive, spreading, large leaves.
- 17. Eureka strain, good fruit and leaves, productive.
- 18. Eureka strain, productive, good fruit, good leaves, upright.

Row 39.

- 9. Small Open strain, productive, good fruit, small leaves.
- 10. Small Open strain, productive, few sports, coarse fruit.
- 11. dureka strain, productive, good fruit, spreading, large leaves.
- 12. Young replanted tree. Bureka strain.
- 13. Eureka strain, good fruit, good leaves, productive.
- 14. Eureka strain, spreading, productive, coarse fruit.
- 15. Eureka strain, productive, good fruit, good leaves.
- 16. Eureka strain, good fruit, good leaves.
- 17 Hureka strain, productive, good fruit, good leaves.
- 18. Eureka strain, coarse fruit, large leaves, spreading.

Row 40.

Tree Number.

- 10. Eureka strain, productive, good fruit, good leaves.
- 11. Small Open strain, productive, small leaves, good fruit.
- 12. Small Open strain; productive, small leaves, good fruit.
- 13. Eureka strain, very good tree, fine fruit.
- 14. Dense Unproductive, crumpled leaves, coarse fruit, spreading.
- 15. Eureka strain, productive, coarse fruit, large leaves.
- 16. Eureka strain, productive, good tree, good fruit and leaves.
- 17. Eureka strain, productive, spreading.
- 18. Eureka strain, productive, good tree.
- 19. Dense Productive, spreading, large leaves, good fruit.

Row 41.

- 11. Small Open strain, productive, small leaves and coarse fruit.
- 12 Small Open strain, good fruit, small leaves, upright.
- 13. Eureka strain, upright, good fruit, good leaves, productive.
- 14. Eureka strain, productive, upright, coarse fruit, good leaves.
- 15. Eureka strain, spreading, sporting branch, good leaves.
- 16. Eureka strain, spreading, good leaves and fruit, productive.
- 17. Dense Unproductive, upright, large leaves, coarse fruit.
- 18. Eureka strain, crumpled leaves, coarse fruit, productive.
- 19. Eureka strain, upright, crumpled leaves, coarse fruit.

Row 42.

Tree Number.

- 13. Eureka strain, productive, upright, good fruit, good leaves.
- 14. Eureka strain, productive, good fruit, good leaves, upright.
- 15. Hureka strain, spreading, coarse fruit, productive.
- 16. Eureka strain, spreading, sporting branch, good leaves.
- 17. Eureka strain, productive, upright, large leaves, coarse fruit.
- 18. Dense Productive, spreading, crumpled leaves, coarse fruit.
- 19. Eureka strain, spreading, productive, sporting branch.
- 20. Eureka strain, productive, dense upright, good fruit.

Row 43.

- 15. Small Open, good fruit, small leaves, productive.
- 16. Eureka strain, dense upright, good fruit, large leaves.
- 17. Eureka strain, spreading, coarse fruit, sporting branch.
- 15. Eureka strain, crumpled leaves, coarse fruit, spreading.
- 19. Eureka strain, productive, good leaves, sporting branch.
- 20. Eureka strain, productive, upright, good fruit, good leaves.

Row 44.

- 16. Small Open strain, young tree.
- 17. Eureka strain, productive, few sports, good leaves,
- 18. Small Open strain, small leaves, good fruit.
- 19. Eureka strain, productive, upright, good fruit and leaves.
- 20. Eureka strain, productive, spreading, sporting branch.
- 21. Eureka strain, upright, coarse fruit, good leaves.

Row 45.

Tree Number.

- 17. Small Open strain, productive, small leaves, coarse fruit.
- 18. Eureka strain, productive, upright, young tree.
- 19. Young tree. Bureka strain.
- 20. Aureka strain, upright, good fruit, good leaves, productive.
- 21. Eureka strain, productive, upright, good fruit, good leaves.

Row 46.

- 18. Small Open strain, productive, small leaves, good fruit.
- 19. Eureka strain, upright, productive, good fruit, good leaves.
- 20. Small Open strain, small leaves, good fruit,
- 21. Eureka strain, productive, upright, good fruit, good leaves.
- 22. Dense Productive, coarse fruit, spreading.

Row 47.

- 21. Eureka strain, productive, spreading, good fruit, good leaves.
- 22. Dense Productive, crumpled leaves, coarse fruit.
- 23. Dense Productive, upright, good fruit, good leaves.

Row 48.

- 21. Small Open strain, crumpled leaves, coarse fruit.
- 22. Small Open strain, productive, good fruit, small leaves.
- 23. Lureka strain, productive, spreading, good fruit and leaves.
- 24. Eureka strain, productive, upright, good tree.

Row 49.

Tree Number.

- 23. Young replanted tree. Eureka strain.
- 24. Eureka strain, productive, good fruit, good leaves.
- 25. Dense Productive, spreading, coarse fruit, large leaves.
- 26. Eureka strain, productive, good fruit, good leaves.
- 27. Hureka strain, productive, spreading, coarse fruit.
- 28. Eureka strain, upright, productive, good fruit.
- 29. Dense Productive, upright, good fruit, large leaves.
- 30. Dense Productive, soreading, coarse fruit, crumpled leaves.
- 31. Eureka strain, productive, dense upright, good fruit.
- 32. Dense Productive, upright, crampled leaves, coarse fruit.

Row 50.

- 24. Small Open strain, productive, good fruit, small leaves.
- 25. Eureka strain, productive, apright, good fruit, good leaves.
- 26. Fureka strain, productive, coarse fruit, large leaves.
- 27. Bureka strain, rough coarse fruit, crumpled leaves.
- 28. Eureka strain, productive, good fruit, good leaves.
- 29. Dense Unproductive, rough fruit, sorting branch, spreading.
- 30. Eureka strain, coarse fruit, crumpled leaves,
- 31. Eureka strain, productive, good fruit, good leaves.
- 32. Threka strain, spreading, coarse fruit, good leaves.
- 33. Dense Productive, spreading, good fruit, large leaves.
- 34. Dense Unproductive, soreading, crumpled leaves, coarse fruit.

Row 51.

Tree Number.

- 25. Small Open strain, productive, good fruit, small leaves.
- 26. Small Open strain, productive, upright, good fruit.
- 27. Shade Tree, unproductive, coarse fruit, crumpled leaves.
- 28. Sureka strain, upright, coarse fruit, good leaves.
- 29. Dense Unproductive, upright, coarse fruit, crumpled leaves.
- 30. Dense Productive, rough fruit, large leaves, spreading.
- 31. Eureka strain, productive, upright, rough fruit.
- 32. Eureka strain, spreading, coarse fruit, productive.
- 33. Dense Productive, crumpled leaves, coarse fruit.
- 34. Dense Productive, crumpled leaves, coarse fruit, spreading.
- 35. Bureka strain, productive, good fruit, good leaves.
- 36. Tree out.

Row 52.

- 27. Small Open strain, productive, good fruit, small leaves.
- 28. Dense Unproductive, crumpled leaves, coarse fruit.
- 29. Dense Unproductive, upright, coarse fruit. large leaves.
- 30. Shade Tree, course fruit, crumpled leaves.
- 31. Eureka strain, crumpled leaves, coarse fruit, productive.
- 32. Bureka strain, productive, good fruit, good leaves.
- 33. Small Open strain, productive, good fruit, small leaves.
- 34. Eureka strain, upright, few sports, coarse frits, productive.
- 35. Dense Productive, upright, good fruit, good leaves.
- 36. Sureka strain, spreading, good fruit, productive.
- 37. Eureka strain, productive, very good tree.

Row 52.

Tree Number.

- 38. Dense Unproductive, spreading, coarse fruit, large leaves.
- 39. Bureka strain, productive, spreading, good fruit, good leaves.
- 40. Young replanted tree.
- 41. Dense Unproductive, spreading, coarse fruit, crumpled leaves.

Row 53.

- 28. Dense Unproductive strain, crumpled leaves, coarse fruit.
- 25. Dense Productive, crumpled leaves, coarse fruit, spreading.
- 30. Small Open strain, small leaves, good fruit, productive.
- 31. Eureka strain, spreading, good fruit, productive.
- 32. Eureka strain, productive, good fruit, good leaves.
- 33. Dureka strain, upright spreading, good fruit and leaves.
- 34. Eureka strain, upright, productive, good fruit and leaves.
- 35. Eureka strain, upright, productive, good fruit and leaves.
- 36. Dense Unproductive, spreading, crumpled leaves, coarse fruit.
- 37. Bureka strain, productive, good fruit, good leaves.
- 38. Eureka strain, very good tree.
- 39. Small Open strain, productive, good fruit, good leaves.
- 40. Dense Unproductive, upright, coarse fruit.
- 41. Dense Unproductive, upright, crumpled leaves, coarse fruit.
- 42. Small Open strain, small leaves. good fruit.

Row 54.

- 29. Small Open strain, productive, small leaves, good fruit.
- 30. Small Open strain, coarse fruit, large leaves, upright.
- 31. Small Open strain, good fruit and leaves.

Row 54.

Tree Number.

- 32. Dense Unproductive, crumpled leaves, coarse fruit, spreading.
- 33. Eureka strain, upright spreading, productive, good fruit.
- 34. Eureka strain, upright spreading, good fruit and leaves.
- 35. Eureka strain, productive, good fruit, good leaves, upright.
- 36. Eureka strain, productive, very good tree.
- 37. Dense Productive, spreading, coarse fruit, large leaves.
- 38. Hurka strain, productive, upright, good tree.
- 39. Eureka strain, good fruit, good leaves, productive.
- 40. Dense Productive, coarse fruit, large leaves, spreading.
- 41. Dense Unproductive, spreading, coarse fruit, crumpled leaves.
- 42. Small Open strain, productive, good fruit, small leaves.
- 43. Small Open strain, productive, fairly good tree.

Row 55.

- 31. Small Open strain, good fruit, crumpled leaves, sporting branch.
- 32. Sureka strain, upright, good fruit, good leaves.
- 33. Small Open strain, productive, good fruit, small leaves.
- 34. Mureka strain, dense upright, good fruit, productive.
- 35. Eureka strain, productive, small leaves, good fruit.
- 36. Eureka strain, small leaves, good fruit, spreading, productive.
- 37. Dense Productive, upright spreading, coarse fruit, large leaves.
- 38. Bureka strain, small leaves, good fruit, productive .
- 39. Mureka strain, productive, very good tree.

Row 55.

Tree Number.

- 40. Eureka strain, upright spreading, very good tree.
- 41. Eureka strain, productive, good fruit, good leaves.
- 42. Eureka strain, good tree.
- 43. Eureka strain, productive, very good tree.

Row 56.

- 32. Small Open strain, productive, good fruit, good leaves.
- 33. Small Open strain, productive, good fruit, small leaves.
- 34. Sureka strain, productive, good fruit, good leaves, good tree.
- 35. Dense Productive, spreading, coarse fruit, sporting branch.
- 36. Small Open strain, good fruit, good leaves, productive.
- 37. Eureka strain, spreading, productive, coarse fuit, good leaves.
- 38. Eureka strain, productive, good fruit, good leaves.
- 39. Eureka strain, upright, sporting branch, good leaves.
- 40. Eureka strain, coarse fruit, good leaves, productive.
- 41. Eureka strain, productive, good fruit, good leaves.
- 42. Eureka strain, apright, good fruit, good leaves, productive.
- 43. Dureka strain, coarse fruit, sporting branch, productive.
- 44. Small Openn, productive, good fruit, good leaves.
- 45. Tree out since records were taken.

1.ov. 57.

- 33. Small Open strain, productive, upright, good fruit, good leaves.
- 34. Small Open strain, coarse fruit, small leaves, upright.
- 35. Eureka strain, upright, coarse fruit, good leaves, productive.
- 36. Sureka strain, productive, upright, small fine leaves.

Row 57.

Tree Number.

- 37. Eureka strain, upright, small fine leaves, good fruit.
- 38. Eureka strain, spreading, coarse fruit, sporting branch.
- 39. Dense Unproductive, upright, crumpled leaves, coarse fruit.
- 40. Eureka strain, spreading, good fruit, good leaves, productive.
- 41. Eureka strain, coarse fruit, good leaves, productive.
- 42. Eureka strain, sporting branch, productive.
- 43. Eureka strain, spreading, coarse fruit, good leaves, productive.
- 44. Young tree Eureka strain, good fruit.
- 45. Dense Unproductive, spreading, large leaves, coarse fruit.
- 46. Small Open, coarse fruit, small leaves, productive.

Row 58.

- 35. Dense Unproductive, sporting branch, crumpled leaves.
- 36. Eureka strain, upright, productive, good fruit, good tree.
- 37. Eureka strain, good fruit, small leaves, productive.
- 38. Small Open strain, coarse fruit, good leaves, productive.
- 39. Dense Productive, good fruit, large leaves.
- 40. Bureka strain, upright, productive, very good tree.
- 41. Dense Productive, crumpled leaves, coarse fruit, sporting branch.
- 42. Eureka strain, productive, coarse fruit, good leaves.
- 43. Eureka strain, spreading, coarse fruit, good leaves.
- 44. Eureka strain, productive, very good tree.
- 45. Sureka strain, productive, spreading, good fruit, very good tree.
- 46. Eureka strain, productive.

Row 58.

Tree Number.

- 47. Small Open strain, small leaves, good fruit, productive.
- 48. Eureka strain, upright, good fruit, good leaves, productive.

Row 59.

- 36. Small Open strain, coarse fruit, small leaves, productive.
- 37. Small Open strain, coarse fruit, small leaves.
- 38. Dense Unproductive, large leaves, good fruit, few sports.
- 39. Mureka strain, upright soreading, good fruit, good leaves.
- 40. Eureka strain, upright, good fruit, productive.
- 41. Small Open, small leaves, sporting branch, small leaves.
- 42. Dense Unproductive, spreading, sporting branch, crumpled leaves.
- 43. Dense Unproductive, spreading, coarse fruit, large leaves.
- 44. Dense Unproductive, upright, coarse fruit, large leaves.
- 45. Eureka strain, productive, upright, good fruit.
- 46. Shade Tree, spreading, crumpled leaves, coarse fruit.
- 47. Eureka strain, productive, spreading, good fruit, good leaves.
- 48. Bureka strain, productive, good fruit, good leaves, spreading.
- 49. Small Open strain, coarse fruit, small leaves, productive.

A**ow** 60

- 37. Small Open strain, small leaves, good fruit, productive.
- 38. ShadeTree, unproductive, spreading, coarse fruit, crumpled leaves.
- 39. Bureka strain, productive, good fruit, good leaves.
- 40. Eureka strain, productive, soreading, small leaves, good fruit.

Row 60.

Tree Number.

- 41. Small Open strain, productive, small leaves, good fruit.
- 42. Small Open strain, productive, small leaves, good fruit.
- 43. Aureka strain, sporting branch, crumpled leaves.
- 44. Eureka strain, small leaves, good fruit, productive.
- 45. Dense Unproductive, crumpled leaves, sporting branch, coarse fruit.
- 46. Eureka strain, good leaves, good fruit, upright, productive.
- 47. Eureka strain, upright, good fruit, good leaves.
- 48. Eureka strain, very good tree.
- 45. Bureka strain, productive, good fruit, good leaves.
- 50. Dense Unproductive, spreading, coarse fruit, large leaves.

Rov. 61.

- 39. Eureka strain, smal pright tree, good fruit, good leaves.
- 40. Lureka strain, productive, coarse fruit, good leaves.
- 41. Hureka strain, uprient, large leaves, good fruit, productive.
- 42. Eureka strain, upright, large leaves, good fruit.
- 43. Eureka strain, productive, small leaves, coarse fruit.
- 44. Bureka strain, productive, upright, large fruit and leaves.
- 45. Eureka strain, productive, very good tree.
- 46. Eureka strain, u.right, sporting branch of collared fruit.
- 47. Eureka strain, oroductive, good fruit, good leaves.
- 46. Bureka strain, small upright tree, productive.
- 49. Eureka strain, upright, good fruit and leaves.
- 50. Small Open strain, productive, small leaves, good fruit.
- 51. Hureka strain, sporting branch of crumpled leaves, good fruit.

Row 62.

Tree Number.

- 40. Small Open strain, productive, small leaves, good fruit.
- 41. Small Open strain, upright, good fruit and leaves, few sports.
- 42. Eureka strain, spreading, productive, coarse fruit.
- 43. Small Open strain, productive, small leaves, coarse fruit.
- 44. Dense Productive upright, sporting branch of collared fruit.
- 45. Eureka strain, productive, very good tree.
- 46. Eureka strain, apright, collared and protruding blossom end fruit.
- 47. Eureka strain, productive, good fruit, good leaves.
- 48. Eureka strain, productive, upright, good fruit and leaves.
- 49. Eureka strain, upright, good fruit and leaves, productive.
- 50. Eureka strain, good fruit, good leaves, productive.
- 51. Young replanted tree. Eureka strain.
- 52. Young replanted tree.

Row 63.

- 42. Small Open strain, upright, good fruit, good leaves.
- 43. Sm.11 Open strain, productive, upright, good fruit and leaves.
- 44. Eureka strain, productive, spreading, collared fruit.
- 45. Eureka strain, upright, coarse fruit, crumpled leaves.
- 46. Dense Unproductive, upright, coarse fruit, crumpled fruit.
- 47. Dense Productive strain, upright, collared and protruding fruit.
- 48. Small Open strain, upright, productive, coarse fruit.
- 49. Eureka strain, upright, good fruit and leaves, productive.
- 50. Eureka strain, productive, upright, good fruit and leaves.
- 51. Dense Productive, spreading, coarse fruit, large leaves.

Row 63.

Gree Number.

- 52. Young tree. Bureka strain.
- 53. Small Open strain, small leaves, good fruit, productive.
- 54. Young tree. Dureka strain.

Now 64.

- 43. Small Open strain, productive, good fruit, small leaves.
- 44. Small Open strain, productive, upright.
- 45. Small Open strain, upright, sporting branch.
- 46. Eureka strain, productive, good fruit and leaves.
- 47. Dense Productive, upright, small leaves, good fruit.
- 48. Small Open strain, good fruit, good leaves.
- 49. Eureka strain, productive, coarse fruit, large leaves.
- 50. Eureka strain, coarse fruit, good leaves, productive.
- 51. Eureka strain, spreading, productive, collared fruit.
- 52. Eureka strain, spreading, productive, very good tree.
- 53. Mureka strain, upright, productive, good fruit and leaves.
- 54. Young tree. Tureka strain.

now 65.

- 45 Young tree. Eureka strain.
- 46. Young tree. Eureka strain.
- 47. Dense Productive, crumpled leaves, coarse fruit.
- 48. Eureka strain, upright, good fruit and leaves, productive.
- 49. Small Open strain, productive, good fruit, small leaves.
- 50. Eureka strain, upright, young tree.
- 51. Eureka strain, upright, young tree.

Rov 65.

Tree Number.

- 52. Eureka strain, collared and protruding fruit, good leaves.
- 53. Dense Productive, sporting type, coarse fruit, crumpled leaves.
- 54. Eureka strain, upright, coarse fruit, good leaves, productive.
- 55. Young tree. Bureka strain, good fruit.

Row 66.

- 46. Eureka strain, productive good fruit and leaves.
- 47. Small Open strain, productive, upright, good fruit, small leaves.
- 48. Small Open strain, good fruit and leaves, small sporting branch.
- 49. Eureka strain, productive, good fruit and leaves.
- 50. Eureka strain, upright, productive, very good tree.
- 51. Dureka strain, upright, good fruit, good leaves.
- 52. Eureka strain, spreading, large leaves, good fruit.
- 53. Eureka strain, coarse collared and protruding fruit.
- 54. Eureka strain, small leaves, good fruit, spreading.
- 55. Dense Productive, crumpled leaves, good fruit.
- 56. Young tree. Eureka strain, good fruit.

Row 67.

- 48. Eureka strain, upright, good tree.
- 49. Eureka strain, upright, productive, good fruit abd leaves.
- 50. Eureka strain, uoright, collared and protruding fruit.
- 51. Eureka strain, productive, upright, sporting branch.
- 52. Bureka strain, productive, very good tree.

Row 67.

- 53. Mureka strain, productive, good tree some coarse fruit.
- 54. Eureka strain, productive, good fruit and leaves.
- 55. Eureka strain, productive spreading, sporting branch.
- 56. Dense Productive, coarse fruit, large leaves.
- 57. Eureka strain, sporting branch of collared fruit.
- 58. Young tree. hureka strain, good fruit.

Tree Census Records. Chase Plantation.

The following Tree Census Records were obtained from the Lureka Lemon grove on the Chase Plantation which is locatedat Corona California and were obtained from Plocks # 33, 34, and 35. Only those trees which showed markedly different characteristics have been noted in this work as the Blocks contain several thousands of trees each and as a whole are as uniform a lot of Eureka lemon trees as could be found in any of the lemon orchards of California.

- 34 16 11 Shade tree, very little fruit, large leaves.
 - 10 3 Almost burren tree, very large.
 - 21 30 Sporting type, bearng especially on the lower side fruit fruit with high warty ridges.
 - 22 37 Dense Unproductive strain, rough fruit, crumpled leaves
 - 22 18 Shade tree, coarse fruit, large leaves.
 - 23 12 Small oden strain, not much fruit, unproductive.
 - 23 55 Almost barren tree, quite large, very poor tree.
- 33 2 44 Sprting type, many fruits with wide raised ridges.
 - 3 23 Sporting type, has small limb on Bast side which heavily raised ridges and collared fruit.
 - 3 50 Sportial type, corrugated and striped fruit, large leaves.
 - 6 34 Sporting type, raised ridgeed fruit, very unproductive.

Block Lower 6.
Limoneira Ranch.

Lisbon Lemons.

The following Tree Census becords were obtained from a small part of a large Lisbon lemon grove on the Limoneira Ranch which is located at Santa Paula California which is the best and largest lemon section in the state. The Lisbon lemon variety is a heavy bearer especially during the winter months. The trees in this study are younger than the rest of the grove in which they are planted and are remarkably uniform as regards strains and bearing habits but were selected for the reason that they are of known parentage and therefore should be true to type. But these records will show that occasionally poor trees will come even from the most carefully selected buds from the best trees. However the percentage of poor trees from carefully selected buds is so small in comparison to the number occuring from trees propagated from a careless selection that the added expense of bud selection is a very small item to consider.

Rov. 32.

- 28. Lisbon strain, productive, upright, good fruit and leaves.
- 29. Lisbon strain, productive, very good tree, fruit and leaves.
- 30. Open strain, spreading, good fruit and leaves, productive.

Row 32.

Tree Rumber.

- 31. Open strain, spreading, small sporting branch of ridged fruit.
- 32. Dense Unproductive, spreading, poor tree, coarse fruit.

Row 33.

- 27. Bull strain, productive, upright, good fruit and large leaves.
- 28. Lisbon strain, noright, good fruit and leaves, productive.
- 29. Lisbon strain, upright, small sporting branch, productive.
- 30. Lisbon strain, productive, upright, good fruit and leaves.
- 31. Lisbon strain, pright spreading, productive, good fruit.
- 32. Open strain, productive, upright, good fruit and leaves.

Now 3/x.

- 27. Open strain, upright, good fruit, large leaves.
- 28. Lisbon strain, upright, productive, good fruit and large leaves.
- 29. Lisbon strain, upright, small sporting branch corrugated fruit.
- 30: Open strain, usright, sood fruit and leaves, sporting branch.
- 31. Open strain, productive, upright, good fruit and leaves.
- 32. Upen strain, upright, good fruit and leaves, productive.

low 35.

- 26. Bull strain, few sports, upright, large leaves, good fruit.
- 27. Lisbon strain, productive, upright, good tree.
- 28. Lisbon strain, very good tree, good fruit and leaves, productive
- 29. Bull strain, upright, sporting branch of raised ridged fruit.
- 30. Lisbon strain, upright spreading, good fruit and leaves.
- 31. Open strain, upright, productive, good fruit and leaves.
- 32. Dense Unproductive, coarse fuit, large leaves.

Tow JG.

Tree Number.

- 26. Lisbon strain, upright, several sporting branches, productive.
- 27. Lisbon strain, productive, good fruit and leaves, upright.
- 28. Lisbon strain, upright, productive, good fruit and leaves.
- 29. Open strain, good fruit and small leaves, upright, productive.
- 30. Dense Unproductive, spreading, many sports, large leaves.
- 31. Dense Unoroductive, soreading, coarse fruit, large leaves.
- 32. Open strain, upright, good fruit and leaves, some sports.

Lov. 37.

- 25. Lisbon strain, upright, productive, good fruit, and leaves.
- 26. Lisbon strain, good tree, good fruit and leaves.
- 27. Lisbon strain, poright, productive, good tree.
- 28. Lisbon strain, small sporting branch, lirge leaves, productive.
- 29. Lisbon strain, sporting branch, good fruit and leaves.
- 30. Open strain, upright, good fruit and leaves, productive.
- 31. Oven strain, good leaves, sporting branch of corrugated fruit.
- 32. Open strain, upright, good fruit and leaves, productive.

Nov. 38.

- 24. Demse Unproductive, spreading, few sports, good fruit and leave
- 25. Lisbon strain, upright, productive tree.
- 26. Lisbon strain, very good tree, fruit and leaves, sporting branch.
- 27. Bull strain, large leaves, upright, spreading, good fruit.
- 28. Bull strain, large leaves, upright, productive, good fruit.
- 29. Open strain, upright, sporting branch of raised ridged fruit.
- 30. Lisbon strain, upright, good froit and leaves, few sports.

Row 38.

Tree Number.

- 31. Open strain, upright, productive, good fruit and leaves.
- 32. Lisbon strain, upright, productive, good fruit and leaves.

Lov. 39.

- 24. Dense Unproductive, sporting branch raised ridged fruit.
- 25. Lisbon strain, good fruit and leaves, few sports, productive.
- 26. Open strain, upright, good leaves and fruit, few sports.
- 27. Open strain, upright, small leaves, good fruit, productive.
- 28. Bull strain, spreading, good fruit and large leaves, productive.
- 29. Lisbon strain, upright, productive, good fruit and leaves.
- 30. Lisbon strain, upright, productive, good fruit and leaves.
- 31. Open strain, upright, productive, good fruit, small leaves.
- 32. Open strain, upright, productive, good fruit and leaves.

