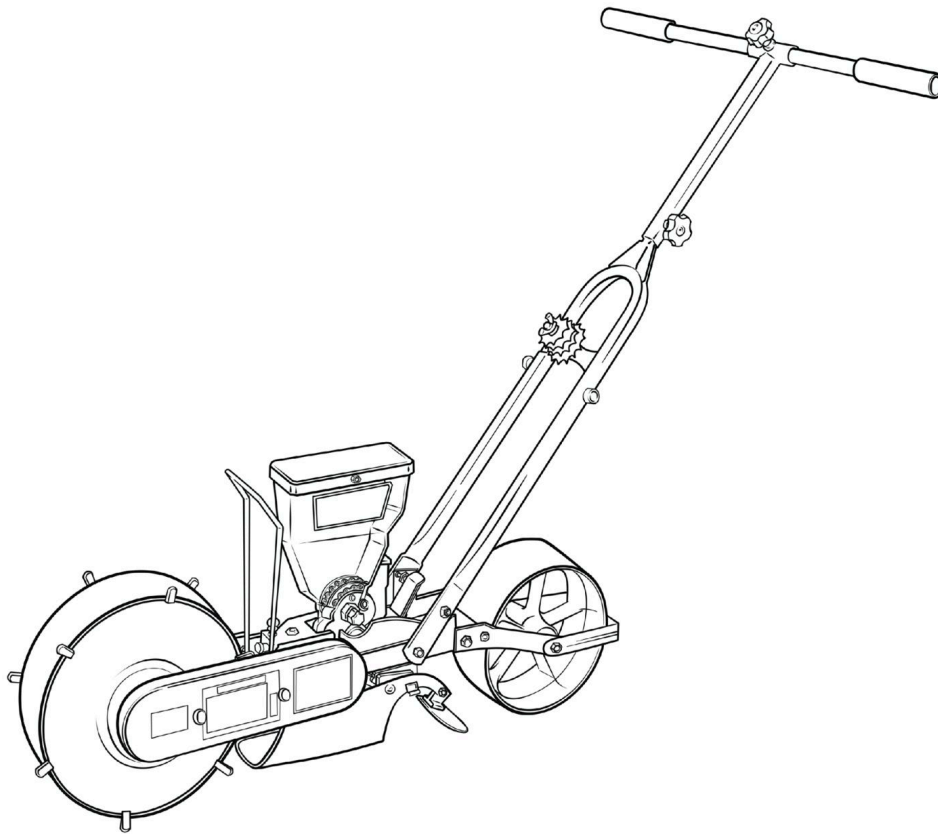


FREE GUIDE FROM MODERN GROWER

# The Jang Seeder Handbook

A complete guide to choosing, setting up, using and caring for the Jang JP1 and JP5 seeders.

**BY DIEGO FOOTER • MODERN GROWER**

Illustrations by Arielle Roxas. Seeding settings developed with Erich Schultz of Steadfast Farm, with contributions from farmer Seth Davis. Second edition, October 2026.

## INTRODUCTION

## Why the Jang seeder

A seeder is one of the most important tools on a market farm or large homestead. A good one plants thousands of seeds in minutes, making direct seeding the cheapest and fastest way to get a crop in the ground.

The Jang has become the standard push seeder for market farmers. Its heavy steel frame, interchangeable seed rollers and sprockets, and accurate singulation (dropping one seed at a time) set it apart.

### How it works

The Jang cuts a furrow, drops seed into it at a set spacing, then covers and firms the soil, all mechanically as you push. The roller and sprockets you choose set the seed size and spacing. Once it's set up, you can plant 100 feet of row in under a minute.

### What a Jang does for your farm

- **No thinning.** Accurate singulation means no going back to thin crowded rows.
- **Less seed.** Plant only what you need, and know exactly how much seed each bed takes.
- **Raw seed works.** No need to pay extra for pelleted seed, and raw seed often germinates better.
- **Better crops.** Even spacing means less competition, better airflow and higher yields.
- **Plant on schedule.** It works in soil that is too wet, too dry, rocky, fluffy or full of residue, so succession plans stay on track. No-till growers can seed into beds that haven't been conventionally prepped.
- **Move fast.** The weight and gearing let you walk quickly without losing traction or accuracy.
- **Built to last.** Steel construction with replaceable parts, and many adjustment points.

