



Precision seed scoops, calibrated



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Summary

A set of scoops from 0.1 to 150cc for filling seeds into packets by hand

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We believe that there should be many, many small seed companies worldwide serving their own local communities. This will encourage diversification of the seeds supply and avoid monopoly control of agriculture.

Accurate scoops are a really vital thing when you're starting out a seed company because it is important to give people the correct number of seeds but not too many otherwise you cannot make up enough packets. And talking to other people I know who are running companies similar to Real Seeds, getting hold of suitable scoops is actually a real problem.

So I have designed a set of 3-D printable scoops which I am releasing here under a creative commons licence. They have been made to be suitable to print on most moderately good quality printers, using normal filament. These days enough people have 3-D printers that I think most people will be able to find a friend of a friend who will print these for them.

The key thing about this design is that printed on the bottom of every scoop is its volume in millilitres (=cc), so it is very easy to choose the right

one and to make a note of what you used for the next time you come to pack the same seed. The complete set is about 70 scoops, the smaller ones have handles and the larger ones are plain cylinders for easier handling.

- Use PLA filament (not PETG).
- You should use a 0.2 mm layer height, and there should be no support necessary.
- The handles are printed separately from the bodies of the scoops and sized to be a tight snap fit at 0.2mm layer height.
- With the larger scoops, you may want to print half of each set at a time, doing two 11-hour prints rather than one 22 hour one.

Assembly

The handles are slightly different for the different diameter scoop families, because they form part of the internal bucket wall, and must therefore match its radius. Make sure you put the right ones on the right scoops - it is simplest to assemble each print run as you make it.

If you want to smooth off any rough surfaces, you must sand them underwater, as the heat from sanding or filing will melt the surface. It is best to use fine sandpaper for longer, and sand slowly. Any mis-printed edges or strings can be trimmed off with a sharp craft knife.

The handles should be a tight pop-in fit. You might have to press really hard to get them all the way home but surprisingly, the buckets do not break.

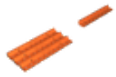
If you really can't get the handles in, first try filing very slightly on the flat upper surface of the triangle plug that sticks out of the handles. This is the place where filing will make it easier to put in without making it too wobbly. If the handles are loose, you can add a dot of superglue or epoxy.

Photos showing them in use at different seed companies in USA, UK, and Europe. If you find these useful please give it a star rating, and upload a photo of your print to make them more visible online. Enjoy!

Model files

hand-scoops-set-a-new-2022-01-to-10cc.3mf





angled-racks-hand-scoops.3mf



volumetric-set-e-18-to-45cc.3mf



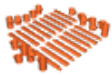
volumetric-set-f-50cc.3mf



volumetric-set-d-50-to-16cc.3mf



hand-scoops-set-b-10-to-17cc.3mf



volumetric-set-c-18-to-45cc.3mf

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