Row 40

- 23. Lisbon strain, upright, productive, alternate bearer, good fruit.
- 24. Bull strain, upright, large leaves, sporting branch of raised ridged fruit, productive.
- 25. Bull strain, good leaves and fruit, alternate bearer, productive.
- 26. Lisbon strain, upright, good fruit and leaves, productive.
- 27. Lisbon strain, upright productive, very good tree.
- 28. Lisbon strain, productive, very good fruit and leaves, good tree.
- 29. Lisbon strain, upright, productive, good fruit and leaves.
- 30. Bull strain, spreading, alternate bearer, good fruit and leaves.
- 31. Open strain, upright, good fruit and leaves, few sports.
- 32. Dense Unproductive, ridged fruit and large leaves.

Row 41.

Tree Humber.

- 26. Lisbon strain, productive, good fruit and leaves.
- 27. Sporting strain, bears practically all of its crop in the months or October and November. Fruit long and corrugated.
- 28. Lisbon strain, productive, upright, good fruit and small leaves.
- 29. Lisbob strain, productive, upright, good fruit and leaves.
- 30. Open strain, upright, productive, good fruit and leaves.
- 31. Open strain, productive, good fruit and leaves, few sports.
- 32. Open strain, productive, upright, good fruit and leaves.

Now 42.

- 22. Buil strain, spreading, large leaves, good fruit, few sports.
- 23. Lisbon strain, productive, small leaves, good fruit.
- 24. Lisbon strain, upright, very good tree, fruit and leaves.
- 25. Lisbon strain, productive, very good tree.
- 26. Lisbon strain, productive, very good tree, fruit and leaves.
- 27. Bull strain, productive, upright spreading, large leaves.
- 28. Sporting strain, unproductive, entire tree produces corrugated fruit, large leaves.
- 29. Lisbon strain, upright, alternate bearer, good fruit and leaves.
- 30. Lisbon strain, productive, good tree, fruit and leaves.
- 31. Lisbon strain, productive, very good tree.
- 32. Dense Unproductive, large leaves, coarse fruit.

Nov. 43.

- 21. Open strain, productive, good fruit and leaves.
- 22. Bull strain. Productive, large leaves, alternate bearer.
- 23. Lisbon strain, productive, good fruit and leaves, few sports.

_..ow-<u>.</u>3.

Tree Number.

- 24. Lisbon strain, productive, good fruit and leaves, upright.
- 25. Lisbon strain, productive, good fruit, few sports, small leaves.
- 26. Lisbon strain, productive, good fruit and leaves, upright.
- 27. Bull strain, spreading, good fruit and large leaves, productive.
- 28. Lisbon strain, upright, productive, good fruit and leaves.
- 29. Open strain, upright, unproductive, large leaves, coarse fruit.
- 30. Dense Unproductive, spreading, coarse fruit, large leaves.
- 31. Open strain, upright, good fruit and leaves, productive.
- 32. Open strain, upright, unproductive, good fruit, large leaves.

Row 44.

- 21. Open strain, alternate bearer, good fruit and leaves.
- 22. Open strain, upright, alternate bearer, good fruit and leaves.
- 23. Lisbon strain, upright, productive, very good tree.
- 24. Lisbon strain, productive, very good tree.
- 25. Lisbon strain, productive, very good tree.
- 26. Open strain, upright, unproductive, coarse fruit and large leaves.
- 27. Open strain, pright, unproductive, few sports.

Row 45 .

- 20. Lisbon strain, upright, very good productive tree.
- 21. Lisbon strain, very good productive tree, few corrusated fruits.
- 22. Lisbon strain, very good productive tree.
- 23. Lisbon strain, upright, very good tree.

Rov. 40.

Tree Kumber.

- 19. Lisbon strain, upright, productive, good fruit and leaves.
- 20. Open strain, a right, productive, few sports, good fruit.
- 21. Lisbon strain, upright, productive, good fruit and leaves.
- 22. Open strain, spreading, productive, good fruit and leaves

Low 47.

- 19. Lisbor strain, upright, productive, good fruit and leaves.
- 20. Lisbon strain, productive, upright, very good tree.
- 21. Lisbon strain, sporting branch of ribbed fruit, productive.

Row 48.

- 16. Lisbon strain, upright, productive, very good tree.
- 19. Lisbon strain, upright, productive, sporting branch ridged fruit.
- 20. Bull strain, spreading, large leaves, many sports.

Row 49.

16. Lisbon strain, productive, upright, very good tree.

Tree Census Records.

Block 30 Call Estate.

The following Tree Census Records were obtained from the Ruby Blood Orange grove on the Call Estate which is located at Corona, California. This grove was selected on account of the very high percentage of sporting trees producing annual crops of off-type fruit. Several absolutely worthless types were found in this grove, especially the Dry Blood type which produces fruit that is practically four fifths rind and one fifth dry juiceless pulp.

This grove is badly broken up with inter-plantings of the Eureka Lemon, Washington Navel Orange, and the St. Micheals Orange but for the purposes of this study the Ruby Blood Orange only has been used in the collection of the Tree Census records.

Block 30 Lot 8.

- 1 15 3 Sporting type, Navels and bloodless Ruby Blood oranges.
 - 15 4 Productive type, large tree, good leaves.
 - 15 5 Productive type, typical of the variety.
 - 15 7 Productive type.
 - 15 -10 Sporting type, navels and ridged fruit
 - 15 -11 Productive type.
 - 15 -12 Sporting type. navels and bloodless or dry sports.
 - 15 -13. Productive type.
 - 15 -18 Productive type.
 - 15 -18 Productive type, good leaves, dense, upright.

Row 16.

Tree Number.

- 1 16 2 Productive type, large tree, dense, upright.
 - 16 4 Productive type, medium size tree, upright.
 - 16 7 Productive type, good leaves and fruit.
 - 16 8 Sporting type, navel bloods, ridged and collared fruit.
 - 16 10. Productive, good leaves and typical fruit.
 - lo 11 Sporting type, few navels.
 - 16 12 Sporting type, few navels and ridges fruits.
 - 16 18 Sporting type, branch of bloodless fruit.

Row 17.

- 1 17 2 Productive type, good fruit and leaves, upright.
 - 17 3 Productive type, large upright tree, good fruit.
 - 17 4 Productive type, large upright tree, good fruit and leaves.
 - 17 6 Productive type, dense foliage, good fruit.
 - 17 7 Productive type, good fruit, good leaves.
 - 17 11 Semi-productive type, large leaves, upright spreading.
 - 17 12 Sporting type, navels and raised riaged fruit.
 - 17 13 Productive type, very good tree.
 - 17 17 Productive type, large tree, upright.
 - 17 18 Semi-productive, large upright tree, laege leaves.
 - 17 21 Productive type, dense foliage, good fruit.
 - 17 22 Productive type, large tree typical fruit.

Row: 18.

Tree Number.

- 1 18 1 Productive type, good fruit and leaves.
- 1 18 3 Productive type, upright, good fruit, very good tree.
 - 18 4 Productive type, large upright tree, good fruit.
 - 18 6 Semi-sporting type, productive, New navel sports.
 - 18 11 Productive type, large uprighttree, good fruit.
 - 18 -. 13 Semi-productive, few sports, large upright spreading.
 - 16 14 Sporting type, navels, corrugated and ridged fruit.

Row 19:

- 1 19 2 Sporting type, navels, ridged, corrugated fruit.
 - 19 6 Sporting type, upright spreading, many sports.
 - 19 7 Productive type, upright, good tree.
 - 19 8 Sporting type, navels, ridged and corrugated fruit.
 - 19 9 Semi-productive type, large upright spreading.
 - 19 10 Productive type, sporting limb of dry fruit.
 - 19 12 Productive type, large upright tree, very good.
 - 19 18 Productive type, good fruit and leaves, upright.
 - 19 19 Sporting type, dry fruit on one limb, few navels.
 - 19 21 Semi-productive, laerge upright tree, few sports.

Row 20.

- 1 20 1 Sporting type, navels, thick rind and dry fruit.
 - 20 3 Productive type, good upright tree, good fruit and leaves.

Row 20.

Tree number.

- 1 20 4 Semi-productive type, large upright tree, good fruit.
 - 20 10 Productive type, good fruit and leaves, upright.
 - 20 11 Productive type, dense foliage, good fruit, upright.
 - 20 12 Productive type, good fruit and leaves, slightly spreading.
 - 20 14 Sporting type, navels, corrugated and dry fruit.
 - 20 16 Productive type, good fruit and leaves, upright.
 - 20 17 Sporting type, large limb having dry fruit only.
 - 20 -20 Productive type, good fruit and leaves, upright.

Row 21.

- 1 21 1 Sporting type, navels, ridged, corrugated fruit, spreading.
 - 21 2 Semi-productive type, sporting limb of dry fruit.
 - 21 5 Productive type, upright, cood fruit, good leaves.
 - 21 6 Productive type, good fruit and leaves, upright, dense.
 - 21 8 Semi-sporting type, one branch of dry fruit i.e., no juice.
 - 21 9 Sporting type, large dense tree, navels, raised sections.
 - 21 11 Productive type, good fruit and leaves, upright.
 - 21 13 Semi-sporting type, many off-type fruits, dense, spreading.
 - 21 14 Sporting type, navels, and dry blood sports.
 - 21 16 Productive type, good fruit and leaves, upright.
 - 21 -21 Productive type, good fruit and leaves, dense, large.

Row 22.

- 1 22 2 Semi-productive type, good fruit and leaves, few sports.
 - 22 4 Sporting type, navels, ridged, and corrugated fruit.

Row 22.

Tree Number.

- 1 22 6 Productive type, good fruit, good leaves, upright.
 - 22 10 Semi-productive type, few sports, good leaves, upright.
 - 22 11 Productive type, one sporting limb of dry fruit.
 - 22 12 Productive type, sporting limb of navels fruit, upright.
 - 22 15 Productive type, good fruit and leaves, spreading.
 - 22 16 Productive type, good fruit and leaves, upright, dense.
 - 22 17 Productive type, good fruit, good leaves, upright spreading.
 - 22 18 Productive type, one sporting branch of dry fruit, upright.

Row 23.

- 1 23 2 Semi-productive type, sorting branch of dry fruit.
 - 23 5 Sporting type, many sports of all kinds, spreading.
 - 23 6 Sporting type, navels and ridged sports, dense upright tree.
 - 23 7 Semi-productive type, sporting limb of dry fruit.
 - 23 8 Productive type, good fruit, good leaves, upright.
 - 23 9 Productive type, good fruit, good leaves, upright, dense.
 - 23 11 Productive type, good fruit, few navel sports.
 - 23 13 Semi-productive type, sporting branch of ridged fruit.
 - 23 14 Productive type, good fruit and leaves, upright, large.
 - 23 15 Sporting type, navels, and dry bloods, corrugated fruit.
 - 23 17 Productive type, good fruit, good leaves, spreading.
 - 23 19 Sporting type, productive, good leaves, many sports.

Row 24.

Tree Number.

- 1 24 2 Semi-productive type, sporting limb of dry fruit.
 - 24 3 Productive type, sporting branch of navel blood fruit.
 - 24 5 Productive type, good fruit and leaves, upright.
 - 24 6 Productive type, good fruit and leaves, upright, dense.
 - 24 10 Productive type, very good tree, upright and large.
 - 24 11 Sporting type, navels, ridged and corrugated fruit, upright.
 - 24 12 Sporting type, navels and dry blood fruit, good leaves.
 - 24 14 Sporting type, corrugated and raised sections, good leaves.
 - 24 17 Productive type, good fruit and leaves, upright, good tree.
 - 24 20 Productive type, good fruit and leaves, very good tree.

Some Special Sporting Type Trees.

Block 30 Call Estate.

- 1 7 2 Sporting type, limb of dry fruit, balance of tree good.
 - 7 10 Whole tree is of the dry blood type of sport. This fruit is four fifths rind and one fifth fruit cells which are absolutely dry and juiceless.
 - 7 18 Sporting type, limb of blood less fruit. That is, fruit the juice of which has no color while the typical blood orange fruit has a blood red pigment in the juice.
 - 6 14 Sporting type, limb of bloodless fruit, upright.
 - 8 3 Sporting type, whole tree is of the dry blood type.
 - 31 2 Sporting type, limb of the bloodless type of fruit.
 - 31 21 Sporting type, limb which seems to be absolutely barren.
 - 32 18 Oporting type, limb of the dry blood type fruit.
- 2 7 3 Sporting type, barren worthless limb, some good fruit.
- 2 29 2 Sporting type, limb of dry ribbed fruit, very poor type tree.

Individual Tree Performance Records.

For the past ten years the practise of securing commercial and scientific individual tree performance records has been one of the established features in the routine work of picking citrus fruitsin

California. Obviously, before any records could be taken each tree should have a number to distinguish it from the others in the grove. The system of marking trees which has proven to be the best is the one devised by some of the investigators of the U.S. Department of agriculture and used by them in their scientific studies of individual tree performance records. This system gives to each tree three numbers which are painted on the trunk of the tree with white lead paint and so placed that one is directly below the other, as $\frac{24}{15}$, the first figure indicating the grove or block number on a certain ranch, the second, the number of the row in the grove or block, and the third figure showing the number of the tree in the row.

In numbering the trees, it has been customary to begin on the left hand side of the grove from the lower end of the irrigating furrows or the lower side of the grove, and the first tree in the row is the one located nearest the irrigating hydrant at the top side of the grove.

In the plots upon which individual tree performance records have been kept by the writer, cloth streamers of muslin have been tied to the trees as a precaution against their being picked by the regular ranch pickers, who, of course, were not supposed to pick any fruit on trees so marked.

The picking of lemons in California is a different operation than the picking of any other fruit. The trees blossom to some extent every month in the year and hence there is a continuous crop of fruit to

be picked. This has been done twelve times a year in the scientific investigations in which the writer has been engaged while in the commercial individual tree performance records the usual number of pickings per year has been only ten.

a small picking ring, clippers, and a picking sack. The ring is worm on a finger of the left hand and is used to measure the green fruit before it is clipped from the tree. Any lemon small enough to pass through the ring is not picked but left on the tree another month, only those which do not pass through the ring being picked. The ring is usually 2½ inches in diameter, as fruit of this size, when marketed, meets the demand of the trade better than larger or smaller fruit.

The picker cuts the fruit from the tree with the clippers, leaving about one-quarter or one-half inch of the stem attached to the lemon. He then makes a second cut close to the "button", which is the receptable of the flower adhering to the fruit with its calyx lobes. The cut is made as smooth as possible so that there will be no scratching or bruising of the skin or oil cells, either in the sack or box.

Practically the same process is used in picking oranges and grapefruit, except that rings are necessary only when there is a very large crop and a consequent large quantity of small fruit, the ring being used in the first pick to gather the largest fruits. As there is only one crop of oranges and grapefruit a year, there is less need of picking to size and the usual practise is to pick all of the fruit on the tree at the same time.

The methods of weighing the fruit have veried according to the character of the records which were being secured. In weighing the fruit picked from trees in the scientifically conducted plats upon which records were kept by the writer, a sair of platform scales were used so that the actual weight of the fruit could be determined to within one ounce. The fruit when-picked is placed in a lug-box and carried to the scales which were set on a level piece of ground in the orchard and not moved during the weighing of the fruit from the entire plat. The box of fruit was set on the scales and weighed and the weight recorded. Then the fruit of various colors is counted out five at a time until all have been removed from the box. The box was then weighed and the result subtracted from the previous weight of the full box and the correct weight of the fruit thus obtained.

The fruit was graded into green tree ripes, and culls, and the weight and number of each grade recorded. This method would, of course, be too complicated and impractical for use in securing individual tree records for connectial purposes, so a pair of common spring balance scales has been used by the writer and others in securing this type of tree record.

In obtaining the records for the groves on the Rancho Sespe, a platform was suspended from a pair of spring balance scales, which in turn was hung from a support attached to the rear end of the wagon used in gathering the fruit. This platform was hung low enough so that a box of fruit could be easily placed upon it and the weight read and recorded. This method was found to be too slow when the number of trees upon which records were being obtained was increased, so a harmess was made which fitted over the shoulders of the weigher, having the spring

to be weighed fastened to the balence. By stooping slightly and lifting the box of fruit from the ground, the weight can be easily read. In this method the weight of the box used as tare was a constant and as the weight of the boxes usually varies from one-half pound to one and one-half pounds, the actual weight of the fruit was not as accurate as in the scientific method where the exact weight of the box was used as tare in each individual case.

In weighing the fruit in connection with the individual progeny lemon tree performance records, a simple pair of saring balances, with a hook on one end, is used. As there is sellow more than one sackful of 1 mons on any of the young progeny lemon trees, the fruit is weighed in the sack without removing it from the shoulders of the picker. This method is the quickest yet devised for securing tree records but would probably be impractical as the amount of fruit per tree increases.

The method of weighing the fruit of the orange trees in the scientifically conducted tree record plats is practically the same as the method used for the lemon trees, except that the oranges were first run through a grader which sorts them into the various commercial sizes, each size being counted and weighed separately on platform scales. The grader was a small portable duplicate of those used in packing houses, and was very efficient in its work.

In securing the commercial individual Valencia orange tree performance records on the Lancho Bespe, the fruit from each tree was placed in boxes and weighed with the same scales and harness that were used in securing the lemon tree records on that ranch. No grading of oranges was attempted in the commercial records, production records only

being desired. After the fruit from the individual trees in the performance record plats was weighed, the result was immediately recorded in the field notebook, there being a space for each tree in the grove or plat.

Fig. 1 is a duplicate of the field notebook form used in the work on the Rancho Bespe, there being in the book one sheet for each row in the grove and spaces on each sheet for eighty trees. Each sheet covers a period of six menths, so that only two books are needed for each grove or block for one year.

Fig. 2 is a duplicate of the field notebook used in the U.S. Department of Agriculture lemon tree performance record plats. This form accommodates only four trees and the space for the records from each tree is divided into four sections, viz., green grade fruit, tree ripe fruit, culls, and one for the total column. There is also space for the number and weight of the lemons of each grade.

The form shown in Fig. 3 is that used in the Mavel and Valencia orange tree performance record work and is considerably different from the lemon tree field notebook. In this book there is a sneet for each tree, which is divided into sections, one for the first and one for the second grade fruit. There are spaces for the ten different sizes of fruit which have been through the grading and sizing machine. The figures 80, 96, 150, 286, etc., refer to the number of oranges of that size required to fill a packed box of fruit.

The permanent record form notebook for the preservasion of lemon and orunge tree performance records is too large to be shown in

Figure 1.

Field Note Book form used in securing individual tree records.

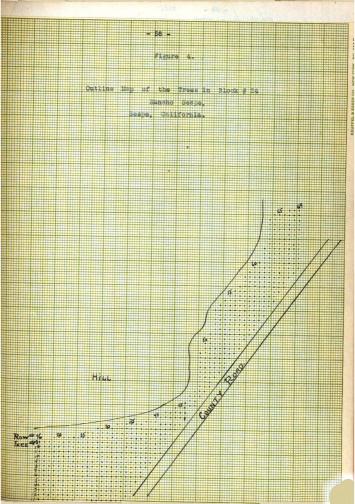
Rancho Sespe Variety Eureka Lemons. Wariety Variety

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Date							Date						
Tree No.	Pounds	Pounds	Pounds	Pounds	Pounds	Fou	Tree No.	Pounds	Pounds	Pounds	Pounds	Pounds	Poı
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rigure 2.

		mal Orange 19/21							
EE	•	GREEN		EE RIPE		culls		OTAL	_ SEEDS
LE _	Number	Weight	Number	Weight	Number	Weight	Number	Weight	_ 02220
-		25-8							Green
)		13-0	,					,	Tree ripe
	50	12-8	4	1- 0	3	0-12	57	14-4	Culls
									Green
									Tree ripe
									Culls
									Green
									Tree rip
									Culls
				ington Na		STANDAR	ree 46		

	ORCH	ARD		STANDA	RD	
288	Number	Weight	288	Number	Weight	
200	10	2+ 4g	200	9	2# 0 oz.	Figure 3.
250	30	9-6	250	5	1-10	Form used in
216	11	22-6	216	7	b (I	securing Oranje
	. 61	22-6		7	2-11	records.
200	65	27-1	200	12	4-14	
176	126	49-10	176	8	3-10	
150	104	56-15	150	11	5-12	
126	67	42-12	126	3	1-2	
112	. 14	13-11	112	3	1-15	
96	18	14-5	96	<u> </u>	o <i>U</i>	
80	5	4-7	80	ن	0 - 0	
SPOR	RTS	•	CULL	s	8-2014	



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this thesis, but it is essentially the same as the field notebook, except that the data from several years' records from each tree is kept on one sheet. This shows at a glance what any tree has done for a series of years.

data was secured by the writer during his residence on the Rancho Bespe, in Ventura County, California, in the years of 1915 and 1916. Block 24, from which these records were secured, is very irregular in shape as is shown in Fig. 4, it being planted between the road and a very steep hill. The soil is uniform throughout and is a medium heavy clay loam, dark in color, and very rich in organic matter. Nows 1 to 15, inclusive, were not included in this record data as the majority of the trees in these rows have been rebudded or replanted and hence can not compare in quantity of production with the trees in the larger portion of the grove. There were so very few rows in the grove containing more than 13 trees that they have been disregarded in presenting this data.

No pick was made in the month of October, 1915, because of the lack of sufficient fruit of the proper size and it was thought best on account of the cost involved to omit one month's pick. No pick was made in February, 1916, due to excessive rains. When California soil of this character becomes thoroughly saturated it is very soft and an empty wagon will sink into it to a depth of 10 or 12 inches; thus, even if the men were able to pick under such conditions, it would be impossible to remove the fruit from the grove.

The forms used for this data are duplicates of the permanent record forms used by the Rancho Sespe. They could be improved upon considerably but as they were among the first to be used by a commercial lemon-growing ranch they were considered all that was necessary at that time.

	1915		- 60	-		
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9	9	9	9	17	18	26	27	36	37	26	27	38
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197	336	354	369	299	384	364	361	424	378	300	323	275
17												
1	2	3	4	5	6	7	8	9	10	11	12	13
2	8	12	10	19	32	32	31 .	21	76	26	20	26
30	77	67	145	145	128	134	98	98	185	133	123	172
7	25	20	10	20	28	25	17	14	25	17	9	- 25
31	52	57	100	47	60	50	38	45	60	37	35	65
18	43	56	69	47	43	63	50	45	45	43	18	48
12	27	77	35	32	21	30	50	45	29	17	10	37
13	13	14	6	6	6	8	8	7	2	1	12	2
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1	4	4	8	22	12	26	55	12	27	17	15	19
134	268	326	410	369	365	405	342	330	489	330	261	423
18											0	La Carte
1	2	3	4	5	6	7	8	9	10	11	12	13
	10 49 10 40 30 30 27 10 1 8 3 197 17 1 2 2 30 7 31 18 12 13 3 5 5	10 21 10 21 10 21 10 19 49 113 10 19 40 62 30 53 27 32 10 13 1 1 8 9 9 3 4 197 336	1	1	1	1	1	1	1	1	1	1

ROW NO.	17												
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan. 1915	2	8	12	10	19	32	32	31	. 21	76	26	20	26
Feb.	30	77	67	145	145	128	134	98	98	185	133	123	172
March	7	25	20	10	20	28	25	17	14	25	17	9	- 28
April	31	52	57	100	47	60	50	38	45	60	37	35	65
May	18	43	56	69	47	43	63	50	45	45	43	18	48
June	12	27	77	35	32	21	30	50	45	29	17	10	37
July	13	13	14	6	6	6	8	8	7	2	1	12	2
Aug.	. 3	3	3	4	3	5	6	5	6	4	4	4	4
Sept.	5	5	5	5	10	9	9	9	6	6	6	6	6
Oct.												1000	1000
Nov.	11	11	11	18	18	21	22	31	31	30	29	19	19
Dec.	1	4	4	8	22	12	26	55	12	27	17	15	19
TOTAL	134	268	326	410	369	365	405	342	330	489	330	261	423
ow no.	18												
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
T	10	11	21	8	30	10	38	26	46	44	33	22	42
Jan. 1915										07.0		3.00	
	77	85	133	74	98	64	147	172	162	210	147	139	157
Feb.				74 23	98 25	64	147	23	30	15	49	10	157 25
Feb. March	77	85	133										
Jan. 1915 Feb. March April May	77	85 12	133 25	23	25	11	49	23	30	15	49	10	25
Feb. March April May	77 5 35 23	85 12 42 38	133 25 66 67	23 53 50	25 26 33	11 45	49 66	23 90	30 70	15 82	49 47	10 38	25 60
Feb. March April	77 5 35	85 12 42	133 25 66	23 53	25 26	11 45 40	49 66 61	23 90 61	30 70 54	15 82 68	49 47 39	10 38 38	25 60 40

12 34

Aug.

Sept.

Oct. Nov.

Dec.