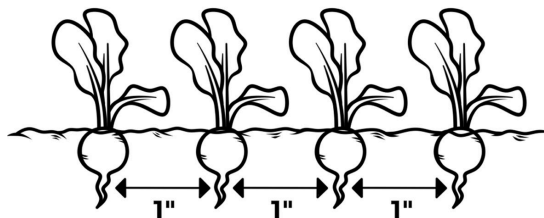
### In this handbook

1. What you can plant
2. Seeding chart
3. Parts of the Jang
4. Sprockets and spacing
5. Seed rollers
6. Brush, guide plate and testing
7. Custom rollers
8. Multi-row seeders and the JP5
9. Comparing direct seeders
10. Tips and tricks
11. Care and maintenance

## CHAPTER 1

## What you can plant

The JP series handles the most common direct-seeded market crops: arugula, lettuce, carrots, radishes, turnips, spinach and kale all come out well. Round, oval or pelleted seeds give the most accurate results, but most Jang growers use raw seed with the right roller. Larger seeds such as corn, okra, peas, sunflowers and beans work too.



Crops like radishes can be planted precisely 1" apart.

### Seeds that are harder

| SEED TYPE           | EXAMPLES                                | WHAT TO EXPECT                                                                                 |
|---------------------|-----------------------------------------|------------------------------------------------------------------------------------------------|
| Long or irregular   | Many flower seeds                       | Don't fit the bowl-shaped holes. Not a good fit.                                               |
| Textured            | Beets, chard                            | Possible: raise the brush slightly so seed isn't jammed or broken.                             |
| Flat and flaky      | Tomatoes, peppers                       | Clump and don't singulate. Usually transplanted anyway.                                        |
| Tiny                | Amaranth                                | Too small for accurate pickup; tends to overseed. Tobacco-sized seed is about the lower limit. |
| Very large and flat | Pumpkin, lima beans, some heirloom corn | Too big for the largest JP rollers. Jang's TD series, which uses seed plates, handles these.   |

#### SEEDING DEPTH RULE OF THUMB

Cover seed with soil about as thick as the seed itself for small seed, and two to three times the seed's width for larger seed. A 1/2" bean goes about 1" deep.

## CHAPTER 2

## Seeding chart

These settings come from professional market farmer Erich Schultz of Steadfast Farm. They are a proven starting point: use them, then adjust for your seed lot and soil. Rows are for a 30" bed. Sprockets are listed front x rear.

## Market garden crops

| CROP                     | ROLLER | SPROCKETS (FRONT X REAR) | ROWS PER 30" BED | BRUSH |
|--------------------------|--------|--------------------------|------------------|-------|
| Arugula                  | X24    | 14 x 9                   | 10               | Down  |
| Baby brassica greens mix | F24    | 14 x 9                   | 10               | Down  |
| Baby kale                | F24    | 14 x 9                   | 10               | Down  |
| Baby spinach             | LJ24   | 14 x 9                   | 10               | Down  |
| Carrots                  | X24    | 14 x 10                  | 6-10             | Down  |
| Lettuce (loose-leaf)     | F24    | 14 x 9                   | 10               | Down  |
| Mustard / mizuna         | F24    | 14 x 9                   | 10               | Down  |
| Radish                   | F24    | 14 x 10                  | 6-10             | Down  |
| Salad turnips (Hakurei)  | Y24    | 14 x 10                  | 6                | Down  |
| Tatsoi                   | F24    | 14 x 9                   | 10               | Down  |

