



## **Seed Sizing Guide**

Proper plate sizing to the specific seed you are planting is critical in achieving consistent planting rates for high crop yields. Seed can be very expensive so it is critical to use the proper sized plate to minimize seed waste and maximize crop yield. The following is a general guide for matching your seed to the proper sized plate. This information is for sizing seed to the John Deere and International Harvester style plates.

You can always send us a small sample of seed, just 10-20, for sizing. If you do send seed for sizing always wrap them up so they do not get crushed by the postage machines. The bubble wrap envelopes work very well. And always include your contact information as well as what type of planter you have. We typically call you with a plate recommendation the same day we receive the seed.

Once you have selected the proper sized plate it is always wise to do a couple rotations with the planter above ground on a flat surface, like a road, to make sure everything is working correctly before going into the field. This would also be a good time to make any adjustments to the spacing with the sprockets.

## **General Sizing Guidelines:**

- Always size the plate to the largest seed in your sample. Otherwise the larger seeds will plug the cells and you will get skips. If the seed varies greatly in size, you may get some doubles of the smaller seed depending upon how well the seed is graded in size.
- It is recommended to have at least 1/64" of clearance between all sides of the seed and the cell of the plate. You do not want a lot of additional space where a second seed could fit within the cell.
- It is generally preferred to have 1 seed per cell or drop, however for some crops like soybeans, it is preferred to have multiple seeds per cell or drop for population purposes.
- Some plates are thinner than a standard corn or soybean plate, such as our Sunflower and Sorghum plates. Because they are thinner they require a specific filler ring so they fit tight in the planter bottom.
- All filler rings are of a specific thickness to work with an individual plate. It is critical you use the correct filler ring for the specific plate you are using.
- Older more worn out plates will plant at a different rate than a new plate. Always ensure the plates you are using are of equal wear to achieve consistent planting rates among different rows.
- Most all corn plates have a wear gauge built in. There is little hole located on the bottom of the plate. When the top of the plate becomes worn down over time from the seed rubbing on it the hole will eventually become visible from the top indicating it is time to replace the plates.
- Some planter bottoms where the plate goes can become very worn over time. This creates additional space between the plate and the planter bottom where some smaller seed can get resulting in varying spacing and planting rates.

**Corn:**

- There are different plates specifically for round or flat corn seed.
- Round corn plates have a round or tear drop shaped cell, whereas flat corn plates have a rectangular shaped cell.
- Most all seed is labeled round or flat seed. Sometimes there is even a specific plate recommendation on the bag of corn seed, although this seems to be less common these days.
- Typically corn seed that does carry a specific plate recommendation is graded more consistent in size for use with gravity fed plate style planters.

**Round Corn Seed:**

- For sizing round corn seed there are really only 2 critical dimensions. The length of the seed and the width at the widest point.
- You want to compare the length and width of the largest seed in your sample to the length and depth of the cell on the plate.
- You are looking for a plate with a slightly longer length and deeper depth than your seed.

**Flat Corn Seed:**

- For sizing flat corn seed there are 3 critical dimensions. The length, depth and thickness of the seed.
- The length of the seed will be the largest of the 3 dimensions, being measured from the tip of the seed to the other end.
- The thickness of the seed is typically the middle of the 3 dimension, being less than the length and greater than the depth. It is measured by lying the seed flat on a surface and measuring how wide it is at the largest point.
- The depth of the seed is always the least of the 3 dimensions. The depth is measured by placing the seed flat on a surface and measuring how far up from the surface the skinny side of the seed is while lying flat.
- The depth of the seed is most critical to get the correct sized plate.
- You are looking for a plate with a cell having a depth of about 1/64" larger than the depth of your seed.

- The flat corn seed will ride up on the skinny edge when it fits within the cell of the plate.
- After finding a plate with the correct depth of cell for your seed, compare the length and thickness of the seed to make sure they fit within the cell on the plate as well.
- Most all corn plates are 20/64” thick. Because of this, the thickness of the plate or seed is the least critical dimension to get the correct sized plate.
  - Some smaller flat corn plates will have a thickness less than 20/64” of an inch.
- If you have a flat corn seed of a width greater than 20/64” you may need to flip over the floor plate that hinges closed on the planter bottom holding the plate in.
  - There is usually a flat side and a grooved side to the floor plate that closes shut.
  - The grooved side will help accommodate seed of a width larger than 20/64”.

### **Sorghum:**

- There are both single drop and multiple drop plates for sorghum seed.