TOTAL

					1	915	-	61 -				
				Blo	ock 24	Ran	cho Ses	spe.				
ROW NO.	19											
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12
Jan. 1915	4	11	31	12	31	46	46	24	26	20	36	36
Feb.	25	74	147	123	98	118	147	167	178	147	172	146
March	5	31	25	20	31	14	14	51	34	35	25	15
April	75	80	57	65	70	45	60	90	72	52	62	37
May	15	33	63	70	44	35	43	53	52	48	43	33
June	12	44	30	48	25	15	11	25	32	25	12	32
July	15	15	15	0	0	0	14	13	13	9	10	9
Aug.	2	2	3	3	2	4	4	4	4	4	7	7
Sept.	8	9	9	9	6	7	6	6	7	8	7	8
Oct.												
Nov.	16	16	16	19	19	19	18	21	22	22	21	17
Dec.	2	7	19	14	32	21	42	13	37	32	40	27
TOTAL	179	322	415	383	358	324	405	467	477	402	435	367

Tree No.	- 1	2	3	4	5	6	7	8	9	10	11	12	13
Jan. 1915	4	11	31	12	31	46	46	24	26	20	36	36	24
Feb.	25	74	147	123	98	118	147	167	178	147	172	146	147
March	5	31	25	20	31	14	14	51	34	35	25	15	13
April	75	80	57	65	70	45	60	90	72	52	62	37	43
May	15	33	63	70	44	35	43	53	52	48	43	33	40
June	12	44	30	48	25	15	11	25	32	25	12	32	22
July	15	15	15	0	0	0	14	13	13	9	10	9	0
Aug.	2	2	3	3	2	4	4	4	4	4	7	7	7
Sept.	8	9	9	9	6	7	6	6	7	8	7	8	5
Oct.													
Nov.	16	16	16	19	19	19	18	21	22	22	21	17	16
Dec.	2	7	19	14	32	21	42	13	37	32	40	27	32
TOTAL	179	322	415	383	358	324	405	467	477	402	435	367	349
ROW NO.	20												
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan.1915	4	21	21	16	39	46	31	41	21	16	34	31	33
Feb.	33	103	53	133	124	90	95	167	123	133	177	133	133
March	3	17	25	10	30	24	29	35	40	14	30	10	33
April		50	63	40	52	32	47	65	68	50	64	54	75
May	13 17	50	57	50	28	23	23	54	67	38	68	48	38
June '	17	25	59	42	12	15	33	32	37	52	27	32	27
July	11	11	11	11	12	11	11	5	10	5	10	15	5
Aug.	6	6	6	7	9	8	8	8	8	9	9	9	9
Sept.	5	6	5	5	7	8	7	7	7	8	7	9	10
Oct.				-	-		,				-		
Nov.	14	15	14	16	17	22	22	15	15	31	32	35	35
Doc	14	10	3.77	10	2.77	20	00	077	07	177	70	2.77	40

Feb.	33	103	53	133	124	90	95	167	123	133	177	133	133
March	3	17	25	10	30	24	29	35	40	14	30	10	33
April	13	50	63	40	52	32	47	65	68	50	64	54	75
May	17	50	57	50	28	23	23	54	67	38	68	48	38
June '	17	25	59	42	12	15	33	32	37	52	27	32	27
July	11	11	11	11	12	11	11	5	10	5	10	15	5
Aug.	6	6	6	7	9	8	8	8	8	9	9	9	9
Sept.	5	6	5	5	7	8	7	7	7	8	7	9	10
Oct.									-			1	
Nov.	14	15	14	16	17	22	22	15	15	31	32	35	35
Dec.	1	7	17	7	17	23	22	27	23	17	38	17	42
TOTAL	124	311	331	337	347	302	328	456	419	373	496	393	440
ROW NO.	21											lu	
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan. 1915	16	6	24	21	48	41	11	21	16	31	51	46	32
Feb.	95	64	74	113	147	118	73	162	118	142	187	172	157
March	10	24	33	11	19	28	10	18	20	30	19	21	27
April	40	100	54	55	40	60	20	65	37	80	75	64	80
May	23	27	50	38	38	36	32	59	22	65	68	59	57
June	8	27	42	29	25	17	33	35	17	32	33	18	29
July	6	66	6	9	9	- 5	4	4	4	19	10	19	14
Aug.	4	3	4	4	-4	3	7	8	7	8	5	5	5
Sept.	5	5	5	5	7	8	7	8	5	5	5	5	5
Oct.					-								1
Nov.	14	13	14	13	13	13	23	23	16	16	16	25	25
Dec.	2	5	12	2	13	12	3	14	17	15	17	22	14

TOTAL

1915 - 62 -

ROW NO.	22												1
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	1:
Jan. 1915	6	2	41	26	31	44	46	44	26	52	51	41	41
Feb.	73	43	126	188	77	115	147	98	74	153	147	123	172
March	26	14	25	21	39	25	13	27	15	24	47	21	30
April	55	100	48	55	53	25	35	55	40	42	73	50	60
May	80	63	43	77	61	21	33	35	42	63	33	47	30
June	25	7	33	32	42	37	32	7	8	25	32	25	45
July	6	6	6	7	7	7	4	3	3	9	8	8	11
Aug.	. 3	2	4	4	4	3	8	7	7	8	7	6	1
Sept.	7	8	7	8	8	9	8	8	9	9	9	9	12
Oct.										-	-	-	1.6
Nov.	13	14	14	15	14	15	18	17.	18	22	21	46	25
Dec.	7	2	22	14	17	22	24	22	17	22	28	29	22
TOTAL	301	261	369	447	353	323	368	313	259	429	456	405	457

ROW NO.	23										10. 04		
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan. 1915	26	26	26	33	36	43	42	26	13	46	48	36	42
Feb.	100	109	98	157	98	123	128	147	147	177	162	145	162
March	37	49	35	29	36	37	18	28	20	30	35	21	30
April	55	76	42	57	52	74	50	71	73	60	65	50	53
May	36	45	43	60	38	67	43	553	67	88	84	63	52
June	27	30	15	33	27	24	15	27	32	47	38	32	17
July	8	8	7	8	7	7	6	6	6	12	12	12	8
Aug.	3	3	3	3	2	3	4	5	5	4	4	9	9
Sept.	7	8	7	8	6	6	7	6	8	9	9	9	11
Oct.									1			12	
Nov.	6	7	26	26	18	18	22	22	19	19	20	28	28
Dec.	14	7	32	27	13	24	22	24	19	24	29	28	27
TOTAL	319	368	334	432	333	426	357	415	409	516	506	433	439

OW NO.	24												
Free No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan.	3,	3	2	16	4	43	56	21	13	21	48	27	36
Feb.	111.	26	78	113	37	128	190	138	147	156	168	172	167
March	1 20	15	20	41	32	32	37	30	15	13	21	38	21
April	1 7	7	55	50	39	100	85	50	47	70	57	64	100
May		- 8	52	52	42	22	43	26	43	83	60	85	7.5
June	1 31	11	31	27	17	20	15	17	27	55	37	32	47
July	1 4	9	9	6	6	6	4	4	4	12	12	12	12
Aug.		0	0	1	0	1	30	3	4	4	3	3	3
Sept.	1 7	5	5	5	4	8	6	7	5	5	5	5	10
Oct.	4												
Nov.	35	11	11	11	24	25	25	25	13	14	22	21	25
Dec.	3 2	2	3	9	12	27	27	7	12	13	27	24	27
TOTAL	Bet	95	266	331	217	412	491	330	330	446	460	483	523

				1	1915	Block		- 63 -					
OW NO.	25	,		-									
Pree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan.	121	8	22	11	16	26	8	31	39	36	51	32	36
Feb.	- 93	49	109	98	85	100	98	145	162	200	162	98	123
March	32	12	20	27	22	40	26	20.	35	23	15	16	29
April	36	26	48	50	50	55	35	50	74	100	85	35	55
May	155	40	48	50	51	52	28	38	45	75	52	47	37
June	24	45	17	18	34	37	30	12	27	35	28	22	12
July	17	9	9	12	12	14	6	6	6	7	7	8	6
Aug.		5	5	5	5	6	4	4	4	4	4	6	7
Sept.		11	11	11	12	5	5	5	5	5	15	15	15
Oct.											200		
Nov.	1	14	14	16	17	14	13	17	18	17	18	26	27
Dec.		7	19	27	22	47	- 9	42	27	25	22	28	29
TOTAL	81.6	226	322	325	326	396	262	370	442	527	459	333	376
					_	,		,					
ROW NO.	26												
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	13

ROW NO.	26											1		
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	13	i
Jan.	26	43	31	41	47	52	29	31	0	55	38	51	41	ē
Feb.	98	129	147	140	147	123	133	167	0	167	172	182	172	
March	23	64	34	27	31	27	16	17	0	29	43	29	20	B
April	36	65	71	60	100	68	50	62	0	81	80	62	60	B
May	44	43	39	55	82	45	43	49	0	58	80	61	58	ā
June	27	37	27	21	38	44	12	14	0	24	38	27	40	ā
July	7	10	7	10	7	10	7	10	0	7	7	7	7	ā
Aug.	4	4	5	5	5	6	5	6	0	6	7	8	7	ā
Sept.	7	8	7	8	6	6	6	7	0	10	10	10	7	ā
Oct.									100	500		Mile St.		ā
Nov.	23	23	24	24	25	26	27	20	0	22	23	22	21	
Dec.	12	12	33	27	22	26	19	27	0	27	27	22	22	
TOTAL	307	438	425	418	510	433	347	410	0	486	525	481	455	

ROW NO.	27					-							
Tree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan.	26	20	16	40	38	26	26	41	28	36	56	31	41
Feb.	119	129	150	128	209	187	114	204	49	84	177	147	128
March	25	51	27	15	35	20	20	35	20	29	35	49	15
April	39	60	100	60	64	68	45	85	55	97	87	65	35
May	43	43	49	58	50	63	55	72	52	72	60	50	52
June	38	21	32	28	27	53	32	43	47	42	19	25	36
July	7	15	15	13	14	144	9	9	9	12	13	13	0
Aug.	4	5	4	4	5	8	6	6	6	6	9	7	7
Sept.	7	8	7	8	10	10	10	10	7	8	7	. 8	10
Oct.	1	March 1	1										
Nov.	16	17	18.	18	30	29	24	24	21	22	48	48	40
Dec.	21	22	23	7	26	27	17	26	22	26	47	27	36
TOTAL	345	391	441	379	508	505	358	535	316	434	558	470	390

12 22

ROW NO.

Tree No.

Aug.

Sept. Oct. Nov.

Dec.

TOTAL

27

Jan. 30 Feb. 98 98 March 32 April 35 May 53 June 24 July 17 Aug. 5 Sept. 4 Oct. Nov. 20 Dec. 9	18 134 39 55 43 37 17 6	41 95 20 62 60 50 17 5	48 174 20 65 50 38 11 6	26 135 15 32 48 27 10	36 147 53 65 72 33	41 168 21 73	40 162 15	42 162 41	24 150	18 116	26 163	43 153
March 32 April 35 May 53 June 24 July 17 Aug. 5 Sept. 4 Oct. Nov. 20	39 55 43 37 17 6	20 62 60 50 17 5	20 65 50 38 11 6	15 32 48 27	53 65 72	73	15				163	
March 32 April 35 May 53 June 24 July 17 Aug. 5 Sept. 4 Oct. 0 Nov. 20	55 43 37 17 6	62 60 50 17 5	20 65 50 38 11 6	15 32 48 27	53 65 72	73		4.1				
April 35 May 53 June 24 July 17 Aug. 5 Sept. 4 Oct. Nov. 20	43 37 17 6 6	62 60 50 17 5	65 50 38 11 6	32 48 27	65 72	73			28	33	19	49
May 53 June 24 July 17 Aug. 5 Sept. 4 Oct. 20	37 17 6 6	50 17 5	50 38 11 6	48 27	72		60	95	78	70	48n	77
July 17 Aug. 5 Sept. 4 Oct. Nov. 20	17 6 6	17 5	11			73	60	67	63	57	65	66
Aug. 5 Sept. 4 Oct. Nov. 20	17 6 6	5	11			37	33	32	52	38	28	33
Sept. 4 Oct. Nov. 20	6				11	10	10	10	12	12	13	6
Oct. Nov. 20		4		6	5	5	5	6	6	8	8	8
Nov. 20			4	3	4	4	4	7	6	6	6	9
0.0												
Dec	33	20	27	24	24	24	24	19	19	33	33	35
Dec. 8	15	24	19	18	27	30	27	30	15	16	27	44
TOTAL 326	393	398	462	344	477	486	440	511	453	409	446	523
ROW NO.			_	T	_	T	T					
29	-			-								
Tree No. 1	2	3	4	5	6	7	8	9	10	11	12	13
Jan. 14	51	28	34	36	46	51	48	28	51	41	36	46
Feb. 49	119	90	67	138	168	143	150	100	164	204	116	147
March 10	50	85	17	49	31	50	49	26	41	21	20	33
April 20	65	90	30	65	60	58	65	60	55	65	35	50
May 31	40	37	30	38	57	38	45	44	73	50	48	67
June 30	20	42	25	21	32	17	22	37	32	28	22	33
July 7	8	7	6	8	8	5	6	5	9	9	9	8
Aug. 5	7	5	5	3	3	3	3	3	3	9	9	9
Sept. 7	9	7	7	7	8	7	8	10	10	10	10	13
Oct.							8.0		-	35	C. Et	
Nov. 22	30	13	13	19	19	24	24	27	28	23	23	29
Dec. 17	22	17	12	27	27	37	39	27	32	16	12	21
TOTAL 211	421	419	246	411	459	433	459	367	498	476	340	456

22

38 51 58 70 36

129 196 147

114 119

1915 Block 24 Rancho Sespe.

W NO.

ree No.

Peb.

31

1

19

150

2 3 4 5 6 7 8 9 10 11 12 13

38 36 38 16 16 44 38

121 134

147 99 73 147 155

001	150	121	134	147	99	(3	141	TOD	77.4	110	765	150	7.71
March	50	16	21	27	21	15	21	15	11	11	27	26	20
April	60	55	60	60	100	55	33	50	62	48	37	55	50
May	47	77	68	68	81	40	48	45	38	33	35	32	33
fune	25	32	17	25	31	32	23	22	31	16	30	41	52
uly	12	11	11	12	10	10	2	3	2	6	7	7	8
Aug.	4	3	3	3	3	3	0	0	0	0	6	7	6
Sept.	5	5	5	5	5	5	5	5	6	6	6	7	5
et.	-	-	-	-	-	-	-				-Aviing	CIME AND	11.205
vov.	19	19	8	9	8	8	24	24	22	21	21	22	20
Dec.	20	19	20	15	26	47	29	28	43	27	27	39	30
OTAL	4111	396	383	409	400	304	376	385	367	338	383	502	407
OTAL													
W NO.	32												
ree No.	1	2	2	4.	5	6	7.	8	9	10	11	12	13
fan.	6	24	12	21	21	18	36	6	52	31	41	37	37
Feb.	50	90	85	147	158	124	147	16	147	147	196	98	124
March	15	25	28	24	35	18	27	3	13	9	19	23	32
April	35	48	50	75	79	36	42	4	50	55	75	48	78
Мау						50	58	60	31	4	28	38	38
Tune	45	43	58	43	73								45
	38	12	30	54	16	20	19	3	25	42	27	30	6
fuly	16	17	17	11	11	10	4		3		6	5	6
Aug.	2	3	3	3	3	3	5	3	5	5			-
Sept.	7	- 8	7	8	5	4	4	4	5	5	5	5	6
XX Nov.	11	12	11	12	19	19	22	21	29	30	35	25	28
Nov.	0-20		10	9		- 11	111	24	94	24	12.10	24	- 1100
Dec.	3	3	7	22	32	22	39	12	12	22	22	17	17
TOTAL	228	287	308	421	452	324	403	132	372	357	462	333	417
)W NO.													
	33					-				10			
ree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
	11	11	26	16	26	18	36	12	22	46	38	46	56
	40				129	81	147	96	90	139	168	173	163
Feb.	49	90	30	85								30	20
Feb. March	10	43	37	37	24	11	12	15	15	17	38		
Feb. March April	10 33	43 75	37 50	37 40	24 64	11	25	40	35	45	80	80	67
Feb. March April May	10 33 45	43 75 45	37 50 38	37 40 43	24 64 33	11 10 18	25 23	40 38	35 28	45 30	80 70	80 76	67 38
Feb. March April May June	10 33 45 9	43 75 45 27	37 50 38 14	37 40 43 22	24 64 33 37	11	25 23 12	40	35 28 17	45 30 15	80 70 29	80	67 38 32
Feb. March April May June	10 33 45 9 5	43 75 45	37 50 38 14 6	37 40 43	24 64 33	11 10 18	25 23	40 38	35 28	45 30	80 70	80 76	67 38
Feb. March April May June July Aug.	10 33 45 9 5	43 75 45 27 6 2	37 50 38 14 6	37 40 43 22 5	24 64 33 37 7	11 10 18 8	25 23 12	40 38 36	35 28 17	45 30 15	80 70 29	80 76 33	67 38 32
Jan. Feb. March April May June July Aug. Sept.	10 33 45 9 5	43 75 45 27 6	37 50 38 14 6	37 40 43 22 5	24 64 33 37 7	11 10 18 8 5	25 23 12 7	38 36 5	35 28 17 5	45 30 15 5	80 70 29 6	80 76 33 6	67 38 32 5
Feb. March April May June July Aug.	10 33 45 9 5	43 75 45 27 6 2	37 50 38 14 6	37 40 43 22 5	24 64 33 37 7	11 10 18 8 5	25 23 12 7 3	40 38 36 5 3	35 28 17 5 3	45 30 15 5	80 70 29 6 3	80 76 33 6 3	67 38 32 5 3
Feb. March April May June July Aug. Sept.	10 33 45 9 5 2	43 75 45 27 6 2	37 50 38 14 6 2	37 40 43 22 5 2	24 64 33 37 7 2 3	11 10 18 8 5 2	25 23 12 7 3	40 38 36 5 3	35 28 17 5 3	45 30 15 5 3 6	80 70 29 6 3 6	80 76 33 6 3 7	67 38 32 5 3 6
Feb. March April May June July Aug. Sept. Oct.	10 33 45 9 5	43 75 45 27 6 2	37 50 38 14 6	37 40 43 22 5	24 64 33 37 7	11 10 18 8 5	25 23 12 7 3	40 38 36 5 3	35 28 17 5 3	45 30 15 5	80 70 29 6 3	80 76 33 6 3	67 38 32 5 3

OW NO.

ree No.

Jan.

Feb.

March

April

May

147

22

1915 Block 24 Rancho Sespe

June													
	30	25	26	17	18	27	7	55	17	57	32	34	32
uly	10	10	6	7	6	7	3	7	8	7	7	9	9
ug.	4	4	4	2	2	2	0	2	2	3	4	4	4
ept.	3	4.	4	4	5	5	5	5	5	5	5	5	4
ct.									0.0120	AUL B	No.		0.4.00
vov.	12	13	13	15	15	17	16	17	21	22	28	28	28
Dec.	5	7	12	14	12	12	3	12	7	20	32	32	32
TOTAL	164	332	347	306	249	273	90	399	245	333	492	449	410
ow no.	35												
ree No.	3	4	5	6	7	8	9	10	11	12	13	14	15
an.	6	5	16	8	2	5	31	33	30	36	32	53	55
eb.	0	62	70	49	0	18	26	104	120	191	196	147	158
March	18	12	35	30	5	4	15	15	15	20	21	25	28
April	21	15	50	30	20	5	45	48	74	62	54	50	74
May	36	28	25	36	20	4	30	40	40	57	55	43	70
Tune	36	17	26	22	8	3	13	25	42	19	60	28	22
uly	2	9	9	9	0	0	2	3	2	2	8	9	ç
lug.	1	1	2	2	3	01	2	2	2	2	81	2	2
lept.	4	5	4	5	2	3	2	3	5	5	5	6	5
	-	-	-		Fut.	-	ы		•	-	-	0	
Jet.													
	10	0	10	9	11	11	11	24	-	94	24	24	24
Nov.	10	9	10	9 2	11 2	11	11	24	24	24	24	24	24
Oct. Nov. Dec.							11 18 195		-	24 2& 442	24 22 478	24 22 409	33
Nov. Dec.	10	3	3	2	2	1	18	3	24	22	22	22	33
Nov. Dec. POTAL W NO.	10 144	3 166	3 250	202	67	55	18	300	24 4 358	242	478	22 409	480
VOTAL W NO.	10 144 36 5	3 166	3 250	2 202	67	1 55	18 195	300	358	242	22 478	22 409	480
W NO.	10 144 36 5 11	3 166	3 250 7 15	2 202 6	2 67 9 14	1 55	18 195 11 36	3 300 12 16	358 358 13 47	2& 442 442 14 39	22 478 15 51	22 409	33 480 17 11
W NO.	36 5 11 36	3 166 6 28 85	7 15 60	2 202 8 0 9	9 14 90	10 18 52	18 195 11 36 134	3 300 12 16 98	13 47 124	24 442 14 39 164	22 478 15 51 163	22 409 16 56 145	17 11 16
W NO.	36 5 11 36 19	3 166 6 28 85 41	7 15 60 25	2 202 6 0 9 2	2 67 9 14 90 30	10 10 18 52 49	18 195 11 36 134 21	3 300 12 16 98 18	13 47 124 20	28 442 14 39 164 26	22 478 15 51 163 34	22 409 16 56 145 15	17 11 16 9
W NO. ee No. an. eb. farch pril	36 5 11 36 19 25	6 28 85 41 50	7 15 60 25 44	2 202 8 0 9	9 14 90 30 40	10 18 52 49 50	18 195 11 36 134 21 55	3 300 12 16 98 18 66	13 47 124 20 58	24 442 14 39 164 26 67	22 478 15 51 163 34 90	22 409 16 56 145 15 64	17 11 16 9 3
W NO. cee No. an. cee No. darch typril day	36 5 11 36 19 25 23	5 28 85 41 50	7 15 60 25 44 65	2 202 8 0 9 2 0	9 14 90 30 40 30	10 18 52 49 50 67	18 195 11 36 134 21 55 43	3 300 12 16 98 18 66 50	24 4 358 13 47 124 20 58 30	24 442 14 39 164 26 67 80	22 478 15 51 163 34 90 75	22 409 16 56 145 15 64 30	17 11 16 9 3
W NO. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The No. The N	36 5 11 36 19 25 23	6 28 85 41 50 46 30	7 15 60 25 44 65	2 202 8 0 9 2 0 0	9 14 90 30 40 30 37	1 55 10 18 52 49 50 67 32	11 36 134 21 55 43 37	12 16 98 18 66 50 27	13 47 124 20 58 30 37	24 442 14 39 164 26 67 60 42	22 478 15 51 163 34 90 75 32	22 409 16 56 145 15 64 30 17	17 11 16 9 3 1
W NO. See No. an. Seb. Sarch pril day une	36 5 11 36 19 25 23 22 6	5 28 85 41 50 46 30 6	7 15 60 25 44 65 14 3	2 202 8 0 9 2 0 0 1	9 14 90 30 40 30 37 4	1 55 10 18 52 49 50 67 32 7	11 36 134 21 55 43 37 8	12 16 98 18 66 50 27 7	13 47 124 20 58 30 37 9	24 442 14 39 164 26 67 80 42 9	15 51 163 34 90 75 32 9	22 409 16 56 145 15 64 30 17 5	17 11 16 9 3 1 0
W NO. ee No. an. eb. farch pril fay une uly uug.	36 5 11 36 19 25 23 22 6	3 166 28 85 41 50 46 30 6 2	7 15 60 25 44 65 14 3 2	2 202 8 0 9 2 0 0 1 0 2	9 14 90 30 40 37 4 2	10 18 52 49 50 67 32 7	11 36 134 21 55 43 37 8 2	12 16 98 18 66 50 27 7	24 4 358 13 47 124 20 58 30 37 9	24 442 14 39 164 26 67 80 42 9 3	15 51 163 34 90 75 32 9	22 409 16 56 145 15 64 30 17 5 2	17 11 16 9 3 1 0
W NO. See No. an. eb. darch ppfil day une ung. eept.	36 5 11 36 19 25 23 22 6	5 28 85 41 50 46 30 6	7 15 60 25 44 65 14 3	2 202 8 0 9 2 0 0 1	9 14 90 30 40 30 37 4	1 55 10 18 52 49 50 67 32 7	11 36 134 21 55 43 37 8	12 16 98 18 66 50 27 7	13 47 124 20 58 30 37 9	24 442 14 39 164 26 67 80 42 9	15 51 163 34 90 75 32 9	22 409 16 56 145 15 64 30 17 5	17 11 16 9 3 1 0
W NO. See No. an. leb. farch pril fay une uly ung. kept.	36 5 11 36 19 25 23 22 6	3 166 28 85 41 50 6 2	7 15 60 25 44 3 2 18	2 202 6 0 9 2 0 0 1 0 2	9 14 90 30 40 30 37 4 2 3	10 18 52 49 50 67 32 7	11 36 134 21 55 43 37 8 2	12 16 98 18 66 50 27 7 3 4	24 4 358 13 47 124 20 58 30 37 9	24 442 14 39 164 26 67 80 42 9 3 4	15 51 163 34 90 75 32 9	22 409 16 56 145 15 64 30 17 5 2 4	17 11 16 9 3 1 0 0 0
Nov. Dec. POTAL W NO. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No. Free No	36 5 11 36 19 25 23 22 6 2 18	5 28 85 41 50 46 30 6 2	7 15 60 25 44 65 14 3 2 18	2 202 6 0 9 2 0 0 0 2 0	9 14 90 30 40 37 4 2 3	10 18 52 49 50 67 32 7 2 4	11 36 134 21 55 43 37 8 2 4	12 16 98 18 66 50 27 7 3 4	24 4 358 13 47 124 20 58 30 37 9 3 5	24 442 14 39 164 26 67 60 42 9 3 4	22 478 15 51 163 34 90 75 32 9 3 4	22 409 16 56 145 15 64 30 17 5 2 4	333 4800 177 11 16 9 3 1 0 0 0 0 1
Nov. Dec. NOTAL WW NO. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No. Dec No.	36 5 11 36 19 25 23 22 6	3 166 28 85 41 50 6 2	7 15 60 25 44 3 2 18	2 202 6 0 9 2 0 0 1 0 2	9 14 90 30 40 30 37 4 2 3	10 18 52 49 50 67 32 7	11 36 134 21 55 43 37 8 2	12 16 98 18 66 50 27 7 3 4	24 4 358 13 47 124 20 58 30 37 9	24 442 14 39 164 26 67 80 42 9 3 4	15 51 163 34 90 75 32 9	22 409 16 56 145 15 64 30 17 5 2 4	17 11 16 9 3 1 0 0 0