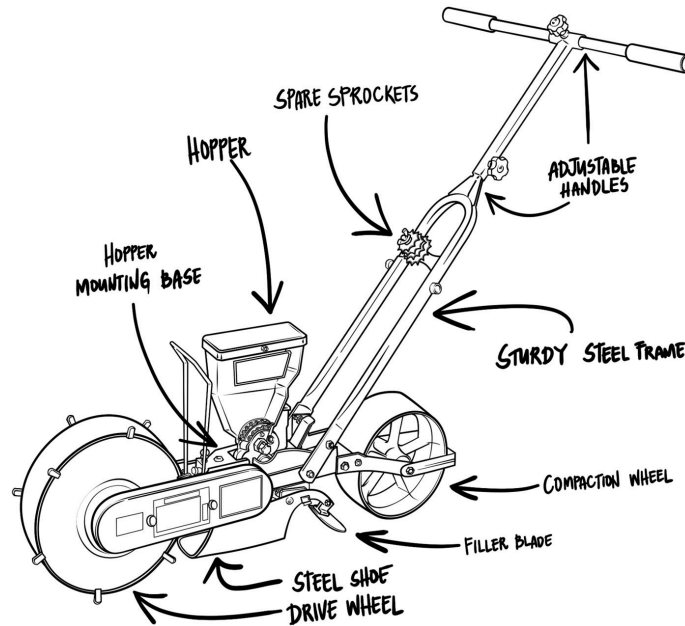
## Homestead crops

| CROP        | ROLLER          | SPROCKETS (FRONT X REAR) | ROWS PER 30" BED | BRUSH |
|-------------|-----------------|--------------------------|------------------|-------|
| Beans       | N6              | 14 x 9                   | 1-2              | Down  |
| Beets       | LV12            | 14 x 9                   | 3-4              | Down  |
| Corn        | A6, N6          | 14 x 9                   | 2                | Down  |
| Okra        | G6              | 14 x 9                   | 1                | Down  |
| Onions      | X6              | 11 x 11                  | 3                | Down  |
| Peas        | BL12            | 11 x 11                  | 2-3              | Down  |
| Sunflower   | A6, AA6, C6, G6 | 14 x 9                   | 2-4              | Down  |
| Swiss chard | G6              | 14 x 9                   | 2-3              | Down  |

Free crop-by-crop guides with timing, yields and harvest notes for arugula, baby kale, baby lettuce, spicy greens, carrots, radishes, salad turnips and spinach are at [paperpot.co](https://paperpot.co).

## CHAPTER 3

# Parts of the Jang



### Steel frame

The weight is a feature. It keeps the seeder stable and tracking, so it plows ahead through residue and debris instead of bouncing off rocks. Some farmers run with it.

### Wheels

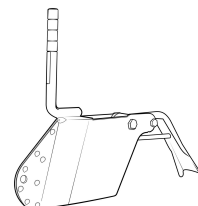
The front drive wheel has teeth for traction, which keeps the gears turning and the seed dropping evenly. The rear compaction wheel presses soil over the seed for good seed-to-soil contact, and a steel scraper above it clears sticky soil. Both have replaceable foam covers; rinse them after use to make them last.

### Steel shoe

The mini-plow pushes rocks aside and cuts an even furrow in wet or dry soil, rarely clogging. Set depth with a 13 mm wrench. The factory depth marks aren't reliable, so mark your own settings.

### Filler blade

A spring-loaded blade behind the shoe pulls soil back over the furrow. Change its angle to adjust how much soil covers the seed.



## CHAPTER 3

# Hopper, handle and chain box

### Removable hopper

A quick-release lever lifts the hopper off, so you can pour leftover seed back into the packet and change rollers, adjust the brush or clean it at a bench. It holds the seed roller, brush and guide plate.

