ENDNOTES

1 For more information on the potential yield figures in column E of the Master Charts and how they were and are determined, see Ecology Action’s “Yields” information. Available for $1.00 plus a self-addressed long envelope with two first-class stamps to: Ecology Action, 5798 Ridgewood Rd., Willits, CA 95490.

2 V. T. Aaltonen, Boden und Wald (Berlin: Parey, 1948).

3 One good foot-treadle-powered mini-thresher is available from CeCeCo., P.O. Box 8, Ibaraki City, Osaka, Japan, or from Christy Hunt Agricultural, Ltd., Foxhills Industrial Estate, Scunthorpe, South Humberside, DN15 8QW, United Kingdom.


5 Ibid., p. 460; and other reference sources.

6 Column I ÷ Column B ÷ Column C.

7 The number of plants you will need may vary. The rise of a curved bed surface (approximate 10-inch rise) adds up to 10% to the planting surface, and a “flat-topped” raised bed adds up to 20% to the planting surface. Also, the hexagonal “offset” spacing uses up less space than spacing where plants are lined up opposite each other. Up to 159 plants fit in 120 square feet of curved surface on 12-inch (1-foot) centers, rather than fewer plants. You will probably have more plants ready than you need when using Column I to plan, so use the best plants first and save the rest for “spotting” areas that lose plants, or give the extras to friends. To calculate the distance between rows on offset spacing, multiply the spacing by 0.87. To calculate the number of plants on offset spacing in a flat bed, first calculate the number of plants on “square” spacing, then multiply by 1.13.

8 Less seed may be necessary if the seed of a given variety is particularly small and/or if there is not much rise to the bed.

9 Estimates based on our experience and research. Use lowest figure if you are a beginning gardener; middle if a good one; highest if an excellent gardener with exceptional soil and climate. (The testing and development process requires a long time and has involved many failures. Its direction, however, has been encouraging over the years, as the soil, our skills, and yields have improved, and as resource-consumption levels have decreased. There is still much left to be done.)

10 The approximate plant yield averages in some instances are much lower than one would expect. For example, a beginning gardener will get carrots much larger than the .04 lb noted, but all of their carrots will probably not germinate as well as a good or excellent gardener’s will and they will probably not be as large. Therefore, it is estimated that the average weight of each carrot would be .04 lb, assuming the bed produces 2,507 carrots.

11 Column E 3 Column I 3 0.01.


13 Numbers in quotes are approximations from other data, because official data are not available for this crop.

14 Assumes flat with internal dimensions of 14 inches by 21 inches (or 273 square inches) for both 3-inch- and 6-inch-deep flats, in which at least 250 plants fit on 1-inch centers and 60 plants on 2-inch centers; if half-sized flats are used, 125 plants fit on 1-inch centers and 30 plants on 2-inch centers.

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### Master Charts and Planning

<table>
<thead>
<tr>
<th>Crop Food Needed</th>
<th>Materials Needed</th>
<th>Yields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pounds</td>
<td>You select</td>
<td>approx. no. Plants You need</td>
</tr>
<tr>
<td></td>
<td></td>
<td>approx. square Feet You need</td>
</tr>
<tr>
<td></td>
<td></td>
<td>approx. no. Flats You need</td>
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<tr>
<td></td>
<td></td>
<td>approx. Ounces/Volume seeds You need</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Your actual Yield per 100 square Feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Your actual Yield Compared with U.S. average</td>
</tr>
</tbody>
</table>

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15 When seeds are broadcast into a flat, it is possible to reduce the number of flats used. To calculate the number of flats needed for broadcast seed, determine the number of plants you need, divide by the number in Column L2, then divide by the number in Column L3. Broadcast the needed amount of seed evenly into the number of flats just calculated.


17 The Approximate Weeks to Maturity in Ground generally remains the same whether seeds are started in a flat or in a bed because the number of weeks to maturity indicated on the seed packet assumes optimal growing conditions that are rarely present.


19 Based in part on standard field figures from James Edward Knott, *Handbook for Vegetable Growers* (New York: John Wiley & Sons, 1975), pp. 198–199, in combination with a multiplier factor based on our research and experience; and other reference sources. The result, however, is preliminary, for your guidance, and very experimental. If growing seed, remember to adjust for the germination rate when determining the amount to grow for your use.