-			-	1210	DIOC.	N N'E	Manon	o pash	0				
ow no.	37												
free No.	6	7	8	9	10	11	12	13	14	15	16	17	18
Jan.	8	26	11	11	22	28	31	37	36	38	36	29	
Feb.	49	90	0	70	86	112	145	124	210	147	147	168	
March	13	35	0	35	31	17	15	25	22	10	27	25	
April	37	50	0	48	37	51	54	60	90	65	55	95	
May	43	45	0	55	24	30	47	45	40	70	45	47	
June	15	27	0	30	12	26	25	32	32	38	42	35	
July	5	6	0	6	9	9	9	8	8	9	0	0	
Aug.	1	1	1	1	1	1	1	3	3	2	2	2	- 1
Sept.	3	4	0	3	3	3	3	3	3	5	5	5	
Oct.	-	1/2	-	- 0	0		0	-	- 0	-	-	-	
Nov.	14	14	0	14	11	11	11	10	30	30	28	28	100
Dec.	2	2	0	12	6	7	15	12	14	22	21	17	
2001	- 4	- 6	0	16	0		10	12	14	66	61	11	_
TOTAL	190	300	12	285	242	295	356	359	488	436	408	451	
OW NO.	38												
ree No.	8	9	10	11	12	13	14	15	16	17	18		
Jan.	5	16	14	11	26	0	34	30	32	36	16		
Feb.	36	70	70	48	133	0	102	156	100	147	98		
March	11	20	25	15	25	0	17	20	15	16	19	BED BA	D1 - 15 5 1 1
April	25	45	50	25	65	0	74	90	60	74	50		
May	22	75	12	60	35	0	67	82	40	45	60		
June	17	28	42	21	41	0	50	44	47	27	28		
July	4	5	6	5	6	0	4	3	7	8	7	7	
Aug.	3	3	3	3	2	0	3	3	2	2	2		
Sept.	5	6	6	5	5	0	5	5	5	5	5		
Oct.	-	0	0	-	- 0	-	- 0		-		-		
Nov.	6	7	10	9	9	0	24	24	17	17	16	000	
Dec.	0	7	2	4	7	0	16	40	24	40	27	100	
	134	282	240	206	354	0	396	497	349	417	328		
TOTAL						-	100						
)W NO.	39												
ree No.	9	10	11	12	13	14	15	16	17	18			
Jan.	3	26	21	11	16	11	28	24	36	34			
Feb.	36	70	96	31	85	92	114	104	157	159			
March	15	49	49	23	40	20	10	21	21	27		120	
April	23	45	50	16	47	74	59	37	64	95			
May	37	50	60	30	35	42	45	37	45	40			
June	52	27	44	16	47	42	32	24	32	27			
July	7	6	7	9	9	9	5	6	5	6	-		_
	4	4	4	4	4	5	5	4	4	4			
				5	7	6	6	6	20	20	-		
Aug.		E			40	0	0	0	EU.	60			
Aug. Sept.	5	5	5	-									
Aug. Sept. Oct.	5				1.0	177	10	. 077	71	70			
Aug. Sept. Oct. Nov.	5	12	9	9	16	17	19	27	31	32			
Aug. Sept. Oct.	5				16 17	17 20	19 22	27	31 30	32 43 487			

- 68 -

				1915	Blo	ck 24	Ran	cho Se	spe				
ROW NO.	40								12.7				
Tree No.	10	11	12	13	14	15	16	17	18	19			396.00
Jan.	23	16	23	31	22	21	38	41	41	26	1	N Di GAR	
Feb.	60	70	65	100	98	117	162	100	146	49	E SANTE		6.000
March	15	29	29	30	17	21	29	33	30	23	10.5%	1 100 100	2000
April	33	30	30	50	35	44	95	65	80	42		100	133
May	35	39	30	40	58	45	62	45	55	47		100	
June	16	37	17	32	52	32	57	18	42	24	122		
July ·	5	4	4	4	6	7	6	6	6	6		138	1
Aug.	3	3	3	44	. 4	4	4	4	4	4			
Sept.	3	4	4	4	7	8	8	7	1	0			
Oct.				-	1		-	1	-			100	100000
Nov.	16	16	16	14	15	14	0	0	34	33		1000	
Dec.	3	10	20	17	18	16	26	20	28	32	Maria C	10000	
												1000	
TOTAL	212	258	241	326	332	329	487	339	467	286	1000		
			_										
OW NO.	41								1	La Co			The said
Free No.	11	12	13	14	15	16	17	18	19		1		
Jan.	13	11	12	13	16	26	20	28	40			10000	
Feb.	50	65	75	50	75	103	80	93	129	1		1045	
March	17	24	30	26	25	70	25	28	64	570.7			
April	14	45	65	31	45	77	46	60	75	1			
May	31	56	68	100	75	60	41	59	62	-	-	100000	
June	23	38	54			-		-					100000
July				37	59	22	18	59	22	-	1		
Aug.	5	5	5	7	6	7	6	6	6	-			
Sept.	4			5	5	6	5	6	5		-		7 7 7 7 7 7
Ook Nov.	18	18	17	16	17	5	5	5	5				100000
NoteX	10	10	11	10	17	24	24	31	32	-		100	
Dec.	4	2	9	4	12	23	24	43	42			1933	
TOTAL	185	274	345	293	339	423	294	418	482				
	1-								10				
OW NO.	42												
ree No.		13	14	15	16	17	18	19	20				- 0.00
ſan.		. 8	20	19	11	26	21	26	20			1000	
Feb.	0	50	75	75	60	70	65	100	65			13	
March	Sec.	24	28	23	25	35	25	38	30	100			
April	1000	30	58	47	35	48	60	35	34	100			
May		35	62	46	35	56	55	63	24			2.00	
fune		18	17	27								10.3	-
uly		3	3	3	16	25 3	52	34	13				
Aug.		2	2	2	2		2	2	2	-			
Sept.	100	4				2				1000	Carrier St.	1000	
Oct.		4	4	3	4	3	4	4	4	ht letto			
Nov.	100	11	10	2.4	2.4	0.7	00	2.0	3.00		-		
Dec.			12	14	14	21	22	16	17				
		5	4	13	7	24	22	37	12	-			33
TOTAL	2007	190	285	272	212	313	331	358	224	1335	1000	1	1000

W NO.	43										
ree No.		15	16	17	18	19	20			700	
an.		11	9	11	16	11	30				
eb.		49	80	65	70	70	100			100	
Iarch		11	24	21	30	30	49				
April		19	48	40	39	29	10				
Iay		31	50	40	45	55	35				
une		47	32	19	33	25	22				
uly		6	6	5	6	5	6				
ug.		2	2	2	2	2	2				
ept.		7	7	7	7	8	6			1.3	
ct.											
ov.		19	19	21	22	19	19			1	
ec.		4	17	12	17	19	24				
OTAL		206	294	243	287	274	303			551.	

W NO.	44									134	
ree No.		16	17	18	19	20	21			1000	
an.		3	6	9	6	21	36			Barrier .	
eb.		21	31	41	49	50	80			Link!	Tales 1
Iarch		7	16	29	25	27	39				
April		11	29	34	20	15	39			E 25	
Iay		20	40	28	25	58	40			0.0	
une		11	58	32	27	28	18		0	35. 2	
uly		6	9	8	9	9	9		1		
ing.		2	2	2:	2	2	2				
ept.		5	5	5	5	5	5			122	
et.										1	
lov.		18	18	13	13	13	14				
ec.		0	7	7	4	18	35				
OTAL		104	213	208	185	246	317				

W NO.	45									
ee No.		17	18	19	20	21			0.78	
an.		2	11	0	28	31			-12-11	1521
eb.		11	45	16	49	98			Laville .	1
Iarch	4	5	12	5	29	45			 11116	103
pril		10	30	0	40	70			1.85	1116
Iay		17	30	3	40	41			old.	
une		20	29	0	40	42			Kale .	
uly		5	5	0	6	6				
lug.		3	3	0	3	3				
lept.		7	7	3	7	6			100	
et.									100	
vov.		13	13	6	22	22				
Dec.		2	4	0	22	44				
TOTAL		95	192	33	280	388			13	

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)W NO.	46									
ree No.	18	19	20	21	22		Line	-22		
Jan.	3	16	26	36	48			233	12	
Feb.	35	58	98	85	196			11		
March	10	18	23	40	48					
April	10	28	34	48	50		2.0			
May	20	40	35	45	52					
une	17	18	27	19.	18					
uly	2	2	2	3	3					
Aug.	1	1	2	2	2			L		
Sept.	2	2	2	2	2					
et.		1								
vov.	17	18	18	16	17					
ec.	4	9	26	23	37					
OTAL	121	210	293	319	463					

W NO.	47										14.5
ree No.		21	22	23			-	333	200		
an.		31	12	28				100	\$Z.		
řeb.		70	49	85				115	220		
Tarch		35	20	24				3.4	130		
April		50	15	50				.53	.60		
Iay		40	55	40			-	To A	145		
une		12	37	33				7	122	Mar IV	
uly		5	6	6				1	7	100	
lug.		3	3	3			3.	3	- 12		
ept.	2	4	4	4						1500	
et.									-		
lov.		17	18	17		-			315		2133
ec.		27	13	24			100	1	38	2.3	
OTAL	182	294	232	314			-	69-6	125.		

W NO.	48									1000	
ee No.		21	22	23	24			53	125-	51	
an.		2	8	6	30			73	W 4 2 -	36	100
eb.	10.5	7	40	80	98			100	5.5	28	16.40
[arch	10.5	5	16	30	25				1.32	12	
pril	Jan 5	7	15	35	62			-54	100	(- A	
lay	2.0	20	35	48	55			1	ale	- db -	
une	6	12	37	47	17			1	1.26	6.58	3
nly	4 - 4	4	6	6	6					1	Sie
ug.		3	4	5	5				. 1		la an
ept.	2. 2.	5	5	5	5				4		
ct.			1								
ov.	10.19	8	8	9	9				Top :	25	
ec.	Die a	2	7	10	27				-	12	
OTAL	88	75	181	281	339					500	- 1

ROW NO.

49

65 255

297 298 299 375 369

COTAL

													Acres de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la co
Tree No.	23	24	25	26	27	28	29	30	31	32	141	-	
Jan.	5	21	25	31	60	58	73	51	72	56	514	5	211
Feb.	26	49	49	69	124	125	119	98	100	99	79	10.0	452
March	17	25	41	49	27	49	50	35	48	72	84	4.3	1.4
April	18	40	58	47	50	48	37	20	50	41	104	0	3.0-1
May	35	43	35	40	35	32	34	18	25	40	7.0	4.	1.2.3
June	37	18	0	12	20	5	17	7	10	17	1	2712	363
July	12	12	13	3	4	4	6	5	3	3	-		11.0
Aug.	6	6	6	6	6	4	4	4	5	5			. 31
Sept.	- 5	6	11	11	12	11	0	0	0	0			35
Oct.													
Nov.	9	9	21	22	40	39	46	47	34	34	11	1	8.000
Dec.	2	8	18	21	41	34	47	35	42	34	1	2.	483
	-				-	-	- 41	- 00					
TOTAL	172	237	277	311	419	409	433	320	389	401	on10	177	126
OW NO.	50												
ree No.	24	25	26	27	28	29	30	31	32	33	34		1000
Jan.	3	9	26	26	34	31	48	73	74	53	51	2.4	15.13.5
Feb.	26	60	60	95	90	85	124	100	110	85	129	ALM ST	10000
March	9	20	27	47	23	30	38	49	49	49	50	(Oz)	100
April	8	70	32	60	59	25	40	40	55	37	60	I Tan	1.134.00
May	30	82	34	45	59	30	32	30	50	26	55	10.00	
June	22	88	17	13	18	14	13	10	14	7	27	190	
July	8	8	9	8	9	8	8	8	7	7	7	1000	
Aug.	4	4	4	4	4	6	3	4	4	3	3	77	- Contract
Sept.	5	5	5	15	15	15	15	0	0	0	0	177	
Oct.	-	0		10	10	10	10		-	-	-		
Nov.	15	15	16	23	23	31	30	53	50	44	23	10000	100
Dec.	2	27	24	27	37	32	30	54	47	35	32	- 0.5	7 7 7 7 7
										/		1	
TOTAL	132	388	254	363	373	307	381	421	460	346	437	1,485	Spall
W NO.	51												
ree No.	25	26	27	28	29	30	31	32	33	34	35	36	Marie
an.	3	13	11	30	36	34	57	27	40	43	43	16	1250
eb.	4	65	49	80	98	98	119	129	96	93	100	26	1
farch	9	25	49	35	25	35	41	50	30	20	55	12	1300
pril	5	20	40	10	40	47	35	40	20	30	20	8	6.045
Iay	10	65	50	70	26	55	32	18	33	55	45	10	10
une	6	28	52	27	10	37	17	9	22	21	14	3	-
uly	6	7	7	7	5	5.	5	3	3	3	5	5	4
ug.	7	8	8	8	8	8	6	6	6	6	5	5	10000
ept.	2	3	3	3	3	3	2	2	4	4	4	3	10
et.												1.7	
Nov.	9	11	11	11	24	24	33	32	21	22	24	24	1.88
ec.	4	10	17	17	24	29	22	44	30	22	38	12	1.28

				191	.5	Block 2	24 R	ancho S	espe				
OW NO.	52												
ree No.	27	28	29	30	31	32	33	34	35	36	37	38	39
Jan.	4	6	16	18	37	62	33	50	34	87	52	36	25
Feb.	26	11	36	36	90	114	50	122	98	98	79	70	49
March	5	9	37	35	49	55	30	53	49	80	64	25	25
April	10	15	27	23	38	44	27	69	48	60	50	30	18
May	17	35	30	34	35	38	40	65	27	50	42	17	15
June	8	27	20	14	24	27	24	32	37	26	24	10	2
July	8	8	8	8	4	4	3	4	4	4	4	6	5
Aug.	4	15	4	15	7	8	7.	7	8	3	3	3	3
Sept.	3	2	3	2	3	2	3	2	3	2	3	2	. 7
Oct.										160	0.		
Nov.	12	11	18	18	24	25	28	28	26	27	47	48	29
Don	7	7.4	0.0	10	70	20	07	20	17	17	20	24	777

TOTAL

221 215 343 408 272 464 401 484 400 271 195

OW NO.	53										Barre		1.52
ree No.	28	29	30	31	32	33	34	35	36	37	38	39	40
Jan.	4	5	13	33	36	36	52	46	28	38	54	26	11
Feb.	16	26	49	90	98	90	123	80	59	98	80	53	36
March	- 8	20	10	45	30	35	35	20	49	30	35	20	10
April	17	22	35	50	25	27	67	35	18	50	47	30	35
May	30	27	25	35	40	60	60	60	40	37	15	28	26
June	16	12	37	28	17	46	37	17	16	15	11	6	9
July	7	7	8	6	6	6	6	6	5	4	5	4	5
Aug.	7	8	7	5	6	6	5	5	7	7	8	7	7
Sept.	1	1	2	2	2	2	2	2	6	7	7	9.	9
Oct.												MAL NO	
Nov.	20	21	11	12	11	12	30	28	40	41	51	50	17
Dec.	7	26	12	12	19	43	19	32	30	34	20	32	17
TOTAL	133	175	209	318	290	363	436	331	298	361	333	265	182

)W NO.	54												h. 1
ree No.	29	30	31	32	33	34	35	36	37	38	39	40	41
fan.	5	5	5	12	6	16	34	38	40	50	52	41	16
Feb.	36	31	31	49	49	80	85	80	80	80	93	75	37
March	20	10	13	20	25	20	35	32	23	33	38	49	28
April	22	5	25	49	48	40	40	32	35	48	23	33	24
Мау	31	15	24	29	42	42	48	52	37	32	455	25	15
June	27	14	32	22	47	40	32	16	36	12	29	7	5
fuly	7	7	7	7	7	7	7	6	6	6	6	6	4
Aug.	7	7	7	7	7	7	7	77	7	6	5	7	7
Sept.	2	3	2	3	3	3	4	2	3	3	2	2	15
Oct.											P 19		
Nov.	10	9	9	11	12	27	26	34	34	27	26	28	28
Dec.	3	1	5	12	25	37	42	31	37	20	22	32	28
TOTAL	170	107	160	221	271	319	360	330	338	317	301	305	207

- 73 -1915 Block 24 - Rancho Sespe

W NO.	55							-			1238		
ee No.	_31	32	33	34	35	36	37	38	39	40	41	42	43
an.	1	1	6	14	22	31	31	40	55	65	77	24	28
eb.	6	36	41	98	86	95	49	90	98	124	98	26	49
Iarch	7	15	20	49	35	35	30	35	51	49	38	31	20
pril	. 9	30	18	85	50	45	35	50	54	85	45	29	19
Iay	15	45	20	67	42	37	50	45	46	31	55	10	10
une	12	38	14	42	45	17	39	32	17	19	19	5	7
uly	11	11	11	12	4	.5	4	5	4	5	4	4	4
ug.	10	12	10	12	10	9	10	9	9	3	4	3	4
ept.	3	4	4	4	3	4	4	4	12	11	11	11	5
ct.												12000	
ov.	17	18	18	19	19	25	25	22	22	29	29	25	26
ec.	0	7	7	12	27	39	27	53	37	48	42	32	28
OTAL	91	217	169	414	343	342	304	385	405	469	422	200	200

w No.	56												
ee No.	32	33	34	35	36	37	38	39	40	41	42	43	44
an.	2	. 7	6	30	46	50	41	50	28	48	51	46	33
eb.	4	11	32	53	92	98	85	149	145	147	112	50	20
farch	1	7	20	25	49	64	35	34	49	50	49	30	5
pril	-1	9	39	39	50	74	79	50	85	65	52	27	4
Iay	0	15	47	33	49	50	45	45	50	70	45	35	7
une	4	12	37	18	22	34	42	8	49	26	26	7	4
uly	7	8	7	5	6	6	5	5	5	5	3	3	3
ug.	8	8	8	8	.9	8	8	8	6	6	6	6	0
ept.	3	4	33	3	2	3	2	3	3	3	3	8	7
ct.										11000		1000	
lov.	11	11	11	24	24	24	24	26	27	22	21	19	19
ec.	0	4	5	26	27	25	58	26	30	32	27	23	15
OTAL	41	96	215	264	376	436	424	404	477	474	395	254	116

W NO.	57												
ee No.	33	34	35	36	37	38	39	40	41	42	43	44	45
an.	131	3	1	26	36	43	36	49	53	50	14	16	41
eb.	11	36	36	49	98	90	80	148	139	100	98	70	71
larch	3	20	16	35	38	35	25	46	45	49	49	17	27
pril	6	40	45	25	50	52	37	60	50	52	47	16	25
lay	7	35	50	22	50	40	50	45	80	45	37	20	15
une	4	17	44	11	35	42	22	29	47	27	22"	11	12
uly	8	9	14	13	14	14	0	0	2	2	2	2	2
ug.	7	7	7	7	7	7	9	9	10	10	9	9	9
ept.	0	0	1	1	1	1	7	7	8	7	70	7	7
ct.	S. March	Da.						- 0.00			- 1	Per La	0
lov.	12	13	13	14	14	26	26	24	24	26	27	32	32
lec.	0	7	7	16	15	20	20	35	27	29	39	22	24
OTAL	59	187	234	219	358	370	312	452	485	397	351	222	265

- 74 -1915 Block 24 - Rancho Sespe

101

80

31 60 49 50 68

110

 145
 36
 22

 68
 25
 17

98

147

74

W NO.

ee No.

an.

eb.

farch

58 35

6 6 22 26 36 41 21 38 50 60 49 26 29

16 36

10

36 37 38 39 40 41 42 43 44 45 46 47

30 30

65 60 80

35

OTAL	165	136	279	256	273	299	308	363	310	406	426	199	202
DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE	0.640							7				410	18.300
ec.	0	6	22	22	20	14	12	20	23	17	24	12	12
ov.	23	26	18	18	16	17	21	22	16	17	9/	24	24
et.	D	Đ	5	Đ.	D	4	4	3	4	8	19	9	
pt.	10	5	9	9	9	9	10	9	91	8	19	7 9	S
ng.	6	9	6	6	6	6	7	77	12	11	11	5	7
ly	19	6	21	32	37	37	18	29	22	57	34	4	4
ne		27	50	45	52	50	30	59	45	50	40	19	
ay	20	20								-			1'
ril	24	12	45	38	39	32 58	52	70	50	80	55	24	21
arch	12	6	31	20	29		40	30	38	32	25	20	2
b.	36	32	55	49	60	48	73	98	60	90	119	49	5
n.	10	17	17	12	0	24	21	16	31	36	71	26	2
e No.	37	38	39	40	41	42	43	44	45	46	47	48	45
V NO.	60												
OTAL	235	277	283	334	388	356	356	339	358	327	218	289	232
ec.	7	12	17	21	26	27	35	42	27	21	14	27	24
ov.	15	15	16	18	18	28	29	16	17	19	19	46	46
t.		-	-	-	-	-			-	1	-		2
pt.	5	5	5	5	5	5	5	5	6	7	6	6	2
ng.	10	9	9	10	9	11	10	11	10	11	11	0	
ıly	6	6	6	7	6	7	6	6	12	11	11	6	1
me	34	47	19	20	32	27	22	37	36	17	22	4	1
ay	45	67	35	47	53	55	52	57	34	45	30	25	1
pril	45	45	45	50	79	55	50	58	60	53	22	38	20
arch	15	20	28	48	31	35	37	30	38	28	10	30	2
b.	41	41	75	70	98	80	80	50	80	87	49	79	53
in.	12	10	28	36	31	26	30	26	38	28	24	28	23
e No.	36	37	38	39	40	41	42	43	44	45	46	47	48
v no.	59									1			
OTAL	185	267	311	366	370	516	342	418	453	439	471	268	171
ec.	5	6	12	13	12	33	22	32	32	15	24	32	20
ov.	11	12	24	24	16	17	28	29	21	22	37	38	34
et.											1000		
pt.	8	9	11	11	12	11	11	12	11	11	1	1	
ug.	6	6	6	6	7	7	7	7	9	9	9	9	5
ıly	9	9	9	9	10	10	10	5	6	6	11	11	4
ine	47	32	37	52	57	43	37	- 22	32	37	27	14	
ay	37	59	55	55	45	45	50	50	40	57	50	31	18
pril	30	62	40	75	65	88	45	62	65	62	50	45	13

OW NO.

Tree No. Jan.