### Hopper mounting base

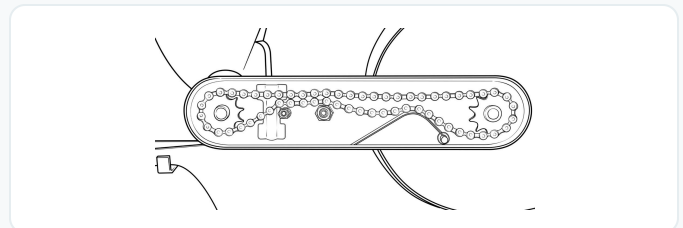
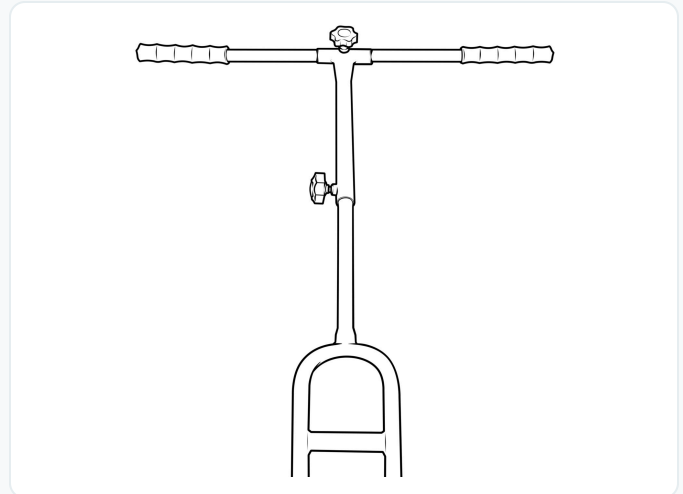
A wingnut lets the JP1 base slide 1/2" to either side to seed off-center, for example beside a line of drip tape. On multi-row seeders it sets the spacing between rows.

### Adjustable handle

- Angle, where it bolts to the body, to suit your height.
- Length, halfway up the post.
- Side to side, at the top, so you can walk in the path without leaning over the bed.

### Chain box

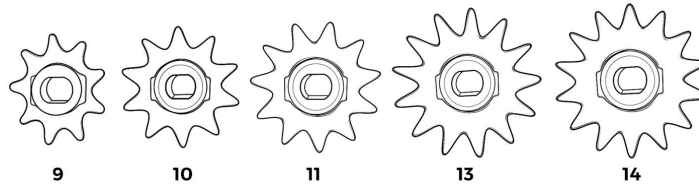
Inside the chain box a front and rear sprocket are linked by a chain, like a bicycle. Loosen the two white screws to remove the cover; the sprockets and chain swap without tools. Spacing is set by two things: the sprocket combination and the holes in the seed roller.



## CHAPTER 4

## Sprockets and spacing

Every Jang comes with six sprockets: 9, 10, 11 (two), 13 and 14. The number is the tooth count. The sprocket pair sets how fast the roller turns: fewer roller turns per wheel turn spread seed out, more turns plant denser.



### The spacing chart

This chart is printed on every chain box cover. Find the spacing you want in the shaded area; the row tells you how many holes the roller needs, the column tells you the sprockets.

| REAR SPROCKET  | 14  | 14  | 13 | 13  | 11  | 11  | 11  | 10  | 10  | 9   |
|----------------|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|
| FRONT SPROCKET | 9   | 10  | 10 | 11  | 10  | 11  | 13  | 13  | 14  | 14  |
| 3 holes        | 20  | 18  | 17 | 15  | 14  | 13  | 11  | 10  | 9   | 8   |
| 4 holes        | 15  | 14  | 13 | 12  | 11  | 10  | 8   | 7.5 | 7   | 6   |
| 6 holes        | 10  | 9   | 8  | 7.5 | 7   | 6.5 | 5.5 | 5   | 4.5 | 4   |
| 12 holes       | 5   | 4.8 | 2  | 4   | 3.5 | 3   | 2.8 | 2.5 | 2.5 | 2   |
| 24 holes       | 2.5 | 2.5 | 2  | 2   | 1.8 | 1.5 | 1.3 | 1   | 1   | 0.5 |

Inches between seeds, reproduced from the chain box chart.

#### EXAMPLE

For 2.5" between seeds with a 24-hole roller, put the 14 in the rear and the 9 in the front. You could also get about 2.5" with a 12-hole roller and 10 rear, 13 front. Pick the combination that lets one roller cover the most crops.