#### **Single Drop Sorghum Plates:**

- Single drop plates only allow 1 seed per cell and are thinner than multiple drop plates or a standard corn plate so they require a filler ring to fit tight in the planter bottom.
- Single drop plates are preferred whenever harvesting sorghum as they will produce stronger plants and higher yields.
- There are both 30 or 60 cell versions of most single drop sorghum plates.
  - The 60 cell plates will plant anywhere from 2-8lbs per acre with 36” rows depending upon your sprocket settings.
  - The 30 cell plates will plant half that.
- Most sorghum seed ranges in size from 10,000 to 20,000 seeds per pound.
  - The lower the number of seeds per pound the larger the size of the seed.
- There are different sized single drop sorghum plates depending upon the size of seed.
- The number of seeds per pound will correspond to one of the specific sized single drop sorghum plates. Please refer to the product information packet or the individual sorghum plate descriptions on our website for reference.

### **Multiple Drop Sorghum Plates:**

- Multiple drop plates will allow multiple seeds on top of one another within the cells.
- Multiple drop plates will work with all sizes of sorghum seed.
- Multiple drop plates are sometimes preferred when planting for wildlife as you do not need a filler ring.
  - Keep in mind you will use significantly more seed per acre, sometimes even four times that of a single drop plate.
- Multiple drop plates also produce smaller plants as they are planted denser than a single drop plate, effectively reducing the amount of water each plant receives.
- There are 2 multiple drop sorghum plates for John Deere planters, the B-Sorg 1 and B-Sorg 2
  - The B-Sorg 1 will plant anywhere from 4-17lbs. per acre depending upon your sprocket settings\*
  - The B-Sorg 2 will plant anywhere from 5-23lbs. per acre depending upon your sprocket settings\*
- There is just 1 multipole drop sorghum plate for IHC planters, the C-Sorg.
  - The C-Sorg will plant anywhere from 4-16lbs. per acre depending upon your sprocket settings\*

*\*Assuming 36" rows and seed sized at 14,000 seeds per pound.*

### **Sunflower:**

- Sunflower plates are thinner than a typical corn plate so they require a specific thickness filler ring to fit tight in the planter bottom.
- Sunflower seed is typically labeled with a size, #2 through #20.
  - If the seed is not labeled most seed dealers can get you this information.
  - If it came from a smaller bag without a label most always the larger bag it came from is labeled with a size.
- Please refer to the product information packet or the specific plate descriptions on our website for which sunflower plates correspond to what seed size.

## **Soybean:**

- Soybeans are typically planted with a multiple drop plate to achieve preferred populations.
- There are 3 different sized soybean plates for JD planters.
  - B-Soy is the largest soybean plate.
    - Planting rates of 30-133lbs. per acre\* depending upon sprocket settings.
    - Averages 7.8 beans per cell\*
  - B-Soy 2 is the medium sized soybean plate, by far the most popular plate for soybeans.
    - Spaces the beans down the row much better than the larger B-Soy plate.
    - Planting rates of 24-98lbs. per acre\* depending upon sprocket settings.
    - Averages about 5.5 beans per cell\*.
  - B-Soy 3X is the smallest soybean plate.
    - Has a very small cell and is not recommended for larger soybean seeds as they will plug and you will get skips.
    - Planting rates of 18-76lbs. per acre\* depending upon sprocket settings.
    - Averages about 3 beans per cell\*.

*\*Based on a seed size of 2,700 seed per lb. and 30" row spacing.*

## **Sugar Beet:**

- Sugar Beet plates require a specific sugar beet bottom in the planter.
  - Different from a standard corn bottom.
- A Sugar Beet bottom consists of a specific metal floor plate that hinges shut and works in combination with a metal filler ring with an integral drop tube in combination with a specific sprocket setup.
  - All different than what is used on a standard corn bottom.
- There are different thickness filler rings that work in combination with the different thickness sugar beet plates we have.
  - It is critical to make sure you have the correct combination.

- For this information it is always best to consult your owner's manual.  
Unfortunately, we do not have this information available as to what plates work with what filler rings.
- If you do not have a specific sugar beet bottom most people will use one of our single drop sorghum plates in combination with the required plastic filler ring, we sell.
- Most people find the single drop sorghum plates work very well for planting sugar beets.
- For sizing, simply measure the diameter of the sugar beet seed and make sure it will fit within the diameter of the cell and also with reference to the plate thickness as to not crack the seed.

### **Miscellaneous Vegetable Seed:**

#### **Disclaimer**

- Please note, the following plate recommendations are simply based off previous customer's experience and positive feedback.
- Seeds do vary in size, even within the same variety, and could always require a different sized plate than what is recommended.
- It is crucial you always test fit your seed within the cell and do a couple rotations with the planter above ground to make ensure everything is working properly before planting in the field.