1915 Block 24 - Rancho Sespe

March 15 1 April 10 2 May 17 2 June 21 1 July 12 1 Aug. 10 1 Sept. 7 Oct. Nov. 26 2 Dec. 10 1 TOTAL 168 17 TOTAL 168 17 May 15 2 July 10 1 Aug. 10 4 March 10 1 April 5 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 10 1 Aug. 1	an.	4	5	11	17	32	24	24	46	38	26	28	- 12	30
March 15 1 1 1 1 1 1 1 1	eb.	36	41	36	75	60	51	52	75	95	25	80	31	50
April 10 2 May 17 2 June 21 1 July 12 1 July 12 1 Aug. 10 1 Sept. 7 Oct. Nov. 26 2 Dec. 10 1 TOTAL 168 17 OW NO. 62 Tree No. 40 4 June 10 1 April 5 May 16 2 June 17 2 July 10 2 July 10 2 July 10 2 July 10 2 July 10 2 July 10 2 July 10 2 July 10 2 July 10 3 July 10 2 July 10 3 July 10 2 July 10 3 July 10 1 July 10 2 July 10 3 July 10 3 July 10 1 July 10 3 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 10 1 July 2 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 July 7 J	arch		10	35	49	49	40	30	45	30	20	30	10	23
May 17 2 2 3 1 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 1 2 1 1 2 1 1 1 1 1 2 1 1 2 1 1 1 1 1 2 1 1 2 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	pril		20	31	66	50	55	54	74	100	35	60	9	12
June 21 1 1 July 12 1 July 12 1 Aug. 10 1 Sept. 7 Oct. Nov. 26 2 Dec. 10 1 FOTAL 168 17 OW NO. 62 Cree No. 40 4 Jan. 5 Feb. 41 4 March 10 1 May 16 2 July 10 1 Aug. 12 1 Sept. 4 Oct. Nov. 22 1 FOTAL 145 17 OW NO. 63 Feb. 41 4 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5 Feb. 41 5	ay		20	29	45	45	67	47	40	65	35	48	7	12
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Aug. 12 1 Aug. 12 1 Sept. 4 Oct. Nov. 22 1 FOTAL 145 17 OW NO. 63 ree No. 42 4 Ian. 1 Iwarch 6 May 5 1 June 7 Iuly 2 Aug. 7 Sept. 5			27	26	22	8	17	27	17	36	39	4	7	. 0
Sept. 4 Ooet. Nov. 22 1 Dec. 4 1 TOTAL 145 17 OW NO. 63 Tree No. 42 4 Tan. 1 Feb. 11 1 March 6 May 5 1 Tune 7 Tuly 2 Aug. 7 Fept. 5			10	10	10	12	12	8	8	9	9	9	9	0
Oct. Nov. 22 1 Dec. 4 1 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 145 17 TOTAL 1		12	12	11	11	11	9	9	8	8	8	11	11	0
Nov. 22 1 Dec. 4 1 TOTAL 145 17 OW NO. 63 ree No. 42 4 Tan. 1 Feb. 11 1 May 5 Tune 7 Tuly 2 Aug. 7 Fept. 5		4	4	3	4	5	5	5	3	3	3	3	3	0
Dec. 4 1 TOTAL 145 17 W NO. 63 ree No. 42 4 Fan. 1 Feb. 11 1 March 6 April 6 May 5 1 June 7 July 2 Aug. 7 Sopt. 5									-			Electric	138	
TOTAL 145 17 W NO. 63 ree No. 42 4 Fan. 1 Feb. 11 1 March 6 April 6 April 6 April 7 June 7 July 2 Aug. 7 Sopt. 5		22	11	12	18	19	18	23	22	21	20	41	40	0
OW NO. 63 ree No. 42 4 fan. 1 Feb. 11 1 March 6 April 6 May 5 1 June 7 July 2 Aug. 7 Sopt. 5	ec.	4	12	9	5	17	31	27	23	12	37	18	10	0
ree No. 42 4 Ian. 1 Feb. 11 1 March 6 April 6 May 5 1 June 7 July 2 Aug. 7 Sept. 5	TAL	145	178	194	157	254	365	352	389	376	466	212	156	0
ree No. 42 4 Ian. 1 Feb. 11 1 March 6 April 6 May 5 1 June 7 July 2 Aug. 7 Sept. 5														
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Feb. 11 1 March 6 April 6 May 5 1 June 7 Tuly 2 Aug. 7 Sept. 5			43	44	45	46	47	48	49	50	51	52	53	54
March 6 April 6 May 5 1 June 7 July 2 Aug. 7 Sept. 5			5	22	16	26	16	48	32	34	19	33	17	19
April 6 May 5 1 June 7 July 2 Aug. 7 Sept. 5			11	64	48	50	36	50	100	90	53	47	31	50
May 5 1 June 7 July 2 Aug. 7 Sept. 5			8	42	27	27	15	25	10	25	25	7	7	25
June 7 July 2 Aug. 7 Sept. 5		6	5	65	43	41	19	36	50	61	40	20	110	19
June 7 July 2 Aug. 7 Sept. 5		5	12	45	56	35	20	30	55	55	38	27	22	7
July 2 Aug. 7 Sept. 5	ne		5	27	26	27	19	22	47	59	52	17	6	5
Aug. 7 Sept. 5	ly		3	3	3	2	2	2	9	9	9	9	9	9
Sept. 5	ıg.		7	7	7	6	6	6	6	6	1	1	1	1
	pt.		5	5	5	5	2	3	2	3	5	4	4	4
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Nov. 22 2	ov.	22	21	14	14	17	16	14	14	24	25	23	23	22
	c.		4	12	12	22	6	12	8	32	17	27	4	12
		0413	86	307	257	258	157	248	333	398	284	215	134	173

				in	- 76		- Vaine						
10000	-	_	-	19	15	Block	24 -	Rancho	Sespe			S SCHOOL	
OW NO.	64												
ree No.	46	47	48	49	50	51	52	53	54	55	56	57	58
Jan.	17	11	0	19	52	30	53	28	10	43	12	4	3
Feb.	36	31	0	49	96	75	100	47	21	55	21	11	5
March	15	20	0	25	28	25	31	20	13	28	8	7	8
April	35	30	. 0	48	62	49	80	19	7	17	14	5	- 8
May	35	30	0	29	35	45	55	30	10	10	10	2	2 2
June	52	34	.0	21	21	37	32	27	4	0	3	0	2
July	8	8	0	8	8	11	11	12	12	2	2	2	2
Aug.	4	4	0	1	1	2	2	2	2	2	3	. 2	3
Sept.	1	2	0	2	2	4	4	4	3	3	3	3	1
Oct.										1000	425	No.	0.000
Nov.	7	7	0	19	19	21	21	19	19	26	27	20	20
Dec.	7	8	0	12	21	7	30	26	17	22	27	12	23
OTAL	217	185	0	232	345	306	419	234	118	208	130	68	77
W NO.	65												
ee No.	45	46	47	48	49	50	51	52	53	54	55	56	57
an.	0	0	11	14	11	2	13	30	26	22	0	10	3
eb.	2	26	49	67	17	18	31	57	50	49	1	11	0

W NO.	65							6.00	1	12.00		40	
ree No.	45	46	47	48	49	50	51	52	53	54	55	56	57
an.	0	0	11	14	11	2	13	30	26	22	0	10	3
eb.	2	26	49	67	17	18	31	57	50	49	1	11	0
Iarch	0	6	15	17	10	14	17	27	20	17	201	9	5
pril	1	8	30	35	10	11	16	32	47	20	0	8	1
fay	0	5	30	19	10	30	10	15	36	25	0	5	2
une	4	0	32	12	10	42	6.4	-7	32	22	0	2	0
uly	2	2	2	2	2	2	2	3	2	3	2	2	1
ug.	2	2	3	2	5	5	4	_4	5	6	7	3	2
ept.	5	5	5	1	1	1	31	-1	5	5	5	2	2
ct.										4.823			
ov.	4	4	5	5	5	5	6	19	19	19	20	14	14
ec.	0	0	21	4	2	2	17	12	14	7	2	7	12
OTAL	20	60	203	178	83	132	121	207	256	195	38	74	42

W NO.	66									la di			
e No.	46	47	48	49	50	51	52	53	54	55	16.6	1000	A. (\$46.55)
in.	1	- 3	13	24	29	6	28	16	42	12	100	0.0	
eb.	3	11	0	36	53	21	102	50	98	90	E - 6	185 ED.	THE REAL PROPERTY.
arch	5	6	26	30	13	17	40	30	35	25		The state of	
pril	4	- 7	47	48	48	33	60	60	55	27		A COMPANY	
ay	5	15	27	35	36	40	47	37	35	37	E Lair	1235	100
ine	2	22	22	27	26	27	50	52	26	10	5.00	Ser	1965
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pt.	4	4	4	4	5	6	6	4	5	4		CON-	
et.									1000	-	600	1000	1
ov.	5	5	5	5	7	8	11	11	12	11		1336	
ec.	0	1	27	12	13	3	20	17	24	10	Parks		DE MOS
OTAL	36	82	179	230	229	169	371	284	340	233			

1915	Block	24	-	Rancho	Sespe

w No.	67		T										
ee No.	48	49	50	51	52	53	54	55	56	57	58	59	
an.	4	8	41	38	60	29	26	20	34	14	1	1	
eb.	11	26	95	80	27	35	105	75	41	35	0	0	
[arch	7	18	27	30	30	30	31	25	9	15	2	2	
.pril	8	27	62	47	55	37	59	50	6	18	1	0	12.5
Iay	20	31	35	45	32	35	40	. 26	7	15	0	0	2
une	12	32	27	19	22	42	36	22	4	7	0	2	. 1/1.
uly	4	4	4	4	4	4	4	4	4	4	3	- 3	Jan. 150
.ug.	9	9	9	9	5	4	4	4	4	4	4	2	100
ept.	5	5	5	5	4	4	4	3	3	3	3	3	
ct.													
ov.	11	12	9	9	14	14	19	19	. 23	22	0	0	BE
ec.	2	7	12	4	6	10	8	27	15	14	0	9	
OTAL	93	179	326	290	259	244	336	275	150	155	14	22	

W NO.	68												
ee No.	49	50	51	52	53	54	55	56	57	58	59	60	
an.	15	18	21	13	18	30	18	25	15	13	0	0	
'eb.	. 30	49	36	26	49	49	49	49	26	36	0	0	
Iarch	16	27	15	16	25	19	17	20	10	10	mO	0	
pril	20	48	19	15	28	48	65	34	10	20	0	1	La Year
Iay	24	39	12	18	20	25	32	20	10	12	. 0	1	
une	17	32	9	5	8	47	62	5	6	5	0	0	
uly	5	5 *	5	5	5	5	5	5	3	3	0	1	
ug.	7	8	8	7	7	5	5	5	5	5	1	1	
ept.	2	2	2	2	2	3	3	4	2	2	0	0	
et.													
fov.	8	9	11	10	9	4	4	8	7	7	0	0	
ec.	3	3	9	6	9	9	10	4	1	21	4	0	
OTAL	147	240	147	123	180	244	270	179	95	134	5	4	

W NO.	69												
ee No.	50	51	52	53	54	55	56	57	58	59	60	61	1000
an.	6	12	28	51	46	0	23	13	18	18	0	0	
eb.	26	36	80	98	79	0	69	31	31	36	. 0	0	ALC: UR
Iarch	20	20	30	35	30	0	20	7	15	25	2	0	
pril	30	35	20	47	50	0	38	10	10	19	1	4	
Iay	35	17	38	17	30	0	35	10	7	11	0	0	100
une	29	32	52	12	12	0	18	5	3	5	4	0	
uly	3	4	4	4	4	0	4	2	2	2	1	0	
lug.	6	7	7	7	. 2	0	2	2	2	2	3	3	
ept.	3	4	4	4	0	0	0	0	0	0	4	4	11.11
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vov.	14	14	11	11	11	9	9	15	5	6	6	6	
)ec.	1	7	9	12	9	0	13	12	6	30	0	0	
OTAL	173	188	283	298	273	9	231	107	101	154	21	17	

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OW NO.

Tree No.

Jan.

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April

May

June

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June	12	TR	28	36	24	20	25	00	O.T.	60	20	00	9
July	7	9	11	12	18	25	31	20	22	23	10	11	9
Aug.	5	7	17	27	19	23	27	17	16	19	.7	19	19
Sept.	2	6	6	11	13	3	7	9	15	14	7	6	5
Oct.	7	14	17	10	21	35	21	40	35	39	38	45	49
Nov.	2	6	10	3	2	15	6	19	14	25	4	19	16
Dec.													
1/20		1				_	1	_	_	1	_		1
TOTAL	84	223	278	305	232	387	245	339	401	398	228	448	313
OW NO.	17						T	T	T	T			
Free No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan.	1	16	18	18	16	29	24	11	8	32	21	19	16
Feb.	-	10	10	10	10	20	62	14		02	64	10	70
March	: 23	40	58	90	95	112	103	65	46	108	53	58	110
April	4	26	36	51	70	45	65	37	52	63	45	36	28
May	6	29	35		64	63	52	68	73	64	90	109	47
June	7		37	61_							40		50
July	3	22		28	48	18	46	38	47	35		29	17
Aug.		8	10	17	11	8	20	19	20	32	11	25	
Sept.	3	11	31	25	18	7	19	25	19	34	15	26	47
Oct.	1	5	6	8	9	4	4	6	3	16	7	9	8
Nov.	7	16	23	19	23	19	15	25	21	35	42	24	47
	2	0	4	4	12	12	13	8	2	14	12	3	13
Dec.	-			-	-		-	-		-	-	-	
TOTAL	57	173	259	321	276	317	361	302	291	433	336	338	383
OW NO.												, ·	
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ree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan.	4	4	15	6	7	8	21	26	38	36	3	6	26
Feb.												6	
		0.00	90	45	30	40	90	90	120	111	55	53	110
March	15	23	90									00-	29
	15	23	46		38	27	77	44	58	46	42	29	
March	7	42	46	52	38	27		38					42
March April	8	42	46 33	52 64	38 74	27	73	38	94	44	65	124	42
March April May June	7 8 8	42 47 38	46 33 32	52 64 46	38 74 57	27 22 18	73 25	38 45	94 24	44 53	65 35	124	27
March April May June	7 8 8 3	42 47 38 10	46 33 32 20	52 64 46 17	38 74 57 42	27 22 18 13	73 25 16	38 45 22	94 24 12	44 53 24	65 35 25	124 29 15	27 19
March April May June July Aug.	7 8 8 3 3	42 47 38 10 11	46 33 32 20 21	52 64 46 17 15	38 74 57 42 25	27 22 18 13 25	73 25 16 19	38 45 22 33	94 24 12 15	44 53 24 31	65 35 25 15	124 29 15 25	27 19 35
March April May June July	7 8 8 3 3 3	42 47 38 10 11 6	46 33 32 20 21 10	52 64 46 17 15 6	38 74 57 42 25 7	27 22 18 13 25 3	73 25 16 19 5	38 45 22 33 4	94 24 12 15	44 53 24 31 11	65 35 25 15	124 29 15 25 8	27 19 35 11
March April May June July Aug. Sept. Oct.	7 8 8 3 3 3 7	42 47 38 10 11 6 27	46 33 32 20 21 10	52 64 46 17 15 6	38 74 57 42 25 7	27 22 18 13 25 3	73 25 16 19 5 23	38 45 22 33 4 25	94 24 12 15 11 33	44 53 24 31 11 46	65 35 25 15 9	124 29 15 25 8 28	27 19 35 11 46
March April May June July Aug. Sept.	7 8 8 3 3 3	42 47 38 10 11 6	46 33 32 20 21 10	52 64 46 17 15 6	38 74 57 42 25 7	27 22 18 13 25 3	73 25 16 19 5	38 45 22 33 4	94 24 12 15	44 53 24 31 11	65 35 25 15	124 29 15 25 8	27 19 35 11

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eb.													
Iarch	16	60	78	75	25	105	90	60	127	98	40	45	91
April	13	54	69	55	42	84	57	61	61	45	40	38	46
Iay	19	43	40	70	65	51	48	73	53	83	46	114	41
une	12	18	28	36	24	26	25	35	31	23	25	35	9
uly	7	9	11	12	18	25	31	20	22	23	10	11	9
ug.	5	7	17	27	19	23	27	17	16	19	.7	19	19
ept.	2	6	6	11	13	3	7	9	15	14	7	6	5
et.	7	14	17	10	21	35	21	40	35	39	38	45	49
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OTAL	84	223	278	305	232	387	245	339	401	398	228	448	313

W NO.	17												
ee No.	1	2	3	4	5	6	7	8	9	10	11	12	13
an.	1	16	18	18	16	29	24	11	8	32	21	19	16
eb.													1800
farch	: 23	40	58	90	95	112	103	65	46	108	53	58	110
pril	4	26	36	51	70	45	65	37	52	63	45	36	28
Iay	6	29	35	61	64	63	52	68	73	64	90	109	47
une	7	22	37	28	48	18	46	38	47	35	40	29	50
uly	3	8	10	17	11	8	20	19	20	32	11	25	17
ug.	3	11	31	25	18	7	19	25	19	34	15	26	47
ept.	1	5	6	8	9	4	4	6	3	16	7	9	8
ct.	7	16	23	19	23	19	15	25	21	35	42	24	47
ov.	2	0	4	4	12	12	13	8	2	14	12	3	13
ec.										101		200	1
OTAL	57	173	259	321	276	317	361	302	291	433	336	338	383

W NO.	18										S		
ee No.	1	2	3	4	5	6	7	8	9	10	11	12	13
an.	4	4	15	6	7	8	21	26	38	36	3	6	26
eb.										1	Variation .	1	0.583
larch	15	23	90	45	30	40	90	90	120	111	55	53	110
pril	7	42	46	52	38	27	77	44	58	46	42	29	29
lay	8	47	33	64	74	22	73	38	94	44	65	124	42
une	8	38	32	46	57	18	25	45	24	53	35	29	27
uly	3	10	20	17	42	13	16	22	12	24	25	15	19
ug.	3	11	21	15	25	25	19	33	15	31	15	25	35
ept.	3	6	10	6	7	3	5	4	11	11	9	8	11
ct.	7	27	19	15	10	10	23	25	33	46	24	28	46
lov.	2	2	3	4	4	2	14	12	13	28	13	4	12
lec.													
OTAL	60	210	289	270	294	169	293	339	418	430	286	321	357

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-				1916	Blo	79 - ck 24	- Ranc	ho Ses	pe.				
v 0.	19												
0.	1	2	3	4	5	6	7	8	9	10	11	12	13
	0	7	25	21	11	6	26	21	36	16	26	16	11
	2	20	50	4.0	na	E77	10	84	103	47	123	84	50
	6	72	90	48	73	53				43			
				70	89	34	57	74	68	25	50	46	62
	11	60	44	40	44	46n	48	54	48	105	65	72	79
	5	33	25	32	22	30	27	25	25	31	20	15	27
	3	6	8	8	133	15	28	17	18	17	18	10	19
	2	6	37	16	13	24	23	11	18	8	37	13	25
	1	3	7	5	6	7	6	4	5	6	8	3	5
	3	8	19	13	27	15	26	22	21	15	53	47	29
	4	2	6	5	12	6	11	7	2	14	18	9	20
FAL	37	217	311	258	310	236	262	319	348	280	418	315	327
			044	, mee					1000				
v NO.	T		T	1	1	T	T	T	_				
	20	-	-	-	-		-	-	-	2.0	- 22	3.0	2
e No.	1	2	3	4	5	6	7	8	9	10	11	12	13
n.	1	9	11	6	16	21	26	31	26	16	36	6	32
b.	-	-			-			-	12.	-			100
arch	25	40	84	35	70	88	82	97	76	48	110	52	90
oril	13	26	58	58	. 68	52	54	73	53	66	47	38	47
ay	14	24	48	93	67	46	56	61	40	99	52	110	40
ne	10	29	23	40	19	12	18	31	24	49	31	30	27
ly	5	8	16	10	10	6	10	6	25	16	8	20	16
ıg.	3	7	27	15	12	15	7	15	21	18	15	21	26
pt.	3	3	10	3	5	4	1	5	4	3	7	8	11
t.	6	30	26	7	16	16	15	29	15	9	57	33	40
ov.	2	4	10	2	9	18	12	12	3	10	11	6	11
ec.									126	10.23			
TAL	82	188	313	269	288	282	377	395	287	334	374	324	340
							distribution re-						
V NO.	21												
e No.	1	2	3	4	5	6	7	8	9	10	11	12	13
n.	6	2	3	3	6	16	2	6	18	24	26	21	26
b.			0.12						1	E. Will	Marie Control	1738.33	5
arch	48	47	70	35	63	83	20	75	60	110	120	105	110
oril	30	65	74	59	88	90	40	75	34	68	54	41	52
ау	23	42	51	66	74	83	46	79	60	46	42	112	61
ne	13	18	23	46	69	41	38	25	30	27	43	26	25
ly	9	8	15	21	32	6	40	18	10	30	15	8	10
ıg.	8	9	19	22	25	28	35	21	14	19	19	11	23
pt.	4	3	6	8	4	3	4	3	1	9	5	. 4	
t.	12	17	10	10	15	23	8	9	14				4
ov.	2	1	9	11	9		1		14	18	47	-37	24
ec.	2	-	3	11	9	6		6	2	5	11	9	28
	155	212	280	283	385	379					183	1000	

)W NO.	22												
ree No.	1	2	3	4	5	6	7	8	9	. 10	11	12	13
Jan.	2	4	21	9	14	16	16	26	28	36	31	21	41
Feb.													
March	8	8	30	30	65	57	45	65	44	116	112	78	106
April	32	22	65	46	53	79	57	44	31	50	57	34	57
May	56	60	36	65	57	49	50	39	25	49	42	92	48
June	42	8	20	43	32	23	22	25	16	38	30	27	37
July	7	1	9	18	25	8	13	17	12	18	13	16	15
Aug.	13	5	15	23	20	12	15	16	9	15	17	8	24
Sept.	6	1	6	6	5	3	5	4	2	7	4	5	7
Oct.	19	6	23	16	15	21	26	18	9	39	34	21	21
Nov.	7	5	10	5	12	4	29	7	2	28	9	12	9
Dec.													
COTAL	192	120	285	261	298	272	278	261	178	386	349	314	365

OW NO.	23												
ree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan.	6	14	26	21	11	21	16	19	18.	23	36	36	26
Feb.													1000
March	35	51	63	90	55	70	73.	60	63	97	110	60	90
April	46	42	42	63	53	70	61	70	32	45	55	47	52
May	52	40	36	34	52	53	61	50	92	82	75	118	73
June	27	22	21	30	35	40	30	25	30	25	35	31	37
July	13	4	11	22	16	30	.15	18	233	13	21	17	10
Aug.	15	20	24	22	15	28	13	23	20	14	22	16	17
Sept.	6	17	8	8	4	7	2	5	4	7	7	5	5
Oct.	27	31	25	21	11	21	19	12	26	26	43	38	51
Nov.	3	4	16	4	5	6	13	4	1	26	5	6	13
Dec.	280											180	
TOTAL	230	245	272	315	257	345	303	286	309	358	309	369	374

)W NO.	24										- Control		
ree No.	1	2	3	4	5	6	7	8	9	10	11	12.	13
Jan.		1	6	7	6	16	21	6	6	16	16	21	16
Feb.													
March		4	45	58	24	76	108	58	48	102	118	128	120
April		22	51	68	26	77	76	47	45	78	55	29	51
May		42	39	56	52	70	41	46	103	48	60	112	90
June ,		18	17	18	15	25	30	33	50	29	51	32	50
July		16	20	15	18	11	23	17	18	43	15	15	31
Aug.		7	18	19	16	15	23	25	13	25	16	17	30
Sept.	-	5	7	5	4	6	6	3	0	9	7	. 11	7
Oct.		16	12	11	8	23	21	11	8	17	35	32	18
Nov.		2	3	3	2	6	14	7	2	7	19	23	14
Dec.													
TOTAL	16.	133	218	260	172	325	363	253	293	364	392	320	427

				1916	Plan	ck 24 -	- Danel	0 500	ne.				
W NO	T	T	1	1210	DIO	NU 64.	[Ranci	Jo Des			T	T	T
W NO.	25												
ree No.	2	3	4	5	6	7	8	9	10	11	12	13	14
fan.	1	16	11	11	17	10	14	11	11	16	46	11	6
Peb.													
March	10	84	49	57	97	36	57	89	119	117	56	58	60
April	44	47	75	72	75	33	34	40	55	63	30	- 39	74
May	105	38	72	58	55	45	47	63	58	71	114	56	88
June	51	23	48	47	22	20	17	38	16	40	33	45	30
Tuly	11	6	6	18	9	13	. 9	34	16	7	17	20	32
Aug.	13	17	10	8	17	14	15	47	13	14	8	15	24
Sept.	7	9	8	6	8	. 3	4	8	7	9	11	5	9
Oct.	16	21	23	26	25	13	13	21	49	45	37	19	25
Nov.	7	11	8	4	28	4	7	. 3	5	27	5	6	5
Dec.													
TOTAL	265	262	310	307	353	191	217	425	349	409	357	274	353
W NO.	26												
ree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
an.	6	16	21	26	10	16	11	16	0	20	21	16	6
Feb.		10	N.A.	20	10	10		10		20	-	10	
March	35	100	97	103	104	38	68	50	0	102	113	133	36
April	41	81	82	66	77	48	47	67	0	22	61	32	36
May	57	72	48	40	64	73	42	56	0	45	63	108	90
Tune	30	20	12	20	42	56	36	18	0	30	30	25	39
uly	11	8	18	17	15	24	37	9	0	21	22	23	43
													33
													5
	_			_									19
													3
		10	7.7	10	-	7.2	-	1.60	1	20	27	10	-
	227	355	348	335	369	300	290	258	0	334	431	413	310
Aug. Sept. Oct. Nov. Dec.	20 7 17 3	15 5 22 16	15 6 35 14	10 4 31 18	11 11 39 6	9 5 21 14	28 4 10 6	10 4 16 12		0 0 0	0 19 0 18 0 29 0 28	0 19 25 0 18 9 0 29 26 0 28 21	0 19 25 23 0 18 9 11 0 29 26 29 0 28 21 13
-		_											
										T			
w No.	27												
NO.	1	2	3	4	5	6	7	8	9	10	11	12	
W NO.		2 6	3 16	4 9	5 28	6 16	7 8	8 27	9 22	10	11 37	12 23	
W NO. ee No. an. eb.	1 16	6	16	9	28	16	8	27	22	11	37	23	1
W NO. ree No. an. reb. Iarch	1 16 32	6	16	60		16	8 28				37 91		16
W NO. ree No. ran. reb. farch	1 16 32 55	6 40 90	16 87 69	60 70	28 32 62	16 40 83	28 58	27	53 40	11	37	23	50
W NO. ree No. ran. reb. farch tpril fay	1 16 32	6	16	60	28	16	8 28	27	22 53	90	37 91	23	50
W NO. ree No. ran. reb. farch tpril fay	1 16 32 55	6 40 90	16 87 69	60 70	28 32 62	16 40 83	28 58	27 104 92	53 40	90 34	37 91 57	102 30	50 57 49
ow NO. ree No. fan. Feb. March April May Tune	1 16 32 55 57	6 40 90 70	16 87 69 42 15	9 60 70 45 22	32 62 31 54	16 40 83 100 55	28 58 125 58	27 104 92 88 20	53 40 107 40	90 34 60 30	37 91 57 44 39	102 30 77 19	50 57 49
ow NO. ree No. fan. Feb. March April May fune fully	1 16 32 55 57 35	6 40 90 70 23	16 87 69 42 15 8	9 60 70 45 22 9	32 62 31 54 25	16 40 83 100 55 27	8 28 58 125 58 41	27 104 92 88 20 10	53 40 107 40 25	90 34 60 30 28	37 91 57 44 39 26	23 102 30 77 19	50 57 49 44 16
ow NO. an. Feb. March April May une fully Aug.	1 16 32 55 57 35 7	6 40 90 70 23 15	16 87 69 42 15	9 60 70 45 22 9	28 32 62 31 54 25 26	16 40 83 100 55 27 25	8 58 125 58 41 25	27 104 92 88 20 10 14	53 40 107 40 25 21	90 34 60 30 28 23	37 91 57 44 39 26 26	23 102 30 77 19 15 9	13 16 50 57 49 46 16 18
OW NO. ree No. Jan. Feb. March April May June July Aug. Sept.	1 16 32 55 57 35 7 15	6 40 90 70 23 15 15	16 87 69 42 15 8 32	9 60 70 45 22 9 22 6	28 32 62 31 54 25 26 7	16 40 83 100 55 27 25 6	8 58 125 58 41 25 5	27 104 92 88 20 10 14 5	22 53 40 107 40 25 21	90 34 60 30 28 23 10	37 91 57 44 39 26 26	23 102 30 77 19 15 9	16 50 57 45 46 16 18
OW NO. Tee No. Jan. Feb. March April May June July Aug. Sept. Oct. Nov.	1 16 32 55 57 35 7 15	6 40 90 70 23 15 15 6	16 87 69 42 15 8 32 10	9 60 70 45 22 9	28 32 62 31 54 25 26	16 40 83 100 55 27 25	8 58 125 58 41 25	27 104 92 88 20 10 14	53 40 107 40 25 21	90 34 60 30 28 23	37 91 57 44 39 26 26	23 102 30 77 19 15 9	50 57 49 46

241 301 318 277 294 382 358 392 344 305 436 357 322

TOTAL

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	-	-	_	1916.	Bloc	k 24 -	Ranch	o Sesp	0		_	_	_
OW NO.	28												
ree No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Jan.	6	11	11	19	16	26	22	12	22	21	16	63	30
Peb.													
March	67	50	30	73	65	94	102	72	119	53	84	67	131
April	62	45	45	77	45	58	84	51	48	45	47	31	36
Iay	44	84	68	62	52	47	63	115	43	82	46	130	59
une	35	42	45	31	55	34	30	42	38	33	41	30	39
uly	6	22	13	7	23	31	15	16	19	25	21	23	20
Aug.	19	17	16	12	16	21	12	19	24	19	23	14	15
lept.	8	7	10	6	11	7	4	6	7	7	5	8	11
et.	26	29	31	21	24	43	31	24	35	24	26	38	57
Vov.	5	15	5	11	19	19	39	6	13	8	2	8	7
ec.												1	
OTAL	278	322	274	329	326	380	402	363	368	317	311	412	405
	,			_		1			T			T	
W NO.	29										5		
ree No.	1	2	3	4	5	6	7	8	9	10	11	12	12
an.	9	6	22	6	21	26	26	31	16	26	8	13	20
èb.			-								Takka.		100
Iarch	15	85	45	38	90	113	126	109	57	129	68	67	112
pril	32	62	50	44	68	56	62	38	26	33	29	18	35
Iay	50	55	45	55	25	60	60	38	105	69	92	77	64
une	23	20	28	23	22	34	21	20	44	22	55	10	28
uly	18	7	5	18	8	25	13	10	31	19	25	7	19
ug.	13	14	17	7	29	15	11	13	17	18	15	10	15
ept.	11	6	8	8	11	7	6	7	8	11	6	5	7
et.	14	29	23	23	26	31	23	60	27	51	37	31	45
lov.	4	7	11	25	7	14	24	18	7	16	18	2	15
ec.													
OTAL	189	291	254	247	308	379	372	344	336	394	353	240	355
w No.	30												
ee No.	1	2	3	4	5	6	7	8	9	10	11	12	13
an.	2	6	16	16	36	32	46	36	41	14	12	16	31
eb.													
arch	5	20	84	98	109	55	104	102	95	85	88	109	90
pril	14	24	85	60	45	44	54	55	53	52	45	32	53
Lay	25	18	50	54	34	20	32	62	63	70	61	61	60
une	7	8	22	27	46	7	20	15	41	46	38	18	41
uly	9	4	5	11	20	8	17	5	23	9	25	27	29
ug.	8	3	14	11	17	4	15	9 .	19	9	19	16	17
ept.	4	1	9	6	13	5	5	7	11	15	11	6	7
et.	8	2	27	16	30	21	23	49	40	46	48	12	37

5

43 12 15 13 10

ept.