Range by roller: 24 holes, about 0.5" to 2.5"; 12 holes, 2" to 5"; 6 holes, 4" to 10"; 4 holes, 6" to 15"; 3 holes, 8" to 20".

## CHAPTER 5

# Seed rollers

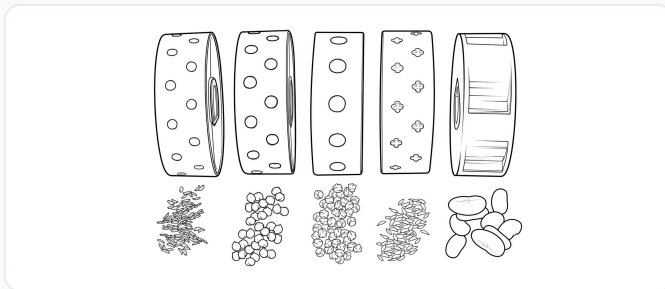
More than sixty JP rollers fit different seed shapes, sizes and spacings. They're made of static-resistant plastic and differ in hole size and shape, number of holes, and single or staggered rows.

### Reading the code

A letter (or letters) for the hole size and shape, then the number of holes. **LJ-24** is a 7.5 mm wide, 3.7 mm deep hole, 24 per roller.

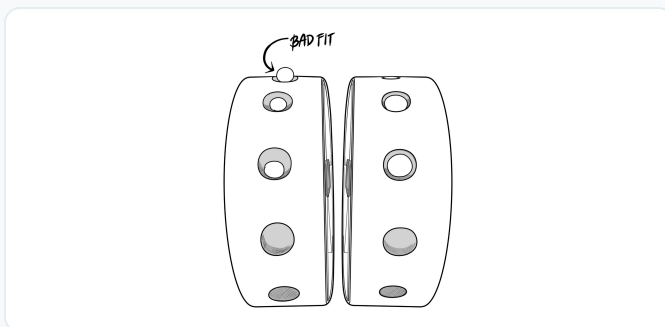
### Hole shapes

Bowl, V-groove, cross and other special shapes.



### The right fit

The seed should sit just below the roller surface or flush with it. For several seeds per hole, they should all fit without mounding above the surface. A good fit lets the brush stay down without jamming or crushing seed.



Left: seed sticks out, a bad fit. Right: seed sits in the hole.

### Hole sizes

| LETTER | HOLE WIDTH (MM) | HOLE DEPTH (MM) |
|--------|-----------------|-----------------|
| A      | 13.5            | 6               |
| AA     | 12              | 6               |
| B      | 10              | 7.5             |
| BL     | 10              | 7.5             |
| C      | 11              | 5.5             |
| R      | 9               | 3.5             |
| G      | 9               | 4.5             |
| Q      | 8               | 3               |
| LJ     | 7.5             | 3.7             |
| L      | 7               | 2.5             |
| LV     | 8               | 5               |
| MM     | 6               | 2.5             |
| MJ     | 6               | 3.5             |
| M      | 5               | 2               |
| F      | 5               | 2.5             |
| X      | 4               | 2               |
| Y      | 3.5             | 1.5             |
| YYJ    | 3               | 1.7             |
| YX     | 2.5             | 1.5             |

## CHAPTER 6

# Gauge, brush, guide plate and testing

### Seed gauge

The hopper lid has a built-in gauge with every hole size marked in millimeters. Take the largest seeds in your packet and find the hole where they sit loosely without sticking up. That's your hole size.