20 Column BB ÷ Column F.

21 Column BB ÷ Column E 3 100. Use the lowest figure in Column E if you are a beginning gardener; middle if a good one working with good soil; highest if an excellent gardener working with excellent soil.

22 Column CC ÷ Column L2 or M3.

23 Column DD 3 Column D 3 .01.

24 Column GG ÷ Column G.


26 In warm weather and/or with a good mini-greenhouse, 6 to 8 weeks; in cooler weather outdoors without a mini-greenhouse, 6 to 8 weeks; 9 to 12 weeks.

27 Johnny's Selected Seeds.

28 Smaller secondary and tertiary heads may also be used and may double the yield.

29 The Redwood City Seed Company carries an interesting tropical variety, Snow Peak, which heads only in the summer. A good variety with small heads for out-of-season growing.

30 Produces 4 times the general protein (not amino acids) and 8 times the calcium (free of oxalic acid) per unit of area compared to the milk produced by a cow or a goat fed on an equal area of alfalfa.

31 Be sure to obtain “seed” Irish potatoes; many potatoes in stores have been treated to retard sprouting. Sprout without soil in a 3-inch-deep flat or box with small air spaces between the tubers in a warm, dry, airy location in indirect light for up to 1 month, until sprouts are about 1/4 inch long. Caution: Avoid conditions of 90% humidity and 70°F or more, for a period of 24 hours; they can encourage blight. Use pieces of potato weighing at least 1.5 to 2 ounces. Each potato piece should optimally have 2 or 3 sprouted eyes. For planting purposes, tubers are in dormancy for 5 to 20 weeks after harvest. For planting procedure, see note on p. 26.
32 Be sure to obtain “seed” sweet potatoes; many potatoes in stores have been treated to retard sprouting. Sprout in wide-mouth canning jars with water. Insert toothpicks into sweet potatoes around their outside to hold the upper half out of the water. Roots form on the portion in the water, and small plantlets grow from the eyes on the upper portion. Each 8-ounce sweet potato will make 3 to 4 of these “starts.” When a shoot is about 1 to 1 1/2 inches long, nick it off along with a very small piece of the sweet potato where it is attached, and plant it in a 3-inch-deep flat on 2-inch centers so only the last set of leaves is above the surface of the flat soil. Whole sweet potatoes may also be sprouted side by side in a flat; approximately 4 to 8 flats are needed for a 100-square-foot bed. When the seedlings are 7 to 9 inches tall, transplant them into the growing bed so at least 6 inches of the stem is beneath the soil.

33 Bountiful Gardens.

34 Use the French variety (Vilmorin’s Cantalun—orange-fleshed) or the Israeli variety (Haogen—green-fleshed). Both have a smooth exterior without netting. This minimizes rotting.

35 Stokes Seeds.

36 Try the torpedo onion. Its long shape is particularly suited to intensive raised-bed gardening and farming, and it can produce twice the yield per unit of area.

37 Irish potatoes. Place your order for the entire year in January in order to ensure availability. Specify untreated seed and delivery date(s) desired (1 month before planting, so sprouts can develop properly).

38 Sweet potatoes: Jewel, Centennial, Garnett, and Jersey varieties. Order in September untreated, number 2 size, for the following summer in 40-pound boxes, to ensure availability. Joe Alvernaz, P.O. Box 474, Livingston, CA 95334, is a good source, although not organic. Ask for prices and include a stamped, self-addressed envelope.

39 Burpee’s Triple Treat variety with hull-less seeds. No shelling of nutritious and tasty seeds!

40 Burpee’s Sparkler variety: red top with white bottom half. Good-looking.

41 Burpee’s New Hampshire Midget variety.

42 Native Seeds/SEARCH.

43 Vermont Bean Seed Co.

44 Fedco Seeds.

45 R. H. Shumway Seed.

46 J. L. Hudson, Seedsman.

47 If overwintering.

48 In some tropical regions.

49 Six inches deep in areas with cooler nights.

50 Some calorie values determined from USDA website.

51 Including for fodder.

52 Longer harvest period is for sequential harvesting of separate stalks on each plant as stalks become mature.

53 As high as 43 weeks in some other countries.

54 Polish Jenn and German Porcelin hardneck varieties: 15/30/60.