#### **Beans (edible):**

- Large flat corn plates work well with beans.
- Measure the length and width of the largest beans in the sample.
  - Select a plate with a length and depth that will accommodate the largest seed.
  - The depth of the cell will often times need to be modified and enlarged to accommodate the entire width of edible beans.
- The B11-16, B11-24, B5-16, B5-24X, B13-16 and B13-24 are common plates to use for edible beans.
  - Sometimes requiring modifications to enlarge the depth of the cells.

**Collard Greens:**

- Most people prefer the largest single drop sorghum plates for planting collard green, the same plate that is used for Okra.
  - For JD planters we recommend the B-Sorg 13-30 or B-Sorg 13-60 in combination with the required BFR-1 filler ring.
  - For IHC planters we recommend the C-Sorg 13-30 or C-Sorg 13-60 in combination with the required CFR-1 filler ring.

**Cucumber:**

- Most people prefer the following plates for planting cucumber.
  - For JD planters, our smallest sunflower plate, the B050-16, B050-24 or B-Blank 050. All in combination with the required BFR-40 filler ring.
  - For IHC planters, our smallest sunflower plate, the C050-16 & C050-24 or the C-Blank 015. All in combination with the required CFR-3 filler ring.
- Most customers report getting 2-3 seeds per cell in the sunflower plates with the existing cells. This seems to be preferred for population purposes.
- Some people prefer the blank plates in order to achieve specific spacing requirements different from that available with a 16 or 24 cell plate.

**Okra:**

- For planting okra most people have good success using the largest single drop sorghum plates, the same plate as used for collard greens.
  - For JD planters we recommend the B-Sorg 13-30 or B-Sorg 13-60 in combination with the required BFR-1 filler ring.
  - For IHC planters we recommend the C-Sorg 13-30 or C-Sorg 13-60 in combination with the required CFR-1 filler ring.

**Peas:**

- Medium to small round corn plates work well when planting Peas
- Simply measure the diameter of the largest pea and then select a round corn plate with a depth slightly larger than the diameter of the pea.

**Pumpkin Seed:**

- Most people prefer to cut their own cells into a blank sunflower plate when planting pumpkin seed.
  - For JD planters we recommend the B-Blank 015 in combination with the required BFR-2 filler ring.
  - For IHC planters we recommend the C-Blank 015 in combination with the required CFR-3 filler ring.
- People seem to prefer anywhere from just 2-8 cells in order to achieve their preferred spacing for pumpkins.
- The blank plates are made of plastic and cut very easily with a dremel tool or even a hand file.
- Simply take your largest seed and lay it on the flat flange part of the plate and trace it.
- Next cut out the rough shape, making sure to cut small at first and test fit the seed often as you enlarge it, as to not make the cell too large.
  - Ideally you want a cell with about 1/64" clearance around the seed.
  - However, the cell shape and size does not need to be extremely precise. Basically you don't want enough clearance where you could fit another seed or part of another seed within the cell, as it will then crack and will not germinate.
- Some people prefer to slightly chamfer the upper edge of the cell, to help the knocker assembly kick out any possible double seeds that are lying on top of one another.
- After cutting just 1 cell in the plate it is recommended to do some testing with the plate and some seed in the hopper and do a couple rotations above ground to ensure everything is working properly.
- Once everything seems to be working well go, ahead and cut however many cells you need in the plate to achieve your preferred spacing.

**Squash:**

- Most people prefer the following plates for planting squash.
  - For JD planters, our smallest sunflower plate, the B050-16, B050-24 or B-Blank 050. All in combination with the required BFR-40 filler ring.
  - For IHC planters, our smallest sunflower plate, the C050-16 & C050-24 or the C-Blank 015. All in combination with the required CFR-3 filler ring.
- The sunflower plates with the existing 16 or 24 cells will all need the cells enlarged to accommodate the entire squash seed.
- Because of the all the required modifications to the plates with cells people often prefer blank plates to start from scratch.

**Watermelon:**

- Most people prefer the following plates for planting watermelon.
  - For JD planters, our smallest sunflower plate, the B050-16, B050-24 or B-Blank 050. All in combination with the required BFR-40 filler ring.
  - For IHC planters, our smallest sunflower plate, the C050-16 & C050-24 or the C-Blank 015. All in combination with the required CFR-3 filler ring.
- The sunflower plates with the existing 16 or 24 cells will all need the cells enlarged to accommodate the entire watermelon seed.
- Because of the all the required modifications to the plates with cells people often prefer blank plates to start from scratch.