### Seed brush

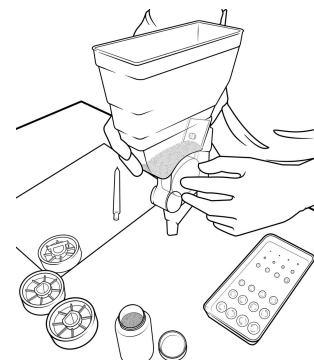
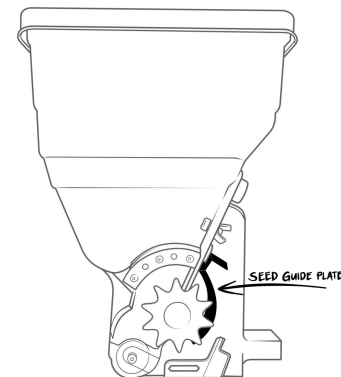
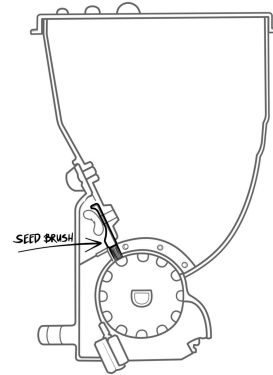
The brush sits just above the roller and sweeps off extra seed. Keep it down, just clear of the roller, for the most accurate singulation. Raise it only for irregular seed like beets and chard so they pass without jamming or breaking. Raising it too far drops too much seed. Loosen the wingnut on the removed hopper to move it.

### Seed guide plate

The curved felt insert that follows the roller works best with smooth, round or pelleted seed. Take it out for odd-shaped seed like lettuce, carrots and beets, which can catch on the felt.

### Test before the field

- 1 Install the roller you picked from the gauge.
- 2 Set the brush down, just above the roller so it doesn't drag.
- 3 Add seed, hold a bowl under the chute and turn the hopper sprocket by hand.
- 4 Watch every hole: skips or doubles mean the hole size is wrong.
- 5 Write down what works for each variety.

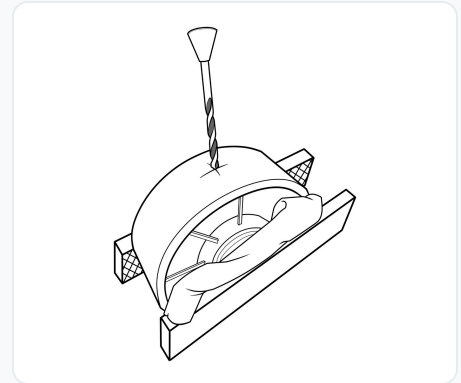
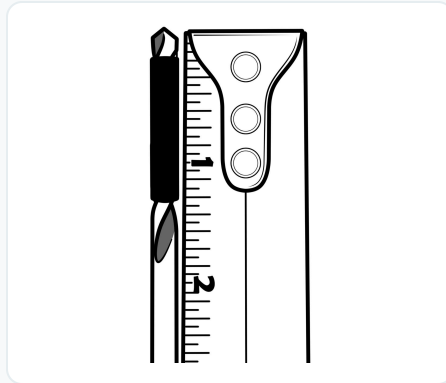
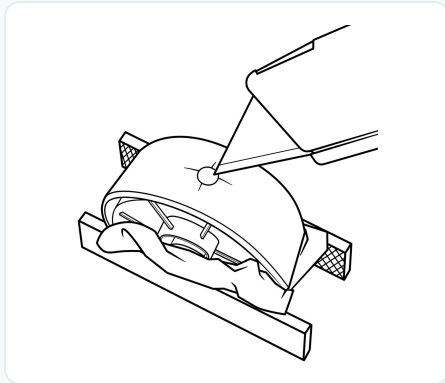


## CHAPTER 7

## Making a custom roller

If no stock roller fits your seed, or you want a different hole pattern, drill your own from a blank roller.