Jov. ≽ec.

OTAL

7 18

						83 -							
				1916	Blo	ck 24 -	Ranch	Sesp	е				
w No.	31												
ee No.	1	2	3	4	5	6	7	8	9	10	11	12	13
an.	21	30	16	21	7	11	38	31	21	31	17	16	26
eb.													
Iarch	52	63	98	90	30	45	90	91	76	88	107	128	62
pril	60	53	54	38	52	38	44	32	46	39	31	23	62
Iay	70	55	41	44	62	50	52	37	98	96	47	92	89
une .	26	31	13	20	60	40	21	24	53	19	48	23	58
uly	10	18	8	15	28	14	13	17	25	6	20	17	21
ug.	6	11	6	16	7	7	11	25	13	11	17	16	14
ept.	5	6	5	7	4	5	4	5	8	7	15	15	10
ct.	13	17	23	21	11	13	25	40	31	49	54	72	39
ov.	4	7	- 8	10	5	4	18	15	16	17	18	16	22
ec.													
OTAL	267	292	272	282	266	227	224	327	387	363	374	418	403

W NO.	32										and the same		
ee No.	1	2	3	4	5	6	7	8	9	10	11	12	13
an.	1	6	6	22	36	25	53	5	26	20	31	18	21
eb.													
Iarch	8	37	64	72	86	62	78	10	60	46	82	64	86
pril	24	36	42	30	40	34	40	11	81	80	76	42	76
Iay	60	60	80	78	27	52	79	20	50	45	42	92	66
une	51	15	27	25	31	20	14	7	40	58	40	39	25
uly	19	6	4	15	30	27	6	3	20	15	20	27	18
ug.	23	15	11	15	14	15	9	5	20	8	17	9	18
ept.	7	5	6	11	7	7	3	.3	16	7	9	6	4
ct.	12	15	23	25	29	15	27	9	29	38	47	51	27
ov.	0	3	4	6	21	8	26	6	20	6	28	7	24
ec.									-				
OTAL	203	198	277	299	321	265	335	79	362	323	392	355	366

W NO.	33												
ee No.	1	2	3	4	5	6	7	8	9	10	11	12	13
an.	4	21	17	21	26	31	40	16	16	51	42	11	61
eb.													
Iarch	20	38	62	16	24	25	46	27	49	75	85	118	105
.pril	28	46	71	42	63	34	55	50	42	68	90	28	74
lay	26	60	16	30	54	60	45	70	60	117	53	78	90
une	2	7	20	19	71	24	13	45	31	33	50	38	18
uly	7	9	5	5	20	7	9	15	9	7	21	30	20
ug.	5	16	12	6	10	3	7	15	10	12	11	8	11
ept.	0	7	4	7	7	3	5	7	5	8	5	9	8
et.	0	15	23	16	15	12	27	19	29	45	43	46	48
lov.	5	8	7	7	3	7	4	10	6	14	16	8	24
ec.													1
OTAL	97	226	237	170	293	206	261	274	257	420	416	374	459

W NO.

ee No.

an.

èb. farch 1916 Block 24 - Rancho Sespe

eb.													
farch	3	33	50	71	47	62	15	47	36	39	97	92	89
pril	15	58	88	54	26	38	18	62	43	54	45	82	93
ay	19	47	59	29	36	52	23	46	44	55	97	73	56
ine	9	- 25	45	25	16	27	8	42	33	38	22	33	50
nly	6	5	10	5	4	15	3	21	5	15	23	13	16
ug.	4	4	15	6	8	16	3	26	10	15	13	9	17
ept.	3	7	8	. 4	7	2	1	7	8	8	6	5	0
ct.	7	21	11	23	20	23	6	19	22	29	43	49	45
ov.	2	6	8	6	9	6	2	6	12	12	6	38	28
ec.													Cos
OTAL	68	224	325	248	190	251	85	284	218	273	384	425	430
W NO.	35												
ee No.	3	4	5	6	7	8	9	10	11	12	13	14	15
an.	3	2	16	4	4	3	7	11	16	16	20	31	36
eb.													
larch	8	3	28	13	11	8	38	75	63	102	33	93	90
pril	26	18	68	28	22	21	34	28	59	43	70	68	64
ay	40	24	25	47	21	26	62	45	42	82	135	56	80
ine	15	20	25	53	10	10	23	. 17	28	23	38	23	45
ıly	4	15	5	7	4	4	9	8	12	8	31	12	22
ng.	10	5	6	6	5	3	19	11	10	12	18	9	16
pt.	1	6	5	3	2	1	5	4	7	5	3	7	1
et.	8	11	6	12	5	12	18	23	24	35	25	45	42
ov.	4	4	3	3	3	6	5	8	16	19	6	19	16
ec.	-	_				0	-		10			10	-
OTAL	119	108	187	176	87	94	220	230	277	345	379	363	418
W NO.	36												
e No.	5	6	7	. 8	9	10	11	12	13	14	15	16	1'
ın.	0	6	7	0	4	6	47	3	11	11	28	26	1
eb.												-	0. 1
arch	7	50	35	0	19	52	66	57	60	70	85	83	18
pril	41	58	35	0	57	460	79	33	77	85	73	28	1
ay	47	47	38	0	36	32	43	30	84	100	56	64	1 15
ine	14	15	31	0	39	45	31	13	20	26	40	45	4
ıly	15	14	9	0	13	15	15	16	8	17	20	19	
ng.	6	11	7	5	13	11	10	10	11	10	33	23	1
ept.	6	5	4	0	6	5	8	5	6	4	11	7	4
	9	12	9	4	21	19	. 15	11	42	- 32	47	49	23
et.		5	2	2	4	4	18	4	20	24	14	22	1
	7			- N	-	-	20	-	700	~ ~	-		
ct. lov.	7												

- 85 -Block 24 - Rancho Sespe

W NO.

	0.				-		-						
ee No.	6	7 .	8	9	10	11	12	13	14	15	16	17	
an.	5	10	0	6	11	6	16	16	50	13	17	19	
eb.		-									-		
larch	30	57	0	47	48	53	93	100	150	66	99	120	
pril	22	- 36	0	26	60	58	46	66	82	30	57	18	
ay	28	37	0	50	32	57	81	69	51	96	67	60	
une	18	19	0	25	26	15	25	19	29	25	30	29	
uly	5	18	1	18	5	8	8	7	10	23	10	15	
ug.	9	10	4	6	6	. 5	10	10	11	11	9	19	-
ept.	4	4	2	3	4	3	4	4	6	8	6	7	
ct.	12	11	0	22	16	21	35	23	45	34	39	37	
ov.	5	7	0	4	9	17	18	33	44	12	9	22	
ec.													
OTAL	138	209	7	207	217	240	336	347	478	318	343	346	
	_										Г		
W NO.	38										1 Bereit		
ee No.	8	9	10	11	12	13	14	15	16	17	18		1
an.	2	6	3	7	9	0	26	22	21	16	11		17 (4)
eb.										1		10.00	VI. 35
arch	5	27	40	25	88	0	134	124	61	93	47		
pril	18	22	29	26	43	0	71	50	45	38	39		To all
ay	20	32	49	44	57	0	30	80	50	65	90	N. T.	1000
ine	22	20	30	18	30	0	19	14	37	18	55	DES V	
ıly	14	22	17	8	16	0	15	18	12	5	23	100	
ug.	4	22	17	5	15	0	11	8	15	7	31	200	
ept.	3	6	7	5	7	0	13	9	5	. 5	5	1	
et.	24	12	15	10	17	1	35	22	62	. 48	24	1000	7.55
ov.	5	1	2	7	11	0	11	36	13	14	10	25%	
ec.	117	-	- 60	-		-		- 00	10	1.2	10	77.7	
OTAL		2.00	100										
OTAL	117	170	199	155	293	1	365	383	321	309	335		
W NO.	39												
e No.	9	10	11	12	13	14	15	16	17	18	-		
in.	3	4	6	6			-				-		
eb.	0	- 12	- 6	0	25	16	25	30	36	51			-
arch	4	57	62	24	4.77	28	82	70	0.0	OF			
pril	24	52	65	37	43 60	79	22		92	97	-	100	
	48	47						55	47	57			
av		20	47	50	102	74	73	54	88	47	-	-	
	111	EU.	38	15	27	46	41	26	22	18	-		
ine	44	7.7		6	16	11	14	13	15	17			
ine	9	13		0		9	17	16	- 8	16		-	
ine ily ug.	9 25	9	13	9	15	6							
une uly ug.	9 25 3	9 7	13	3	7	6	3	4	4	6			
une uly ug. ept.	9 25 3 22	9 7 24	13 4 16	17	7 21	6	19	39	19	47			
ay une uly ug. ept. ct.	9 25 3	9 7	13	3	7	6							
une uly ug. ept.	9 25 3 22	9 7 24	13 4 16	17	7 21	6	19	39	19	47			

						86 -							
	-	_	-	1916	Block	24 -	Ranch	Sesp		_	-	-	1
W NO.	40									100	E.L.	1 . 5	
ee No.	10	11	12	13	14	15	16	17	18	19		-	1000
an.	6	7	16	15	20	6	21	55	26	22			170.00
eb.	0	-	10	10	60	0	64	00	60	66	-603		
farch	44	21	47	68	30	:50	69	70	86	51		1000	
pril	19	43	43	26	26	62	57	31	66	43			- Date and
Iay	21	46	57	72	84	52	123	44	65	85			100
une	23	29	20	23	43	46	46	35	27	46		100	10 10
uly	12	23	12	13	20	18	13	20	13	30		Holes	100.000
ug.	11	13	13	11	18	6	11	24	11	18	S. C. E.	Jan	III. GER
ept.	5	8	9	5	11	4	5	8	5	7	2100		
et.	18	27	23	23	23	39	37	51	35	33	Cart	10000	13.000
ov.	3	11	6	5	12	21	16	33	36	15	3	ENL	1.110
ec.										77-63	110		10000
OTAL	162	228	299	261	287	304	398	371	370	350			
	T	Τ.	_	_	T		_	_				1	
W NO.	41									100	S. S	1	1000
ee No.	11	12	13	14	15	16	17	18	19	1	500		1000
an.	6	11	31	11	22	36	21	41	56			1000	1000
eb.	-	111	0.1	111	- 66	- 00		41	- 50		1000		NO VANCED
farch	25	36	40	51	20	77	46	45	88			1000	
pril	38	25	43	49	62	71	50	62	39			1	100000
lay	41	18	41	63	66	78	74	91	48		11. N. ST	TALL	
une	14	18	23	30	57	32	40	44	24			WEST !	
uly	13	16	9	15	22	8	11	17	22		100000	1000	100000
ug.	4	17	12	7	23	16	6	15	15	J. 1586	511123		1000
ept.	5	5	4	5	5	7	7	6	6			The same	
et.	7	23	20	33	33	43	44	42	46	17 30	100000	POLICE S	
lov.	2	3	5	7	15	16	27	23	14			E SE	
ec.							- N.	200				ISMA.	
OTAL	155	172	228	276	325	384	326	386	358				
	_		-	-			_			200		1124	
W NO.	42												
ee No.	13	14	15	16	17	18	19	20	-			100	
an.	3	11	10	11	22	11	31	21		1	40000	1866	1
eb.	-												
Iarch	30	44	52	30	68	35	48	46		1			
pril	37	42	64	36	51	61	54	38			1 may 1		
lay	30	39	28	33	50	85	94	54		19 - V		285	
une	23	18	17	16	30	64	38	17					
uly	8	10	16	_ 11	16	25	30	18			9		-
lug.	5	7	11	10	6	19	15	17			611		
ept.	5	8	4	2	4	6	7	9		S 12		1000	
Oct.	15	15	16	17	. 40	40	23	19				1	
Nov. Dec.	3	10	14	6	18	6	34	4	1	1		29	1500
rec.	-		-	-	-	10000	-	30.00	-			100	-
COTAL	159	204	232	172	305	353	379	243	10000			N. W.	

- 87 -

				1916	Bloc	87 - k 24 -	Ranch	o Sesp	e b				
OW NO.	43										annie de		
ree No.	15	16	17	18	19	20							
an.	2	6	7	6	6	26		01 37					
eb.		-									100		1000
farch	10	40	17	53	32	116							
April	18	44	10	59	27	39							7-50
Iay	30	69	114	78	85	61							
une	38	30	22	27	32	12				1.0			
uly	23	13	23	22	21	19							
lug.	15	7	10	10	23	15							
ept.	5	6	. 5	5	4	8							Link
Oct.	27	27	24	48	25	41							
Vov.	8	17	10	10	2	15		1					177.33
Dec.								dan e			and the		
OTAL	176	259	242	320	257	342			4				
										-		No.	
l traje		_				T							
W NO.	44						Acres 1			1			100
ree No.	16	17	18	19	20	21	-			B 440			
an.	1	1	2	4	6	28				W. 15			
eb.									5. 43		Table 1		
farch	9	30	20	12	55	87			100	W. Call			
April	10	33	17	14	51	34	11.	San Land	14. 36	1000			5-90
Iay	24	51	53	70	48	25							
une	9	30	20	42	30	15			200	Dec 201			
uly	8	18	15	15	19	16		15		Daniel .	Sec. 2		
lug.	5	13	12	19	8	15					Contract of the last		
lept.	3	5	. 3	6	8	7	para de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la constante de la con	Sec. 15.	G. L.				
et.	6	21	23	31	39	28		1 19					
lov.	1	14	9	6	22	12	1000			2000			
Dec.													
OTAL	66	216	174	219	286	267		1	200				
W NO.					-	-	-						
	45					-		LA		600		125.0	
ee No.		17	18	19	20	21				1			
an.		3	0	0	6	11					2000		
eb.		7	20	0	4.5	67				E. B.	Be 133	B. Carlo	
Iarch		3	. 20	0	45	67			-		2111111	France.	13.14.18
pril		17	23	0	34	64	1		1			1000	
Iay		55	38	0	90	63				100	100	100	
une		37	16	4	39	38						OR THE	S. W.
uly		. 17	19	4	13	18		1			La rice	13300	
ug.		21	7	10	15	20	1				Carrie		
ept.		2	3	0	8	7							050
et.		6	17	4	43	15	88			200	0.436	BASE LA	4
lov.	100	2	2	0	10	17	33		200	5.5.	126.10	E. S.	
ec.				Jan S	1500		2	2200	6.03.S. A	8. 17		DE C	6-3-1
OTAL	-	163	135	22	375	320	Neg 13					Mary 1	

- 88 -1916 Block 24 - Rancho Sespe

				1910	BIG	JCK 24	- Its	meno i	sespe				
w No.	46												
ee No.	23	18	19	20	21	22	2.2	30	Sold.	30.0	300	100	S D. AND
an.		0	8	11	18	16	and.	1.6	1.38	322		a Marie	
eb.									Jan.				0 17/01/3/2
farch	1.0	10	20	44	50	66	BIL	76	1184	98			1025
pril		26	24	34	43	46	40	5:5	86	0.000	No.	1912	
lay		30	24	56	33	67	30 -	94	35	912	N. KILL	60.00	
une		10	19	24	23	28	203	0.0	80	146		The same	
uly		14	15	9	27	15	4.50	N.Y	1960	0.98	123		- 120
ug.	1	5	7	11	18	27	33	30	31/5	355		100	100000
ept.		3	3	4	5	6		. 9	1	- 6		The Value	10000
ct.		4	1	10	13	8	60	67	67	31		0.00	
ov.		8	10	22	35	27	30	25	18	28.			
ec.		-	1	1010	- 00								100000
			_	1					-			200	
OTAL		115	131	225	265	306	275	330	520	328			
W NO.	47											100	
	41	63	0.0	077	-		-		-				
ee No.	-	21	22	23	-	100	09	100	- 38	100	- 89		-
an.		10	16	12		13	33	30	L. GES	27	27		
eb.		_						-	-				
larch	-	55	24	48	- 0	3.0	- 40	1361	100	1.0%	102		10000
pril	-	43	43	46		400	5.0	7016	1.234	1	63	BINE	1-0/28/09
lay		37	66	51		- 34	-65	354	0.880	53	5.52		123.00
ane		30	39	27	200	SE		112	12/2	780	193	Barrier S	
ıly		15	16	20			100	100		0.00	19.57		
ug.		11	9	15	1.2	46	140	43.	1. 19	1115	1.00		THE WAY
ept.		5	7	8		40	16						
ct.		27	21	19		88	160	100	1 400	100	4.6		
ov.		6	8	23		1.3	LL				1.23	130.5	12000
ec.													
OTHE		239	249	270				Color.	100	465			
OTAL	-		-			-	-				1000		
		-										36.	-
W NO.	48												
e No.	3.5	21	22	23	24	Mars	4.00			Mariento.	196	d de	1
ın.		0	2	16	11	0 8	100		33	E PER I		100	1000
eb.			~	100	-						6.030		
arch		5	16	41	78				1. 1. Table	Carri	- SA	C 230	2-003
pril		16	14	43	26			190	- 2	5155	173.6	13.7	100
ay	10	20	46	48	47				100	13.	85 1082	100	100
ine	100	7	23	21	18			-	100	10.00	A Page 1	100	
ily	7.8	7	16	9	17		2.7		N 400	1000	Chronic.	100 A	
ug.	40	4	15	11	11	-	16.5		500		4.0	200	
ept.	0					-	-	-	1000		-	100	
et.	200	1	7	7	10	-	-	-	-			100	-
ov.	-	3	19	22	27	1.13			-	1	D 104	0.500	
	- 0	3	8	5	_ 21	10.1		A COLOR	1000	W. 174		1000	-
			1	Later and the second	1		Day Sand		1	Pr. 20 10 10	100	0.00	Drugger and
ec.	-	-	+	-	-	-		_	_				

Block 24 - Rancho Sespe.

29

31 32

30

1916

25 26 27

W NO.

ee No.

an.

eb.

49

23

1 11 19 26 19 46 36 36 36 32

eb.								12.2	100	1		The said	
Iarch	10	51	80	95	82	110	81	76	112	98	2100	0.26	
pril	40	18	32	31	39	40	40	25	46	29	67.	16-	0.000
Iay	24	43	55	41	39	18	30	24	38	29	7.72	127	10.50
une	22	21	12	15	15	18	20	20	30	15	0.00	CIA	
uly	12	8	14	13	39	23	42	37	25	22	190	S. S.	0.000
ug.	13	4	11	9	28	35	33	35	31	35	0.0.00	08.285	5 540
ept.	2	5 .	4	3	8	7	8	9	7	6	1.00	B. LL	308
et.	7	22	33	51	62	68	55	67	67	31	500	and the second	10/19
lov.	1	12	19	13	20	34	30	22	28	28	(FLIS)	E-NG	
ec.									1	7.54	10000		HEE
OTAL	132	195	279	297	351	399	375	351	420	325	434	222	252
W NO.				T	T	T	T	T					
ee No.	50 24	25	26	27	28	29	30	31	32	33	34	STATE OF	
an.	0		7		_		31	_	37	27	27		1000
eb.	1 0	4	1	21	21	15	27	36	37	21	21		10000
farch	20	43	46	94	56	37	45	110	109	125	102	100	132
pril	12	19	49	37	38	47	46	38	62	26	61	193.20	10000
Iay	35	76	98	30	91	47	42	24	55	50	62	A.K.	
une	8	20	24	14	38	25	28	19	15	25	38	123 3 20	100
uly									11			100 MV	
ug.	6	15 11	23	27	24	9	30 30	24	27	23	19	1000	1
ept.	4	8	5	5	7	4	9	14	7	8	7	1000	
et.	8	19	24	35	25	49	66	79	42	74	46		
lov.	4	4	10	14	16	22	24	15	36	14	21	100000	
ec.	- 4	- 4	10	1.2	10	20	N'E	10	- 00	14	27		No.
OTAL	103	219	197	307	335	270	351	390	414	391	412	208	
								1					
W NO.	E1						Ī						
na Na	51	0.0	077	0.0	00	70	773	770	22	77.4	75	90	
ee No.	25	26	27	28	29	30	31	32	33	34	35	36	2.33
an. eb.	2	11	11	16	31	17	36	30	26	22	41	16	0.00
farch	-			-	-			-	-		-	1	
	2	35	39	70	40	65	86	112	60	67	92	20	200
pril	0	26	58	38	54	63	56	65	60	41	34	7	A-200
lay	16	47	59	24	11	88	37	31	36	69	55	9	100
une	15	30	23	28	60	27	16	22	31	21	23	4	1.460
uly	13	26	17	10	10	11	16	14	16	13	16	8	103
lug.	4	18	26	22	21	13	22	31	20	19	19	11	68
ept.	0	7	7	4	7	8	7	6	10	6	7	15	33
)ct.	4	26	24	31	51	41	54	57	60	65	67	61	885
Nov.	3	1	7	2	4	5	5	38	22	25	6	14	200
Dec.	1		-			Laure L		0.12	1				100
	59	227	271	245	289	338	335	404	341	348	360	166	1-255

W NO.	52												
ree No.	27	28	29	30	31	32	33	34	35	36	37	38	39
an.	3	6	3	11	28	29	21	21	16	31	36	28	24
eb.													
Aarch	10	12	38	37	65	79	87	91	78	99	110	46	67
April	8	37	50	32	45	50	24	68	60	78	67	16	9
Iay	34	59	58	34	31	74	64	60	67	109	72	17	26
une	9	20	40	25	30	26	19	26	49	21	22	15	20
uly	13	10	11	8	21	14	25	19	25	-8	19	7	14
lug.	8	7	19	18	29	10	19	23	11	21	29	15	17
ept.	2	6	4	3	7	6	6	7	5	5	10	11	14
ct.	15	17	27	36	51	43	72	60	37	70	50	71	60
lov.	2	19	10	9	4	26	15	32	14	31	19	46	30
ec.													1
OTAL	104	199	260	213	311	357	352	407	362	473	434	272	281

W NO.	53												
ree No.	28	29	30	31	32	33	34	35	36	37	38	39	40
an.	4	11	32	26	32	21	62	31	26	36	36	46	21
eb.													
Iarch	25	30	28	80	95	75	51	65	53	82	90	55	29
April	26	27	34	40	42	80	44	52	40	28	43	23	22
Iay	24.	46	39	35	50	75	100	59	51	56	65	44	46
une	16	22	35	26	20	48	44	19	15	27	20	18	10
uly	5	11	16	9	12	17	15	24	7	20	15	7	9
lug.	4	4	8	6	6	5	3	8	3	8	6	6	8
ept.	9	23	27	44	41	55	23	46	39	27	43	31	50
et.	10	10	19	24	16	16	16	15	11	23	13	15	16
lov.	3	3	14	6	12	14	25	25	8	30	44	18	34
ec.													
OTAL	166	187	252	295	326	406	383	344	253	337	375	263	245

W NO.	54											L. C.	
ee No.	29	30	31	32	33	34	35	36	37	38	39	40	41
an.	3	0	4	12	13	16	24	26	16	16	21	26	46
eb.											Land Commission	Cale .	
Iarch	25	18	16	51	48	62	75	44	60	97	105	105	60
pril	16	8	20	30	32	44	57	63	65	54	40	42	22
Iay	22	20	51	50	120	94	92	83	63	63	95	64	11
une	15	8	17	22	48	33	60	30	38	25	43	19	13
uly	15	11	11	9	13	10	14	16	7	7	8	10	3
lug.	8	19	19	17	9	10	8	17	13	10	22	17	5
ept.	1	2	2	5	3	3	5	8	8	4	9	8	7
et.	19	16	25	26	19	41	53	58	47	55	27	56	68
Nov.	2	6	2	11	5	15	10	24	24	15	24	23	20
ec.													
TOTAL	126	114	167	233	310	328	398	369	341	346	394	370	255

