Lemon Cuttings with Fruit Rooted

means of prolonging useful life of lemon fruits
developed at Riverside valuable aid in research

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Light green Eureka lemon fruits—
with 1" to 2" stems—were rooted suc-
cessfully in an experiment designed to
develop a means of prolonging the use-
ful life of lemon fruits for studies of a
physiological, biochemical, and entomo-
logical nature.

Detached lemon fruits are utilized in
many general and specialized research
problems but a major drawback to their
use has been the relatively short period
during which they would remain turgid
and more or less normal.

A simple solution to the problem
seemed to be the production of roots on
stems attached to the fruits. Such a tech-
nique should not only result in maintain-
ing healthy turgid fruits for long periods
under the usual conditions of high hu-
midity but also should permit studies
involving low relative humidity.

An experiment was initiated to deter-
mine the rooting response of lemon cut-
tings with fruits attached.

On February 7, 249 medium-sized
lemons—ranging in color from yellow
to light-green—were clipped from sev-
eral Eureka lemon trees. Stems on the
fruits varied from 1" to 2" in length,
and approximately half of them had one
or two leaves attached.

The fruits were segregated into three
color groups of yellow, silver, and light-
green. The silver category is a packing-
house designation for yellow fruit which
still retains a slight amount of green
color, usually at the ends. Each color
group was subdivided into cuttings with
and without leaves. These groups were
further divided into groups to be treated
with a rooting preparation—0.2% naph-
thaleneacetic acid on talc, ANA—or left
untreated. The cuttings were placed in a
rooting bed, with sand as a rooting me-
tium, and were usually sprinkled two
or three times daily during the rooting
period.

A count of rooted cuttings and roots
was made on March 6, four weeks after
the start of the experiment. Cuttings with
light-green lemons attached rooted most
readily, whereas those with yellow
lemons rooted least readily. The presence
of leaf tissue appeared to be unnecessary
in the cuttings with light-green and silver
lemons but necessary for root formation
in the cuttings with yellow lemons. Naph-
thaleneacetic acid increased the percent-
age of rooted cuttings in all comparisons.

Leafy lemon cuttings have been re-
ported to root better than leafless ones,
even when treated with a growth regula-
tor such as indolacetic acid.

In the present study it was found that
leaves were not essential for the rooting
of cuttings when light-green or silver-
colored lemons were attached.

It appears that immature lemon fruits
can supply the same factors as are ordi-
arily supplied by the leaves. Sugars and
nitrogen are present in both green and
yellow lemons. Whether these factors be-
come less available for mobilization to
the base of the cutting as the fruit ma-
tures, or whether other factors for root-
ing are concerned requires further in-
vestigation.

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WATER SPOT

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In the experimental block at Pomona
application of the treatments was made
late in the season. A design of one pair
of trees per plot replicated three times
was laid out in a block with over-all di-
mensions of two by 33 rows.

The date of harvest in this block
was in mid-March when the rains were not
in plots treated with parathion wettable
powder than it was in those sprayed
with c.i.

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