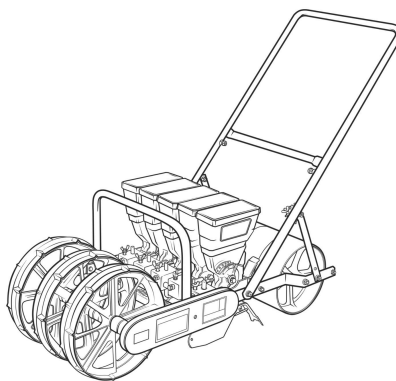
- 1 **Choose the number of holes** from the spacing chart. The roller circumference is 7-3/8"; divide it by the number of holes to get the distance between hole centers, and mark each hole evenly around the roller.
- 2 **Clamp it safely.** Wrap the roller in a cloth, hold it in a vise, and drill a shallow pilot hole at each mark.
- 3 **Pick the bit.** Slightly wider than the seed: the seed drops in easily, but there's no room for a second one. When in doubt, start smaller.
- 4 **Find the depth.** Drill the first hole a little at a time, testing the seed, until it sits just below the surface. Wrap tape around the bit at that depth as a guide for the rest.
- 5 **Clean up.** Remove burrs with fine sandpaper or a utility blade so the edges are smooth and flush. Burrs cause misses and wear out the brush.



## CHAPTER 8

## Multi-row seeders and the JP5

| MODEL | FRAME WIDTH | HOPPERS INCLUDED | MAX OUTSIDE ROW SPACING | MAX HOPPERS |
|-------|-------------|------------------|-------------------------|-------------|
| JP2   | 15"         | 2                | 12"                     | 5           |
| JP3   | 15"         | 3                | 12"                     | 5           |
| JP4   | 15"         | 4                | 12"                     | 5           |
| JP5   | 15"         | 5                | 12"                     | 5           |
| JP6   | 26"         | 6                | 22"                     | 8           |
| JP6W  | 40"         | 6                | 36"                     | 12          |



## Why the JP5 is the most popular

It's compact and easy to move, unlike the wide, heavy JP6. Five hoppers share one chain box, so a crop change takes about three minutes. Rows are 3" apart: line the outer edge up with the bed edge, make a pass, then repeat from the other side for 10 rows on a 30" bed. Fill hoppers 1, 3 and 5 for 6 rows, or remove hoppers and slide the bases for other spacings.

## The Modern Grower JP5 kit

Narrow 1/2" shoes instead of the standard 1-3/8", which keeps soil from building up between five shoes, plus 20 rollers: 5 each of F24 (radish, lettuce, greens), LJ24 (spinach, cilantro), X24 (arugula, carrots) and Y24 (salad turnips).

## When to move up from a JP1

When you grow a lot of densely sown salad greens and baby roots at 10 rows per bed, or your beds are long enough that seeding one row at a time adds up.

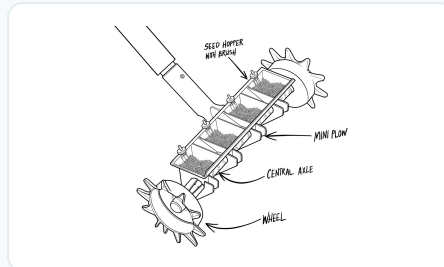
## CHAPTER 9

# Comparing direct seeders

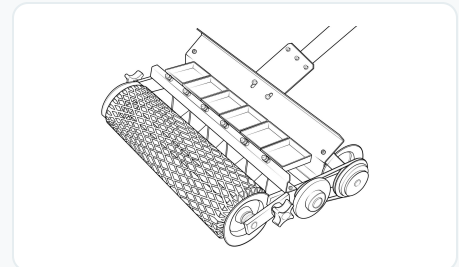
|                            | EARTHWAY                          | FOUR-ROW<br>PINPOINT      | SIX-ROW                   | JANG JP1 / JP5                       |
|----------------------------|-----------------------------------|---------------------------|---------------------------|--------------------------------------|
| <b>Rows per pass</b>       | 1                                 | 4                         | 6                         | 1 / up to 5                          |
| <b>In-row spacing</b>      | Fixed per plate                   | 1" to 1-1/4"              | 1", 2" or 4"              | 0.5" to 20"                          |
| <b>Small seed accuracy</b> | Poor                              | Good                      | Good                      | Excellent                            |
| <b>Large seed</b>          | Good                              | No (beet-size max)        | No                        | Yes (TD series for the largest)      |
| <b>Bed prep needed</b>     | Struggles with rocks and wet soil | Fine, tamped, debris-free | Fine, tamped, debris-free | Tolerates rocks, residue, wet or dry |
| <b>Covers seed</b>         | Drag chain                        | No                        | Rear cage roller          | Filler blade and press wheel         |
| <b>Hopper</b>              | Fixed, no lid                     | Small, no lid             | Lidded                    | Removable, lidded, 0.26 gal          |



