



He Doesn't Like Weeds

**W**EEDS, weeds, weeds. How many a hopeful householder, now joyously spading his garden and sowing his seeds, will pause two or three months hence to straighten his aching back and mop his sweating brow, the while he glares malevolently at the never-conquered hosts of weeds, weeds, weeds! "Thorns also and thistles shall it bring forth to thee," was the severest part of the primal curse laid upon the earth's first gardener.

Hands across the sea—weed-stained, briar-scratched hands—will greet the new publication of Sir Charles Vernon Boys' book, *Weeds, Weeds, Weeds*. Sir Charles is an eminent physicist, with right to sign himself LL.D., F.R.S., Hon. F.R.S. Edin., and Fellow of the Imperial College; but in the presence of his green *bêtes noires* (if a bilingual Irishism may be permitted) he is just another baffled and exasperated sweating son of Adam.

It is distressingly interesting to see how many of the weeds on Sir Charles' list are all too familiar in our own gardens and lawns. We meet three species of plantain, two of thistles, as well as the sow-thistle, and the ubiquitous dan-

delion, wild mustard and that clinging, strangling vegetable devil, bindweed.

As for the latter, afflicted American farmers in the West might assure Sir Charles that he "ain't seen nothin'." An area half the size of New York State has been mastered by this one weed so completely that its farms can't be made to produce even a mortgage, and it would cost more than the land is worth to get the bindweed off it.

Britain is to be congratulated, too, if the characterization of ivy as "the one

and only tree weed" is really correct. Our trees have to contend not only with introduced English ivy but with native wild grapes, woodbine, bittersweet, poison ivy and (in the eastern states) Japanese honeysuckle.

But Sir Charles is no mere moaner and wringer of hands. He tells of herbicides which he has used successfully, and (a Scotch touch, perhaps) of turning pulled-up weeds into useful fertilizer in a solidly-built compost bin.

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HORTICULTURE

## Don't Plunge, Is Advice On "Dirtless Farming"

**M**AKE haste slowly, is the gist of the advice to persons interested in growing plants by the water-culture or "dirtless farming" method, offered in a new University of California circular prepared by Drs. D. R. Hoagland and D. I. Arnon of the California Experiment Station staff.

They suggest that the water-culture method is being somewhat over-promoted, and that some of the claims made on its behalf, especially by advocates with little training in science, are doing the idea more harm than good. For certain crops in special circumstances, especially for greenhouse production, they can see possible profit in the method, but they insist upon the importance of expert supervision:

"Indispensable to profitable crop production by the water-culture method is a general knowledge of plant varieties, habits of growth, and climatic adaptations of the plant to be produced, pollination, and control of disease and insects; in other words, the same experience now needed for successful crop production in soils."

To anyone who may be contemplating water-culture production on a commercial scale, Drs. Hoagland and Arnon offer the sensibly conservative advice: try it on a small scale first.

For experimenters who want to try it in crocks or two-quart jars, just for fun, and especially for teachers' use in classroom demonstration, the California scientists' circular offers many practical, common-sense suggestions, including a formula for mixing the mineral-salt solution that is put in terms of common ounces and teaspoonfuls, instead of the usual metric units, which may be diffi-

cult for some beginners to handle.

For the immediate future at least, the arousing of interest in the ways of plant growth and the necessities of plant nutrition, demonstrable in small-scale water-culture "gardens," may well turn out to be the greatest general benefit arising from the whole broadcast discussion of "dirtless farming".

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AGRONOMY

## Soil Temperature Governs Distribution of Grass

**B**LUEGRASS lawns grow best in the North, Bermuda grass lawns best in the South largely because of the soil temperature preferences of their roots. This has been determined by cooperative experiments by scientists of the U. S. Department of Agriculture and the Missouri Experiment Station, in which a number of grass species were grown under conditions of controlled soil and air temperatures.

Kentucky bluegrass roots made their best growth at a soil temperature of 60 degrees Fahrenheit and stopped at 80 degrees. This explains the "summer dormancy" of bluegrass lawns. Canada bluegrass showed a preference for temperatures about 10 degrees lower than those favored by the Kentucky variety.

Bermuda grass did not start good growth until both soil and air temperatures were 60 degrees or higher, and it continued to thrive at 100 degrees. It could not, however, tolerate the chilly 40 degrees which was good enough for at least some growth on the part of Kentucky bluegrass.

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### PATON RANCH

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