W NO.	55							Part of					
ree No.	31	32	33	34	35	36	37	38	39	40	41	42	43
an.	2	7	7	31	17	22	16	26	32	31	33	26	36
èb.	-	-		01	11	66	10	60	06	OT	00	- 60	- 30
farch	8	32	38	. 75	40	57	55	40	114	87	93	41	57
pril	12	16	18	34	48	38	43	57	29	36	76	14	18
Iay	13	37	20	65	84	75	102	88	115	62	62	88	16
une	8	11	4	21	53	17	27	52	35	38	32	8	14
uly	4	6	6	19	23	22	12	11	16	11	18	4	8
ug.	4	6	5	17	10	21	17	15	21	25	21	8	9
ept.	2	4	3	5	6	8	8	4	8	7	4	11	10
et.	7	21	23	50	55	57	55	43	51	51	45	63	69
ov.	1	11	7	14	-8	15	30	12	16	14	28	27	45
ec.													
OTAL	61	151	131	331	344	335	365	308	437	362	412	210	284

W NO.	56							L. Same					
ee No.	32	33	34	34	36	37	38	39	40	41	42	43	44
an.	1	1	11	21	26	21	18	21	16	26	. 25	25	26
eb.						- 11						200	1773
farch	5	7	45	55	66	98	83	90	72	90	138	65	28
pril	4	11	22	24	56	83	50	84	53	56	55	18	6
Iay	13	19	33	44	50	65	51	61	152	51	53	11	8
une	6	9	18	12	22	50	28	30	18	76	15	8	9
uly	3	15	8	13	10	16	15	10	14	11	11	7	4
ug.	5	6	15	7	19	22	16	16	21	19	15	8	7
ept.	0	4	6	4	4	7	. 5	14	7	8	7	13	23
ct.	4	7	23	55	57	49	48	68	41	46	60	65	55
ov.	3	1	6	5	18	36	13	10	5	4	18	7	14
lec.													
OTAL	44	80	176	240	328	447	317	374	399	439	397	230	185

W NO.	57								Carrier Street	1920			
ee No.	33	34	35	36	37	38	39	40	41	42	43	44	45
an.	2	6	21	11	26	20	20.	26	31	33	42	20	40
eb.									-				
Iarch	4	40	38	58	94	47	44	90	55	80	107	30	43
pril	7	22	28	. 25	30	53	29	36	87	44	44	67	22
Iay	0	46	30	40	60	56	64	63	62	30	52	31	11
une	10	14	15	18	29	40	25	20	51	32	30	8	10
uly	0	7	15	9	20	17	6	9	23	20	22	9	6
ug.	3	6	19	9	29	19	16	19	19	18	19	8	8
ept.	1	4	5	3	7	7	10	7	3	9	12	9	6
et.	8	25	42	55	40	31	41	63	44	60	86	50	55
lov.	2	12	3	4	_ 11	20	5	11	19	12	21	26	33
ec.								13.17					
OTAL	37	182	216	232	346	310	260	344	395	338	435	258	234

W NO.	58												
ee No.	35	36	37	38	39	40	41	42	43	44	45	48	47
an.	6	11	8	26	14	41	16	30	26	27	20	26	31
eb.													
arch	10	42	54	54	30	95	47	83	86	80	70	35	42
pril	24	18	40	48	46	38	52	64	76	71	44	14	14
ay	33	31	70	35_	106	87	102	61	50	78	99	29	10
ine	22	22	25	18	46	21	48	28	42	35	30	16	8
ıly	8	9	8	9	8	12	9	8	17	18	20	7	15
ug.	9	16	8	16	13	14	14	21	23	15	27	. 8	21
pt.	5	6	8	77	15	7	8	8	7	7	9	15	5
et.	26	43	33	27	27	52	34	69	56	23	25	89	71
ov.	11	5	22	13	12	30	6	17	18	4	9	41	9
ec.													
OTAL	154	203	276	253	317	397	336	389	401	358	353	375	226
W NO.	F0		T				T	T	Т	T			
ee No.	59 36	37	38	39	40	41	42	43	44	45	46	47	48
an.	11	16	26	-	24		21	16	36	21	11	43	31
eb.	11	10	20	20	24	36	21	10	20	21	11	40	01
arch	20	41	55	60	92	61	68	78	80	75	25	42	44
pril	19	51	34	28	27	52	72	51	35	42	38	14	7
ay	12	39	31	100	92	50	46	64	47	39	49	20	11
ine	15	25	18	30	25	30	28	40	23	30	20	15	8
ıly	8	14	7	7	25	10	15	17	18	15	4	9	6
ug.	5	13	15	22	15	15	21	19	15	14	5	6	11
ept.	2	4	3	4	5	2	11	8	5	8	5	6	7
ct.	2	12	8	21	21	10	21	34	6	25	6	28	36
ov.	25	39	39	35	55	43	55	45	29	17	21	75	46
ec.		05	05	00		40	00	40	20		27	10	40
OTAL	119	254	236	327	381	319	358	372	294	286	184	248	207
OTAL	119	254	236	327	381	319	358	372	294	286	184	248	20'
W NO.	60												1.18
ee No.	37	38	39	40	41	42	4.3	48	45	46	47	48	49
an.	9	2	11	17	23	11	46	11	23	31	19	31	26
eb.		~	11	11	20	11	40	11	20	01	10	OI	20
arch	17	4	46	38	35	60	62	78	70	44	62	68	42
pril	14	26	32	26	66	41	40	60	29	26	47	18	15
lay	41	43	62	100	39	61	28	93	76	158	58	25	10
une	12	20	17	23	41	23	30	18	41	34	32	15	7
ıly	5	9	6	11	10	8	10	8	22	25	15	7	4
ug.	4	13	13	. 9	16	5	18	5	7	6	11	6	4
ept.	1	3	5	7	5	4	7	5	7	5	8	7	6
ct.	5	13	21	31	45	19	33	19	37	18	27	43	49
ov.	2	6	6	6	8	5	32	5	8	4	4	22	7

302 310 351 283

242

170

110 139 219 268 292

TOTAL

	- 93 -	
1916	Block 94	- Bonaho Sagno

OW NO.	61												
ree No.	39	40	41	42	43	44	45	46	47	48	49	50	51
Jan.	2	4	7	7	10	11	16	6	11	6	11	6	21
Feb.													
March	20	16	46	77	57	75	60	84	110	41	66	40	50
April	9	12	40	58	63	63	48	37	30	33	34	12	10
May	50	43	44	40	56	76	50	80	93	36	94	15	24
June	19	21	18	20	28	53	20	21	35	25	43	6	12
July	8	10	6	17	15	19	20	8	17	9	8	3	6
Aug.	8	9	10	16	15	22	11	7	11	6	17	5	6
Sept.	2	3	3	4	5	7	5	4	1	2	5	3	4
Oct.	17	21	40	27	26	41	23	15	18	10	31	34	35
Nov.	3	4	2	26	7	20	3	13	10	4	5	13	19
Dec.													
TOTAL	138	143	216	292	272	387	256	275	336	172	314	137	187

)W NO.	62										1		
ree No.	40	41	42	43	44	45	46	47	48	49	50	51	52
Jan.	2	12	6	7	27	22	31	15	26	26	18	16	0
Feb.													
March	10	16	26	12	70	85	82	77	100	93	50	35	0
April	14	29	27	26	23	42	18	44	51	45	10	13	0
Иау	38	22	33	52	42	60	82	70	55	88	23	10	0
Tune	10	15	27	23	17	29	37	35	38	25	5	9	0
uly	6	9	10	6	7	13	15	9	10	4	5	0	0
Aug.	6	11	18	3	8	12	10	8	14	9	7	0	0
Sept.	4	4	7	3	7	7	6	4	5	4	4	0	0
)ct.	15	23	27	27	42	48	27	31	40	21	31	0	0
Vov.	4	5	7	6	23	22	23	24	18	12	13	0	0
Dec.											CONTRACT OF		
OTAL	109	146	188	165	266	340	331	317	357	327	166	83	0

W NO.	63											Bur	
ee No.	42	43	44	45	46	47	48	49	50	51	52	53	54
an.	0	1	11	6.	16	5	16	16	16	6	16	3	21
èb.													100
Iarch	1	4	72	41	40	30	70	54	85	36	32	16	52
pril	2	10	47	47	38	16	34	44	45	42	10	10	10
Iay	4	10	37	27	49	34	24	55	87	62	24	54	22
une	13	11	15	19	9	10	16	27	35	43	6	12	3
uly	8	7	12	10	9	4	5	7	9	8	0	6	0
ug.	16	6	23	8	8	9	5	17	6	15	0	5	0
ept.	5	1	7	2	8	4	3	3	4	3	0	1	0
et.	16	0	48	22	30	19	8	15	29	17	0	10	0
Tov.	2	1	6	2	11	8	14	4	9	6	0	5	- 0
ec.												Phone I	
OTAL	67	51	278	184	217	139	195	242	325	238	88	122	108

_	94		
-	24	-	
70	Ole	24	

W NO.	64												
ee No.	43	44	45	46	47	48	49	50	51	52	53	54	55
an.	3	0	2	2	6	1	6	12	9	11	6	11	11
eb.													
arch	0	0	5	20	25	0	30	67	50	108	52	30	65
pril .	0	0	16	43	18	0	29	24	45	50	18	13	10
ay	1	0	26	87	77	0	47	72	80	4.5	49	4	23
ine	5	1	8	8	49	0	25	21	58	18	20	10	7
uly	5	0	5	22	18	0	6	7	18	17	9	0	0
ug.	2	0	6	9	11	0	5	12	17	8	9	0	0
ept.	0	0	3	5	5	0	1	3	6	4	4	0	0
ct.	0	0	11	8	13	0	7	15	27	21	35	. 0	0
ov.	2	0	1	9	4	0	4	9	5	16	18	0	0
ec.	18												
OTAL	18	1	83	213	226	1	160	242	315	298	220	68	116
W NO.			_	· T		T	T -	T	T	T		L. P. St.	
	65								-	-	1		
ee No.	46	47	48	49	50	51	52	53	54	55	56	57	58
an.	0	21	4	2	6	19	10	12	10	2	16	16	10
eb.		-	-	_	-	-	-	-	-	-	-		
Iarch	0	40	20	15	3	15	60	50	45	0	30	27	15
pril	0	31	22	3	4	14	20	34	20	1	9	7	0
lay	0	38	47	26	26	13	52	116	60	3	6	6	8
une	0	17	12	14	22	12	13	50	22	0	4	10	3
uly	1	6	5	11	8	4	11	17	8	0	0	0	0
ug.	0	8	10	8	11	3	8	11	4	0	0	0	0
ept.	0	5	2	1	1	0	2	4	3	0	0	0	0
ct.	18	33	11	4	6	3	21	29	12	0	0	0	0
ov.	0	6	1	1	0	1	14	11	10	0	0	0	0
	19	205	134	85	87	0.4	017	774	104	-	C.F.		-
OTAL	19	205	134	85	87	84	211	334	194	6	65	66	36
W NO.										T			
ee No.	66	47	4.0	4.0	F.0	Fo		5.0	FA	5.5			
an.	0	2	48	49	50	51	52	53	54	55	56	57	58
eb.	-	6	TT	8	177	1	11	11	8	4	3	0	4
farch	1	1	40	47	1.72	10	87	100	0.5	70	- 0	-	2.0
pril				41	47			40	65	30	3	6	15
[ay	0	5	40	21	13	14	43	26	56	34	1	2	9
une	7 9	38	30	44	43	54	65	74	30	50	1	3	5
nly	7	23	24	16	17	50	18	52	34	30	4	0	5
ug.	2	14	6	7	10	19	7	9	10	8	0	0	0
ept.		10	9	12	9	15	12	10	15	8	0	0	0
ct.	2	3	4	4	5	2	1	5	6	2	0	0	0
lov.	3	6	11	17	9	9	9	19	18	12	0	0	0
lec.	1	1	6	3	- 6	2	6	5	3	4	0	0	0
	32	103	181	173	170	176	239	251	248	182	12	11	29

Block 24 - Rancho Sespe. W NO. ree No. an. eb. farch April 75 Iay une uly 7 9 10 lug. ept. ec.

 TAL

W NO.	68							4			1		
ee No.	49	50	51	52	53	54	55	56	57	58	59	60	
an.	3	5	11	4	7	11	11	10	2	8	0	4	
Iarch	10	29	22	37	20	25	30	36	25	60	3	6	
April	6	11	16	16	22	56	32	22	26	46	1	0	
Iay	48	46	15	18	38	46	53	26	16	34	0	6	
une	14	18	15	10	14	35	37	11	5	16	4	2	1111
uly	6	8	7	4	5	11	. 8	3	6	7	0	0	100
lug.	4	11	7	4	9	8	18	5	9	4	9	0	
ept.	3	5	1	2	2	3	6	4	5	6	0	0	1
et.	8	15	10	20	19	22	22	18	23	43	0	0	
lov.	4	4	5	5	3	8	4	10	11	30	0	0	15.5
ec.										45		R.O.	
OTAL	106	152	119	120	139	225	221	145	128	254	8	18	

W NO.	69												
ee No.	50	51	52	53	54	55	56	57	58	59	60	61	
an.	0	4	9	11	16	0	11	6	11	36	2	1	
eb.												0.500	
Iarch	18	15	70	65	70	2	35	38	61	55	2	2	
pril	12	21	27	28	64	2	45	37	47	31	0	0	160
Iay	28	45	38	41	33	2	44	25	42	24	1	0	
une	40	24	15	12	18	0	26	18	18	0	3	0	
uly	3	11	17	6	9	0	8	8	5	7	0	0	
ing.	3	7	6	10	5	0	9	8	10	5	0	0	
ept.	2	5	1	5	8	0	70	8	3	7	O	00	
et.	5	18	15	17	30	1	16	27	15	27	0	0	
vov.	2	5	13	15	17	4	27	15	6	12	0	0	
)ec.													1
OTAL	113	155	211	210	270	11	228	190	218	204	8	3	N Lang

The value of such tree performance records as have just been presented lies in the fact that they show to the grower which of his trees are productive and which are non-productive. At least two years' records must be obtained before a reliable and fair judgment can be made of the productivity of the tree, although records for one year are better than none at all and give a fair indication of which trees will probably be in the first class.

For the purpose of illustrating the interpretation of the records, a small block of 30 trees has been taken from Block 24, Ennicho Sespe, the records of which are given in the foregoing tree performance data. These trees are located in a very favorable place in the grove, where the soil texture and exposure to wind and frost are very uniform, thus assuring a true test of each tree. The 50 trees taken are in Rows ES, E3, 54, 55, 56, and are numbered 36 to 41, inclusive, in each of these rows.

In the following table is outlined a production record of these trees as shown by the weight of the fruit produced by each tree for the period of two years covered by the records. In this production record each tree is placed according to its average production for the two years:

PLODUCTION RECORD.

Graded to beight of Fruit.

200 10 10 10 10 10 10 10 10 10 10 10 10 1		19	1 5	4		1916			
2: 56-40: 477: : 2: 56-37: 447 3: 56-41: 474: : 3: 56-41: 427 4: 55-40: 469: : 4: 55-39: 437 5: 56-37: 436: : 5: 52-37: 454 6: 56-38: 424: : 6: 55-41: 4°C 7: 55-41: 422: : 7: 56-40: 399 8: 55-29: 405: : 8: 54-39: 394 9: 56-39: 404: : 9: 53-38: 375 10: 50-37: 400: : 10: 16-39: 374 11: 55-38: 385: : 11: 54-40: 370 10: 56-36: 376: : 12: 54-36: 369 11: 55-38: 342: : 14: 55-40: 305 14: 55-36: 342: : 14: 55-40: 305		Tree No.	=	-	:	: : Tree No.	•		
3: 56-41: 474: : 3: 56-41: 437 4: 55-39: 437 5: 56-37: 436: 5: 52-37: 454 6: 56-38: 404: 6: 55-41: 410 7: 55-41: 422: 7: 56-40: 399 8: 55-39: 405: 8: 64-39: 394 9: 56-39: 404: 9: 53-38: 375 10: 50-37: 400: 10: 16-39: 374 11: 55-38: 395: 11: 54-40: 370 10: 56-36: 376: 10: 54-36: 369 11: 55-38: 395: 11: 54-40: 370 10: 56-36: 376: 12: 54-36: 369 11: 55-38: 395: 11: 54-40: 305 13: 53-37: 361: 13: 55-37: 305 14: 55-36: 342: 14: 55-40: 305	1	24-52-36	484	:	: 1:	: 24-52-36	:	473	
3: 56-41: 474: : 3: 56-41: 427 4: 55-40: 469: : 4: 55-39: 437 5: 56-37: 436: : 5: 52-37: 454 6: 56-38: 424: : 6: 55-41: 402 7: 55-41: 422: : 7: 56-40: 399 8: 55-39: 405: : 8: 54-39: 394 9: 56-39: 404: : 9: 53-38: 375 10: 50-37: 400: : 10: 16-39: 374 11: 55-38: 385: : 11: 54-40: 370 11: 55-38: 376: : 12: 54-36: 369 13: 53-37: 361: : 13: 55-37: 305 14: 55-36: 376: : 12: 54-36: 369 14: 55-36: 376: : 12: 55-37: 305 <tr< td=""><td>2</td><td>56-40</td><td>: 477</td><td>:</td><td>: 2</td><td>56-37</td><td>:</td><td>447</td><td></td></tr<>	2	56-40	: 477	:	: 2	56 -37	:	447	
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Two-Year Liverage of Trees in Plat.

		Tree Munbe	r	average aeig	i.t	Grace
	 :		÷- :	i'ounds.	- -	
1	:	24-52-36	:		:	1
	:				:	4
3	:	56-41		462	:	2
4 ±	:	£5 - ⊋0	:	415	٠:	3
5	:	56 -37	:	4/11.5	:	3
6	:	56 - 88	:	370.5	:	10
7	:	55 - 41		417	:	6
ઈ	:	55-39	:	421	:	5
9	:	5 6- 39	:	38 9	,	9
10	:	52 -37	:	417	:	7
11	:	EE-38		3 ₄ 6.5	:	15
12	•	56 - 36	:	352	:	12
13	:	53-37	•	3.19	:	14
1.1				338 .5	:	
15	:	5-1-37	:	339 .5	:	17
16 17	:	5 3- 38	:	354		11
		54-36	:	349.5		13
18			:	33 2.5	:	21
19		51-40	:	337.5	:	19
20		0., 0.	:	304.5	:	20
21	:		:	342.5	:	
55		- -		275.5		22
23		52-33		271.5		ವಿ 3
24				264		24
25				· · · ·		26
26				231		27
27				188		30
23		02 U		238		25
7.9	:	52-40	:	149.5	:	29
30	:	53-40	:	213.5	:	28

It has been found that the productive type of tree produced nearly three times as much fruit as the shade tree type and that the fruit of the productive type was of a finer quality and more even in size and shape than the fruit of the shade Tree strain. To make a better and more concrete comparison of these two strains of the harda lemon variety, the following figures have been taken from the production record of these 30 trees to show the difference in the profit per acre:

1915

Average for 30 trees, 303.13 lbs.

100 trees per dore

. there would be 30°13 lbs. per dore

Packed box - 50 lbs. fruit

. 375.7 packed boxes per acre per year

2 p3.00 per box - pli26.10 per acre per year.

Average 10 poorest trees = 239.65 lbs.
100 trees = 23965 lbs. per acre
23965 = 266.27 packed boxes
50
2 43.00 = 4798.71 per acre per year.

In the first problem the first or best 10 trees were taken and the average of their production obtained. Their average was nearly 425 pounds per tree, equivalent to an income of "1410.71 per acre per year, providing an acre of productive type trees averaging

425 pounds could be found. By taking the average of the poorest 10 it is found that each tree would produce 239.66 pounds per year, or an income of only 4798.71 per acre per year. The average for the 30 trees, which contain the trees of both types, is 238.13 pounds per tree per year, or an income of 1126.10 per acre per year. Therefore, we find that the productive type produced 86.82 pounds per tree more than the average per year thile the Shade Trees produced 98.48 pounds per tree less than the average. There was a difference of 185.30 pounds per tree per year between the average of the best 10 trees and the average of the poorest 10 trees.

With such a large difference in yield in pounds per tree per year as 185.30, the financial loss to the citrus industry from the presence of such non-productive trees is almost beyond belief. In fact, the average grower is unable or else not willing to believe that there is such a great difference in the trees in his grove and, of course, when he stops to figure up the loss he would have to stand for a few years while his poor trees were being top-worked to a better and more productive strain, he is almost sure to decide to let the old trees remain and refuse to figure ahead to the time when the trees would pay him for his trouble by their increased groduction.

Correlation of Citrus Characters.

From daily observation of the different characters of Citrus varieties the opinion had been formed by the writer that certain definite correlations existed between several of the most important characters but up to the present time no one has secured any accurate mathematical evidence of these correlations.

In presenting the following correlation tables the number of individuals in each population is too low to allow very great accuracy but it is felt that the correlation coefficients obtained are sufficiently high to indicate that there is a very definite correlation between the characters considered.

In the consideration of the correlation between the weight of fruit and the number of fruits produced by 117 trees of the Eureka lemon variety we have found the highest correlation of any of the characters considered to occur. A correlation coefficient of .9663, shown in Table 2 clearly indicates that these two characters are dependent upon each other and that there is a very striking choherence between the two characters of weight and number of fruits.

The correlations between the percent of variable fruits and the percent of green grade fruit for both the Eureka and Lisbon lemon varieties indicates coherence between these characters as shown by the coefficients of .7755 for the Eureka strain of the Eureka variety, shown in Table 3, and .6709 for the Open strain of the Lisbon lemon variety, shown in Table 4. This fact would indicate to the grower that as the number of green fruits on his trees increases the number of off-type or variable fruits also increases.

TABLE I

Correlation of Chareacters in Eureka and Lisbon Varieties and their Strains.

Correlation Coefficients.

Characters Considered	Weight	Numbe r	Percent Variable Fruits	Percent Green Fruit	Total Amount Fruit
weigh t		. 96 63			
Number					
Percent of Variable Fruits				.7755 E	.0853 A
Percent of Green Grade Fruit			.6709 ೦೮		.2608 B
Total Amount of Fruit			.2025 03	.6359 03 .2364 LS	

Eureka Lemon Variety

Lisbon Lemon Variety

In the above Table of Correlation Coefficients of the Correlated Characters considered in the Eureka and Lisbon Lemon varieties and their strains we find only one negative correlation between characters while all the rest are positive. The abbreviations used in the Eureka Lemon variety side of the table are as follows;

- I for the Bureka strain
- S for the Small Open strain

The abbreviations for the Lisbon Lemon variety are as follows;

- Od for the Open strain
- LS for the Lisbon strain.

Notations on Correlation Tables.

In each of the following correlation tables the abbreviations used are as follows:

f = Class frequencies of the total population with respect to the correlated characters.

V = Value or measurement corresponding to a given frequency.

M = Mean

D = Deviation of correlated character from the Mean (M) for that character.

= Standard deviation

r = The coefficient of correlation.

The formula used in the calculation of the correlation coefficient in the following correlation tables is the one worked out
by E. Davenport of the University of Illinois and used by him in his
book "Principles of Breeding". It is not necessary to include in
this work all of the mathematical calculations but the method and the
formula used in obtaining the figures in the various arrays of the
tables is as follows:

D = Deviation of the class value from the Mean.

$$\sigma = \frac{m^2}{f}$$
 Standard Deviation

$$r = \frac{\sum P}{f(q)(q)}$$
 the correlation coefficient.

TABLE II

Correlation of Weight and Number of Fruit in

117 Eureka Trees.

-0-0-0-0-0-0-0-0-0-0-0-0-

	Num	ber				10-5	15-10	20-15	25-20	30-25	35-	1 1
f D ²	_D2	f D	D	2 V	, f	G,	0	15	20	25	8	!
59.40	29.70	10.90	5.45	29.	2						70	15-14
99.00	19.80	22.45	4.45	67.5	5					4	۲	14-13
107.10	11.90	31.05	3.45	112.5	9					9		13-12
54.00	6.00	22.05	2.45	103.5	9			•	6	છ		12-11
52.50	2.10	36.25	1.45	262.5	25				25			11-10
2.00	.20	4.50	•45	95 .0	10			F	9			10-9
7.80	.30	-14.30	55	221.0	26			24	8			9-8
12.00	2.40	-7.75	-1.55	37.5	5			5				8-7
52.00	6.50	-20.40	-2.55	52.	8		57	3				7-6
63.00	12.60	-17.75	-3.55	27.5	5		σı					6-5
165.60	20.70	-36.40	-4.55	36.	8	۲	7		 			5-4
92.40	30.80	-16.65	-5.55	10.5	3	છ						4-3
85.80	42.90	-13.10	-6.55	5.	2	8						3-2
852.60		253.55		1059.5	772	6	17	33	42	16	છ	н
Mean :	= 1059.	<u>5</u> = 9.0	5		2259	42	204	561	924	432	96	r V
Ave.Devi	ation_	253,55 117	2.16	h.		-12.3	-7.3	-2.3	2.7	7.7	12.7	b
$\sigma = \int_{1}^{85}$	2 <u>.60</u> =	2.69	م <u>ال</u>	$\frac{\text{Mean} = \frac{2259}{117}}{\text{Ave.Deviation}}$	548.5	73.8	124.1	75.9	113.4	123.2	38	r D
	·		3726.93 =	1 11		151.29	53.29	5.29	7.29	59.29	161.29	Weight D
			5 .64	19.30 548.5 = 4	3726.93	907.74	905.93	174.57	306.18	948.64	483.87	H
	5.02 .69)(5.	= 64)	•9663	4.68	1715.02	421.89	455 .16	64.75	145.53	432.74	194.95	М

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TABLE III

Correlation of the Per Cent of Variable Fruits to Per Cent of Green Grade Fruit in Eureka Strain.