Earthway



Four-row Pinpoint



Six-row

## JP1 vs. Earthway

The Earthway is a fair entry-level seeder and good with beans, corn and peas, but its seed plates clump small seed (so you thin), spacing is fixed per plate, the light frame bounces and slips, wet soil clogs it, and seeding fails when the hopper runs low.

## JP5 vs. Four-row and Six-row

Both precision seeders need fine, tamped, debris-free beds and the right moisture. Steadfast Farm switched from a Six-row to a JP5: ten rows instead of twelve gave the same or better yields, with far less bed prep, no pre-tamping and no pressing down while seeding.

**CHAPTER 10****Tips and tricks****Straight rows with a JP1**

Mark rows with a rolling marker or a bed-prep rake with row markers. Without one: seed both outside rows first, then the center, then split the gaps for a five-row bed. A JP1 row marker can also follow a string line.

**Put the hopper in the right way**

The sprocket shaft can go through the roller backward, which drops no seed. Write an "S" in marker on the sprocket side of each hopper.

**Prime the seeder**

Push it forward one turn of the drive wheel before the bed starts. Otherwise the first foot of row is often bare while the roller fills.

**One hopper per crop**

Diversified farms often seed several crops in a day. Extra hoppers set up with their own roller and brush for a specific crop skip the swap-and-clean every time. Clean hoppers with an air compressor.

**Large seed**

JP rollers handle peas, beans and corn, but walk slower so seed doesn't jam the chute. If you sow a lot of large seed, the plate-based TD series does better.

**Keep notes and weigh seed**

Load about 50% more seed than you expect to need, weigh it before and after, and record grams per bed for each crop and setting. That number makes seed orders accurate and flags a setting that's off.

## CHAPTER 11

## Care and maintenance

- Brush or hose off soil after each use, especially the wheels, to prevent corrosion.
- Oil the drive chain about once a month in regular use; bicycle chain lube works well.
- Seed brushes and felt guide plates wear out. Keep spares.
- Foam wheel covers wear too; rinsing them after use makes them last much longer.
- Most parts are replaceable if something breaks. Email [hello@moderngrower.co](mailto:hello@moderngrower.co) for parts.

## RESOURCES

## Keep going

| RESOURCE                                     | WHERE                                                                                                         |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Jang crop guides (8 crops)                   | <a href="https://paperpot.co/jang-seeder-growers-notes/">paperpot.co/jang-seeder-growers-notes/</a>           |
| Seeding chart                                | <a href="https://paperpot.co/jang-seeder-crop-seeding-chart/">paperpot.co/jang-seeder-crop-seeding-chart/</a> |
| Choosing a seed roller                       | <a href="https://paperpot.co/jang-seeder-roller-chart/">paperpot.co/jang-seeder-roller-chart/</a>             |
| Tech sheets: JP1, JP5, rollers and sprockets | <a href="https://paperpot.co/tech-sheets/">paperpot.co/tech-sheets/</a>                                       |
| JP1, JP5, rollers, hoppers and accessories   | <a href="https://shop.moderngrower.co/collections/jang">shop.moderngrower.co/collections/jang</a>             |
| Farm Small Farm Smart podcast                | <a href="https://paperpot.co/farm-podcast/">paperpot.co/farm-podcast/</a>                                     |

### ABOUT THE AUTHORS

Diego Footer hosts the Farm Small Farm Smart podcast and has interviewed hundreds of small-scale farmers. He founded Paperpot Co. and Modern Grower. Seth Davis has farmed from Tennessee to California to British Columbia and contributed field testing and writing. Erich Schultz of Steadfast Farm developed the seeding settings.

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