

## Tips for planting with Planet Jr.

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Getting a uniform, healthy, and quick stand from direct-seeded crops is essential for profitable farming. It takes money and time to prepare beds for planting, so it is important to not to waste space. Unevenly germinated beds are an inefficient use of limited planting area. Untimely or spotty germination affect expected harvests dates and overall yield potential. Seeds that get a poor start can be more susceptible to disease and pest pressure. On our four acres of annual vegetables, we find most of these problems can be avoided with a fairly simple and inexpensive tool: the Planet Jr. walk-behind push seeder.

During our initial season farming eight years ago, cash flow was tight so we opted for the cheap and seemingly simple Earthway seeder. While this tool may work well for many farmers, we found the plastic construction too light to attain good seed-to-soil contact. Small seeds, such as arugula and turnips, got caught behind the seed plate and the seed hopper and were ground up into tiny pieces. The tool's light weight makes it easy to push down a bed, but it conversely lacked the heft to drive through any residual vegetative matter. Where the tool became clogged, we got empty patches in the row. That translated into missed opportunity and lost income.

After becoming frustrated with meager stands, we decided to research other options. We soon realized that precision seeders like Stanhay were too expensive for our scale. We were looking for a versatile seeder capable of handling a wide range of seed sizes and shapes. A walk-behind Planet Jr. became the best option as it is affordable (around \$400 from Market Farm Implements), and from our past experiences working on other farms, does a great job. We chose to get a walk-behind instead of a tractor-mounted Planet Jr. as it is more convenient for the size of our operation. Since putting it to use, we have not looked back. It quickly paid for itself in a matter of weeks by achieving standardized germination rates and reliable coverage.

Over the years, we have come to plant more and more crops with the Planet Jr. We started off just planting the usual spring crops like radishes, arugula, lettuce, spinach, etc., and now we plant almost every summer crop too, except zucchini (for which we use a jab planter). When we plant corn, melons, watermelons, winter squash, and cucumbers with the Planet Jr., we select a hole size that releases about three seeds per foot. After the seeds have germinated and are several inches high, we thin them to their required spacing. Although this creates a bit more work up-front, getting a perfect stand makes it worth the effort. Ideally, we would like to plant summer squash and zucchini with the Planet Jr. as well, but the seed is too big and expensive.

The Planet Jr. is a drill-type seeder. There are three seed plates for a total of almost 40 differently sized seed holes. There is a ground-driven brush mechanism in the seed hopper, so when the seeder is moving on the soil the brush continuously pushes the seed into the hole. A shoe creates a "V" channel/furrow where the seed is deposited. This shoe can be lowered and raised depending on the size of seed that is being planted and the desired depth. Two arms behind the shoe sweep soil to the center to cover up the seed, and a rear packing wheel firmly settles the soil.

Perhaps the trickiest key to success with the Planet Jr. is finding the right seed hole size for the crop. The inside of the seed hopper lid comes with a list of standard crops and suggested seed hole sizes. We have found most of these to be ball-park figures with several holes sizes of give or take. It took help from other growers and many years of experimentation to arrive at our ideal list. Below is a list of the seed hole sizes we use with some of the specific varieties mentioned (all with the planting shoe depth on the second notch from the bottom - except where noted):

## Spring Crops

Arugula (Astro) - 3

Mizuna (Kyona) - 3

Turnips (Hakurei)- 3

Rapini or Broccoli Rabe - 4

Kale (Red Russian or Siberian)- 4

Pac Choy - 5 (for cutting as baby greens)

Carrots (Nelson) - 9

Radish (Cherriette) - 11

Lettuce (mix) - 12 (good thick stand)

Spinach (Tyee) - 18 (good thick stand for baby)

Beets - 19

Chard - 23

Pea Shoots - 36

## Summer Crops

Beans (Jade) - 36 (notch 4)

Corn (Incredible) - 36 (notch 4)

Okra (Clemson Spineless) - 21

Cucumber - 17-18

Watermelon (Crimson Sweet or Sugar Baby) - 21-22

Melon - 20-22

In some cases, different varieties of the same crop will call for separate seed holes due to variation in the seed shape and size. We also adjust the hole size if the seed package indicates a low germination rate.

As with most seeders, it is important to start with a clean, smooth seed bed with little crop residue. We till using a tractor-mounted rototiller and then make raised beds with a bed maker. The bed maker firmly packs down the soil. We like to plant after a rain when there is residual moisture, and if possible, avoid planting just before a heavy downpour to prevent compaction. We fit the back of our bed maker with bolts that extend an inch into the bed, marking a shallow line in the soil we use as a guide with the seeder. We plant one, two, or four rows per bed. Beds are on sixty inch centers, and the space between rows can be adjusted by moving the bolts. Straight lines for planting make it possible to use a tractor-mounted cultivator later for weed control.

Planet Jr. hoppers can be mounted to a three-point hitch. However, we decided to go with the walk-behind model for several reasons. First, we wanted to minimize tractor passes in the field. Second, we plant multiple crop varieties per bed. We feel it is much easier to change plates on the walk-behind model than from the tractor. In some cases, we may plant two different crops in a single row (half a row per crop). It is also faster to adjust when switching between one, two, and four- row beds.

Our four hundred dollar investment turned out to be one of the best decisions we've made. We find the Planet Jr. push seeder to be the ideal tool for our small scale and recommend it for growers looking to achieve productive stands at a relatively low cost.