Per Cent of Green Grade Fruit.

fg Dg2	Dg2	fg Dg	Dg	fg Vg		15	13	12	F	10	9	8	7	6	57	4	63	
516.39	172.13	39.36	-13.12	137	3	T				Г					\vdash	H	-	48-50
409.64	102.41	40.48	-10.12	208	4				T		F		-	1	-	ea		51-53
456.30	50.70	64.08	- 7.12	495	9	T	T	T	T						4	03		54-56
118.79	16.97	28.84	- 4.12	406	7		1	Т	1		F		200	60	0	-		57-59
13.75	1.25	12.32	- 1.12	671	11		T	Т	-	Г	Г	H	200	en		H		60-62
74.13	3.53	39.48	1.88	1344	21	1		Т		20	200	6	4	on	-	-		53-65
261.91	23.81	53.68	4.88	737	11	1		F	F	20	200	co	H					66-68
372.54	62.09	47.28	7.88	420	6		10	T	20	1		4		-	2.50	0		69-71
236.74	118.37	21.76	10.88	146	2		T	T	F	F								72-74
192.65	192.65	13.88	13.88	76	1				100	-	-							75-77
																		18-80
395.21	395.21	19.88	19.88	82	1	F	100	1		1							1	81-83
048.05		381.04		4721	26	ea	20	-	cn.	Ç1	6	1	10	11	8	9	מ ונ	18.30
	$\frac{4721}{76} = 62$			k		45	26	12	55	50	54	88	70	66	40	36	faVa 15	
	$v \cdot = \frac{381}{7}$ $3048.05 = \frac{3048.05}{76}$		5.01	$M_{\mathbf{a}} = \frac{557}{76}$		7.67	5.67	4.67	3.67	2.67	1.67	0.67	-0.33	-1.33	-2 33	-3.33	D _B	tgjal s zvo
Cg =	62.12		0,10	De	H	23.01	11.34	4.67	18.35	13.35	10.02	7.37	3.30	1.46	18.64	29.97	\$ D	
		Ca = Ma	100	$= 7.55\%$ of Variable $v_{\bullet} = \frac{163.13}{2.15} = 2.15$		58.83	32.15	21.81	13.47	7.13	2.79	0.45	0.11	1.57	5.43	11.09	Da ²	
		= 2.91 7.33			642.66	176,49	64.30	21.81	67.35	35.65	16.74	4.95	1.10	17.27	43.44	99.81	fa Da2	
		1 = 39.672%		fruits	1030.76	204,328	89.359	22.789	111.201	65.148	45.591	22.029	1.716	75.534	000 00 F	203.263		

The correlation between the total amount of fruit and the per cent of variable fruits in the Open Strain of the Lisbon lemon variety is much higher than the corresponding correlation in the Eureka and the Small Open Strain of the Eureka lemon variety. The coefficient for the Open Strain of the Lisbon lemon variety is .2025, shown in Table 5, while that for the Eureka strain of the Eureka lemon variety is .0853, shown, This would seem to indicate that the Open strain of the in Table 6. Lisbon lemon variety produces a higher per cent of variable fruits than the Eureka strain of the Eureka lemon variety. The coefficients are considered high enough to indicate some coherence between these correlated characters but in the case of the correlation between the total amount of fruit and the per cent of variable fruits in the Shade Tree strain of the Eureka lemon variety we have a disherence as shown by the negative coefficient of -.0998 as shown in Table 7. Could the number of individuals in the population of this group have been larger the result would probably been different and in the favor of a coherence as the Shade Tree strain actually produces a bery high per cent of varable fruits.

The most important of these correlations between characters of Citrus fruits to the grower, is the correlation between the per cent of green grade fruit and the total amount of fruit produced. As the green fruit is the most valuable it is the grade most highly prized by the grower and fortunately we find that the correlation coefficients between the characters of per cent of green grade fruit and the total amount of fruit are comparitively high, indicating the dependence of one upon the other

TABLE IV

Correlation of Per Cent of Green Grade Fruit to Variable Fruits.

(Open Strain)

Per Cent	of Gree	n Grade	Fruit			4	임	7-	141	1 1	219	3115	2 10	
_f D2	\mathbf{D}^{2}	f D	D	fV	f	35	S	29	9	3	81	714	- -	
1445.22	240.87	93.12	-15.52	288	6					Ţ	T	#- -	ļo	46-50
442.68	11067	42.08	-10.52	212	4						1		1/2	51-55
274.23	30.47	49.68	-5.52	522	9					_	44	2010	,	56-60
6.75	.27	13.00	 52	1575	25	-					12	712		61-65
461.61	20.07	103.04	4.48	1564	23				3	7	101	ωį.		66-70
898.70	89.87	94.80	9.48	730	10	! !		۳		7	2	- T -		71-75
3529.19		395.72		4891	2	-	-	۳		- (ΩK	ЫİС	~	 Ins
Mean =		_ 6 3. 52			1433	34	31	28	100	352	532	208	70	Pe Pe
Ave. De	77 ▼-= <u>395.7</u> 77	$\frac{72}{2} = 5.14$	4	Mean	_	OI GI	Cal	Ca l		e le	 	٥١٥	πiò	er Cent
$\sigma = \int_{-3}^{3}$	529.19 77 =	₌ 6.77	-#3		255.75	15.3		9 3	(C)	2		310	60.27	of the second
			77 .626.15 77	433 77 55.75		36.8	5	8.1	0	1.4	_ !:	6 I A	74.13	Variable Fr
			4.59	8.61	1626.15	36.8	100	88.1	3	83) (4) (5	210 210	518.91	Fruit.
$r = \frac{1}{77}$	1605.22	=	.6709		1605.22	6	0	89.	16.1	01	וא		849.29	£ 2

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	$\frac{dr}{dr} = \frac{1}{r} \left(\frac{1}{r} - \frac{1}{r} \right) \left(\frac{1}{r} - \frac{1}{r} \right) \left(\frac{1}{r} - \frac{1}{r} \right) \left(\frac{1}{r} - \frac{1}{r} \right)$	1 1 1	•	F
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TABLE V

Correlation of the Per Cent of Variable Fruits to Total Amount of Fruit.

Open Strain

1	9-11	12-14	15-17	18-20	21-23	24-26	27-29	30-32	33-35	f	nds. f V	in pour	t of fruit	al amoun	To ta
326-35	200			F			-		T	3	1012,50	-131.1	17187.21	393.3	51561,63
351-37	H		1							2	725.00	-102.1		204.2	20848.82
	200	P		H	200			F	F	8	3100.00	-81.1	6577.21	648.8	52617.68
401-42	Н		500	٢		F				5	2062.50	-56.1	3147.21	280.5	15736.05
426-45			1	0	200				T	8	3500.00	-31.1	967.21	248.8	7737.68
451-47	\vdash	۲	H	4	500	H				10	4625.00	- 4.1	16.81	41.0	168.10
476-50			S	4			٢			7	3412.50	18.9	357.21	132.3	2500.47
501-52		4	CR	20	10					11	5637.50	43.9	1927.21	482.9	21199.31
526-55			4	OI.	20	٢	٢			13	6987.50	68.9	4747.21	895.7	61713.73
551-57			٢	٢	¢3					5	2812.50	93.9	8817.21	469.5	44086.05
576-60				500	500	٢				5	2937.50	118.9	14137.21	594.5	70686.05
2 140	7	6	14	27	15	4	200	H	F	13	36082.50			4391.5	348855.57
- hri	70 -8	78 -5	-	513		100 6		L	L	1436				36082.5	Mean =
Cen	1	-5.65	1		Γ	1	.35	2.35	-35	73	Me	٩	$\frac{91.5}{7} = 59.63$	7	Ave. Dev
10 P	60.55	33.90	38.10	9.45	50.25	25.40	18.70	12.35	15.35	264.05	Mean = 1	-	67.31	48855.57 77	6 = 3
Variable Frui D ²	74.82	31.92	7.02	.12	11.22	40.32	87.42	152.52	235,62	_	1436 = 18.68 77 = 264.05 77	77 =			
H 5	523.74	191.52	98.28	3.24	168.30	161.28	174.84	152.52	235.62	1709.34	5.43	4.71			
∑ ₽	5074.96	-510.76	-849.59	128.91	1716.88	810.26	820.93	-1001.59	-1244.89	4945.11		5	71) = .202	345.11 7.31)(4.	. =

1 1

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Correlation of the Per dent of Variable Fruits to Total amount of Fruit; Eureka Strain.

(a and b)

Total Amount of Fruit.

fb Db2	D _b ²	fb	Db	Ъъ		fb	1	15	14	R	3 -	10	10	00	17	6	OT	4	63	
17632.32	2938.72	325		-54.21	1050	6					F	-			F	50	L	1		171-1
17590.68		397		-44.21	1665	9		0			-	-		20	P	F		T	F	181-1
4681.28				-34.21	780	4						T	T	F		500	P		13	191-20
3516.72	586.12	145.	26	-24.21	1230	6	_		1		T	T	500		10		100			201-2
1615.36	201.92	113,	68	-14.21		3_						-		۲		٢	CR	10		211-2
159.48	17.72	37.	.89	-4.21	2025	9		-				-			100	٢		Ci		221-2
268.16	33.52	46.		5.79		3				12	E	150	۲	H	7	1			1	231-2
1745.24	249.32	110.		15.79		7_				2	2	P	F	H			A	-	1	241-2
1330.24	665.12	51.		25.79		2			_	1	I	L					1	20	10	251-2
7685.52	1280.92	214.		35.79	1590		-					I		500	1	1	1		7	261-2
6290.16	2096.72	137.		45.79	825							I				Ci	Vå.	0	500	271-2
9337.56		167.		55.79	855			1				100		-						281-2
8656.64	4328.32	131.	58	65.79	590 2						1		1			100	1			291-30
		-		10.00	(I	L	I							18	301-3
7359.92	7359.92	85.	791	85,79	315				F	-	1	T	-	1	1		0			311-3
			_		(T	T	T								321-3
	11191.52	211.	58	105.79	670 2	,		I			1			1			1		10	331-3
0252.32	2	313.	68	h	7420 76	5	76	A P		1 20	5	9	51	10	8	12	8	8	4	H ₀
	$\frac{17420}{76} = \frac{2313.6}{100}$			14		0.0	578	AR	14	24	55	90	45	80	56	72	40	32	122	faVa
b = 110	76 252.32 76	38.19			Ave.	_	1.00	- In	0000	4.39	3.39	2.39	1.39	0.39	-0.61	-1.61	-2.61	-3.61	-4.61	Per
$C_f = \frac{38}{229}$	•19 •21 = 16 •	66%		Sa 7£ I	Meana =	F.2.000	185.44	0000	G 20 2	8.78	16.95	21.51	6.95	3.90	4.88	19.32	20.88	28.88	18.44	Cent of
			1	110	$\frac{578}{76} = \frac{7}{76}$		10.40	CO. O.	40.00	19.27	11.49	5.71	1.93	0.15	0.37	2.59	6.81	13.03	21.25	Varieb Da ²
			,	$\frac{670}{76} = 2.97$ 39.02 %	7.61 185.44 76 =	0.0.00	T00.00	40.00	90.05	38.54	57.45	51.39	9.65	1.50	2.96	31.08	54.48	104.24	85.00	of Variable Fruits
				7	2.44	020.60	-004.04 005.00	-20.50	462.41	138.64	267.54	52.84	54.14	44 6	69	97.44	375	-95.02	-60.68	× APP

Correlation of the Per Cent of Variable Fruits to Total Amount of Fruit.

Shade Tree Strain.

Total amount of fruit.

Total	amount of	fruit.											
ff Dg2	D _e ²	fe De	D	ff Vf	fe	22	20	17	36	1 1	13	12	The State of State of
3322.36	830.59	115.28	1-28.82	460	4			03				10	111-120
354.19	354.19	18.82	-18.82	125	1				-	1	1		121-130
233.37	77.79	26.46	-8.82	405	3			03		1	7	10	131-140
4.17	1.39	3.54	1.18	435	3	٢		H	-		T		141-150
374.97	124.99	33.54	11.18	465	3	ž.	7	,	-	-1	T		151-160
					0	1							161-170
972.19	972.19	31.18	31.18	175	1						F		171-180
695.79	1695.79	41.18	41.18	185	1 -						H		181-190
619.39	2619.39	51.18	51.18	195	1				1	1	1		191-200
576.43		316.86	1	2445	17	P	Ы	cn	C1	- 2	0 10	20	H ₀
216	on _ 2445	= 143.8	82		268	22	20	85	48	15	26	24	fc Vc
ME	17			P									
Ave. De	v.f = 31	6.86 = 18	8.64	Meanc=		6.24	4.24	1.24	0.24	-0.76	176	-3.76	er
Ave. De		6.86 = 18	8.64	17		6.24 6.24			7	-0.76 0.76		100	er
Ave. De	v.f = 31	6.86 17 = 16 = 23.73	$\phi_{0} = \frac{17}{115.10}$	$\frac{58}{7} = \frac{15.76}{7}$	34.72	6.24	4.24	6.20	7	0.76	3 50	7.52	Dc
Ave. De	v.f = 31	6.86 17 = 16 17 = 23.73 0 = 15.76 15.76	$\phi_0 = \frac{17}{17} = 2.60$	1 7 16	34.72	6.24 38.94	4.24 17.98	6.20 1.54	0.72 .06	0.76 .58	3.52 3.10	7.52 14.14	er
Ave. De σ =	v.f = 31	6.86 = 18 17 = 23.73		$\frac{58}{7} = \frac{15.76}{7}$	34.721 115.101	6.24 38.94 38.94	4.24 17.98 17.98	6.20 1.54 7.70	0.72 .06 .18	0.76 .58 .58	3.52 3.10 6.20	7.52 14.14 28.28	er Cent of Variable Fruits

The coefficient for the Lisbon strain of the Lisbon lemon variety is .2364 as shown in Table 8, while for the Eureka strain of the Eureka lemon variety we have a coefficient of .2608 as shown in Table 9. Apparently these two strains are of nearly equal value as to their ability to produce a uniform and fairly high per cent of green grade fruit.

In the case of the per cent of green grade fruit to the total amount of fruit produced by the Open Strain of the Lisbon lemon variety we have an even greater coherence than in the two previous strains. Here we find a correlation coefficient of .6359 as shown in Table 10, which clearly indicates that the Open Strain of the Lisbon lemon variety is a more reliable producer of a high per cent of green grade fruit than either the Lisbon strain or the Eureka strain, and that as the total amount of fruit increases the per cent of green grade fruit also increases.

As the mass of individual tree performance records increases and also the number of individuals in the population of any class, it is thought that some very interesting and valuable correlations will be found to occur. Especially will this be true if correlations between parent trees and the progeny in the second and third generations can be found to occur.

The coefficients of correlation presented in this thesis are presented to show that certain characters of citrus fruits are dependent upon each other and that in the future other correlations will be found using these as a basis upon which to work.

TABLE VIII

Correlation of the Per Cent of Green Grade Fruit to the Total Amount of Fruit.

Lisbon Strain

Total	Amount of	Fruit in	Pounds.	<u> </u>		86-90	81-85	76-80	71-75	66-70	60-65	•
f D ²	D ²	f D	_D	_ f _V	f	90	85	80	75	70	65	
21957.31	21957.31	148.18	-148.18	485	1				1			471-500
					0							501-530
15551.42	7775.71	176.36	-88.18	10 90	2			2				531-560
3384.91	3 384.91	58.18	-58.18	575	1	1						561-590
2382.33	794.11	84.54	-28.18	1815	3	1	1				1	591-620
9.93	3.31	5.46	1.82	1905	3	3						621-650
7087.57	1012.51	222.74	31.82	4655	7	2	3	1			1	651-680
15286.84	3821.71	247.28	61.82	2780	4	1	2	1				681-710
8430.91	8430.91	91.82	91.82		L		1					711-740
74091.22		1034.56		14030		8	7	-4-		0	20_	1-6
					1784.	700.0	577.5	310.0	72.5		À	M
	$=\frac{14030}{22}=6$					6.41	1.41	-3.59	-8.59		19.09	Per
Ave. δ =	Deviation 74091.22			2 4 Ve •	122.28	51.28	9.87	14.36	8.59		i ca	Cer
c =	$ \begin{array}{r} 74091.22 \\ 22 \\ \underline{58.03}_{633.18} = \end{array} $			22 Deviatio	1784	41.08	1.99	12.88	73.79		364.45	<u> </u>
			' 7	12	1196.74 ; 81-09	328.64	13.93	51.52	73.79		728.86	
			7.37	28 -5.56	2224.36	285.63	438.39	296.96	1272.87		-69.49	M M
$r = \frac{1}{2}$	2224.36 22(58.03) ('	7.37) -=	•2364	6		i	•		i	i	i	1

1 1 i . • . • • .

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TABLE IX

Correlation of the Per Cent of Green Grade Fruit

to the Total Amount of Fruit.

Eureka Strain.

	mount in	Pounds.				81-83	75-77	72-	69-71	66-68	63-	60-62	57-59	RA	FI_RS	48-	
f D ²	D^2	f D	D	fV	f	83	77	74	71	88	5	52	59	500	R	-50	
17632.32	2938.72	325.26	-54.21	1050	6	1			1			0		-		1	171-180
17590.68	1954.52	397.89	-44.21	1665	9			16	- 10	10	A	10	-1	T			181-190
4681.28	1170.32	136.84	-34.21	780	14			1	N				1	10		7	191-200
3516.72	586.12	145.26	-24.21	1230	6		٣		9	1	-	1	0	1	-		201-210
1615.36	201.92	113.68	-14.21	1720	8		14		-	7	7		- 1	10	R		211-220
159.48	17.72	37.89	-4.21	2025	9	H		oj.	\vdash		-	185	-1	1	-	٢	221-230
268.16	33.52	46.32	5.79	1880	8		1	1	٢	200	N	-		1	81	۲	231-240
1745.24	249.32	110.53	15.79	1715	7	1		۲	10	103	0	13		100			241-250
1330.24	665.12	51.58	25.79	510	12		1		1		-1		1	-			251-260
7685.52	1280.92	214.74	35.79	1590	6			5	1	-	-10	37	7	T			261-270
6290.16	2096.72	137.37	45.79	825	3			1			R	9	1	T			271-280
9337.56	3112.52	167.37	55.79	855	3			H		7	7	7					281-290
8656.64	4328.32	131.58	65.79	590	2			4		-	-1			П		0	291-300
7359.92	7359.92	85.79	85.79	315	1				7								311-320
22383.04	11191.52	211.58	105.79	670	12		14	- 9		1	-						331-340
110252.32		2313.68		17420	76	-	1	CI	OT	11	21	1	7	00	n	ca	н
Ave.Dev.	$ \begin{array}{c} 420 \\ 6 \\ 2313-6 \\ 76 \\ \hline 76 \end{array} $	8 = 30.4		Mean = 473; 76	32	82 19.74	-	-				100			-10	147 -13.26	Per Cent
1	10		100	150	385.92	19.74	13.74	32.22	38.70	52.14	36.54	13.86	29.82	58.08	51.30	39.78	nt of Green
			#	= 62.26 385.92		389.67	188.79	115.35	59.91	22.47	S .03	1.59	18.15	52 71	105.27	175.83	en Grade
				5.08	3154.92	389.67	188.79	346.05	299.55	247.17	63.63	17.49	127.05	421 68	526.35	527.49	e Fruit.
	375.17 3.19)(6.44	- = ·2608	3		14875.17	-83.11	-332.64	1475.35		538.89					728.97	697.87	X

TABLE X

Correlation of the Per Cent of Green Grade to Total Amount of Fruit

Open Strain

	Amount of	Fruit.				71-1	66-70	61-65	56-60	51-55	41-45	
f D2	D2	f D	D	fV	. f	5	0	5	0	5	5 6	
53258.67	17752.89	399.72	-133.24	1035	3	1	-	H		1	5	331-360
85267.92	10658.49	825.92	-103.24	3000	8	1	H	20	H	2 0	0	361-390
21456.63	5364.09	292.96	-73.24	1620	4		H	H		F	- F	
20566.59	1869.69	475.64	-43.24	4785	11	1	Ö	Ca	53	+	T	421-450
1752.90	175.29	132.40	-13.24	4650	10	-	20	CI	CI	0	1	451-480
3089.79	280.89	184.36	16.76	5445	11	H	4	Oi		7	+	481-510
39356.82	2186.49	841.68	46.76	9450	18	200	52	+02	20	+	+	510-540
35352.54	5892.09	460.56	76.76	3330	6	CR	Ci		1	+	+	541-570
68386.14	11397.69	640.56	106.76	3510	0	4	Н	H	\neg	+	+	571-600
328488.00		4253.80		36825	27	10	24	24	9	2 4	n	
Mean = 36	825 = 478	.24			4891	730	1632	1512	522	272	43	£ V
Ave.Dev.	77	_ = 00 00	9	Me Av		9.48	4.48	52	5.52	10.52	-20.52	Per Cent
77				Mean = 4891 77	404.68	94.80	107.52	12.48	49.68	45 08	20.52	of Green
			777	63.		89.87	20.07	.27	30 47	18.042	421.07	de
r - 2212	20.13	CREC		50 50 50 50 50 50 50 50	3688.79	898.70	441.28	6.48	274 23	1204.35	421-07	Fruit.
	5.31)(6.92	= .6359			22120.13	7276.85	1398.84	24.84	30 880 11.00	8477.02	1502.88	M M

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The figures from which these correlation coefficients were obtained were taken from the United States Department of Agriculture Bulletins Number 813 entitled "A Study of Bud Variation in the Eureka Lemon", and Number 815 "A Study of Bud Variation in the Lisbon Lemon, which are an account of the work of Mr.A. D. Shamel and his associates including the writer, in the work of the improvement of citrus fruits thru bud selection.

Isolation of Types thru Bud Selection.

In order to prove the theory that citrus fruits could be improved and that the various strains of the various citrus varieties could be isolated thru bud selection two variety orchards have been established, one in Riverside and one in Corona California. The buds from which these trees were propagated were fruit wood buds taken from every different strain of each of the citrus varieties which had been studied in the bud selection work.

Many of these strains were commercially worthless to the grower, others produced fruit of undesirable shape, low in acidity or sugar content, coarse in texture, and some were the very best that have so far been discovered in the citrus orchards of California.

These two variety orchards were planted in May 1918 and the securing of individual tree performance record data was begun by the writer in May 1920 when the trees were just two years old. Only the most productive strains have borne much fruit but all of the trees have borne enough to enable us to have full confidence in the theory that the different strains of the citrus varieties can be and have

been isolated thru careful bud selection.

Conclusion.

Bud selection has proven to be of very great value to the Citrus industry of California.

It has taught the growers that there are many worthless trees in their groves which lower the average production of the grove and which they can ill afford to care for.

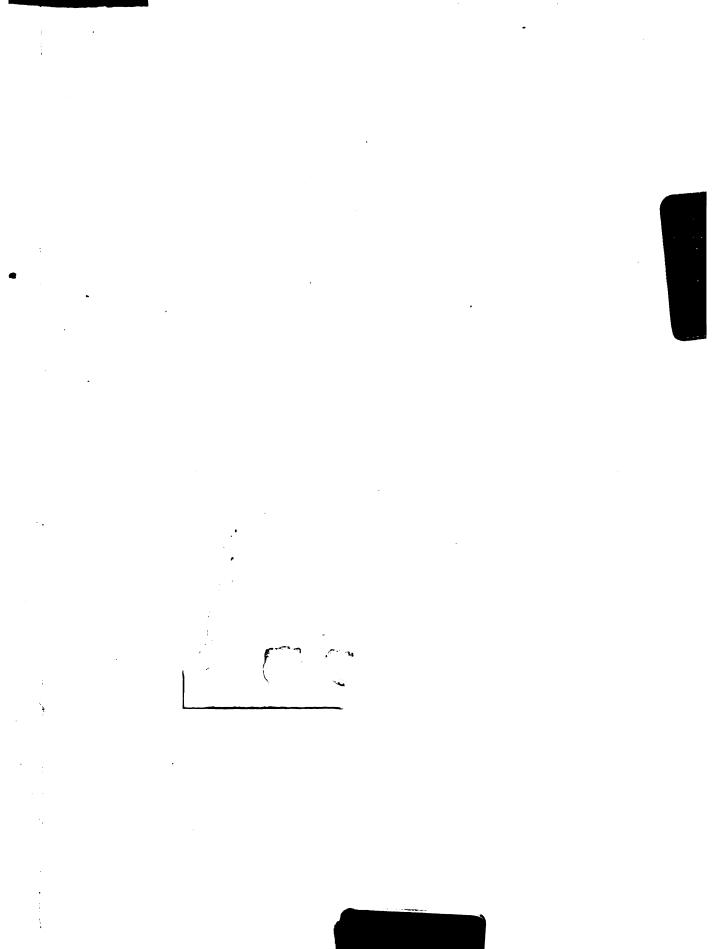
Tree performance records as a means of determining the productive and the non-productive trees has become an established part of the work in the largest and most successful of the citrus plantings.

has been put on a reliable and accurate basis. Formerly buds were secured from the best looking and fastest growing trees because the buds were large and easy to handle but tree performance records have proven that trees of this type are usually drones or shade trees and that buds taken from them produce progeny of the same kind. All this has been changed for the better so that now buds for propagation are taken only from the fruit bearing wood of the most productive trees from which tree performance records have been secured for a period of at least three consecutive years.

Nurserymen have been relieved of the responsibility of securing their own buds as this operation has been taken over by the growers themselves thru their organization the California Fruit Growers Exchange, commercial nurserymen now eurnishing the growers with trees

the parentage of which is a matter of record often in their own groves.

It is hoped that this thesis has presented some of the most valuable phases of bud selection and that it has made clear that thru careful bud selection the valuable strains of the citrus varieties may be perpetuated and improved and the worthless eliminated. y use with



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