

Number of Seeds per Mature Fruit for Different Types of Cucumber

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In a plant breeding program, it is useful to know the number of seeds per fruit to expect when plants are harvested at the mature fruit stage. As a rule of thumb, we generally count on 100 seeds per fruit for the American pickling and slicing types. Seed yield per fruit increases as the plants are given more room to grow in the field, or as larger pots are used in the greenhouse (1).

In order to determine the seed yield from different plant and fruit types, we measured 8 fruits from each of 15 populations developed in the North Carolina breeding program. The populations included pickling, slicing, Middle-Eastern (Beit Alpha), and Japanese trellis (burpless) fruit types. Plant types included tall-indeterminate, multi-branched hardwickii (*Cucumis sativus* var. *hardwickii*), and dwarf-determinate.

The number of seeds per fruit varied from 24 to 423 in the populations evaluated. The elite pickle population from North Carolina had few seeds per fruit, reflecting the emphasis on slow seed development and small seedcell size. The elite pickle population from Wisconsin had the most seeds per fruit, averaging 330. In most cases, slicing cucumbers had more seeds per fruit than pickling cucumbers with similar backgrounds. For example, the wide base slicer population had 191 seeds per fruit vs. 161 for the wide base pickle population.

It appears that one could expect 150 seeds per fruit from field-grown plants, except in those populations selected for small seedcell, where 100 seeds per fruit would be reasonable. However, as many as 15% of the fruits might be deficient in seed number.

Literature Cited

1. Wehner, T. C. and R. R. Horton, Jr. 1986. Effect of pot size on growth and flowering of cucumbers in the greenhouse. *Cucurbit Genet. Coop. Rpt.* 9: 47-50.

Table 1. Number of seeds per fruit from different cucumber types².

Popula- tion	Cucumber type	No. seeds per mature fruit		
		High	Low	Mean
Pickling cucumbers				
NCWBP	Wide base	273	24	161
NCMBP	Medium base	236	73	151
NCEP1	Elite 1	220	39	104
WIEP1	Elite Wisconsin-U.S.D.A.	423	258	330
NCEDP	Elite determinate	388	119	217
Slicing cucumbers				
NCWBS	Wide base	234	130	191
NCMBS	Medium base	223	118	183
NCES1	Elite 1	262	235	248
NCEDS	Elite determinate	185	117	147
Other type cucumbers				
NCH1	Hardwickii-pickling type	354	260	279
NCR1	Relish (large fruits)	309	77	177
NCBR1	Belly rot resistant	348	295	310
NCBA1	Beit Alpha	222	116	185
NCJT1	Japanese trellis	235	102	147

²Data from 8 fruits per population.