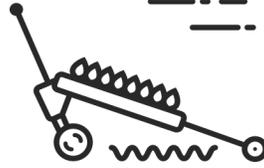


GROWER'S NOTES

BY PAPERPOT CO.



BUNCHING ONIONS

CROP & PAPERPOT DATA:

PAPER CHAIN POT	6"
ROWS PER 100' X 30" BED	4
TRAYS PER 100' X 30" BED	3
KWIK KLIK™ TOP PLATE	Plate: Paperpot (264 holes) / Thickness: 3mm / Hole Diameter: 5mm
SEEDS PER CELL	5-7
SEED PER 100' X 30' BED	4,560 seeds (+/-) *Always round up when placing seed orders to ensure having enough
RECOMMENDED CULTIVARS	Guardman, Parade, Deep Purple
GERMINATION	72 hours at 78°F
DAYS TO TRANSPLANT	28 days (+/-) *time from seeding to transplanting in the field
DAYS TO MATURITY	70 days (+/-) *time from seeding to being ready for harvest
HARVEST WINDOW	14 days (+/-) *time crop is at ideal stage for harvest after reaching maturity
TOTAL DAYS IN FIELD	56 days (+/-) *DTM + harvest window - days to transplant
HARVEST UNIT	Bunch (10-12 green onions per bunch, 3-4" bottoms)
TARGET CROP YIELD	380 bunches per 100' bed (+/-)
PRICE PER UNIT	\$2 *depending on local market pricing
REVENUE PER BED	\$760 *depending on local market pricing

SUGGESTED TOOLS:

SEEDING	Kwik Klik™ Drop Seeder, Paperpot Germination Trays, Paper Chain Pots
TRANSPLANTING	Paperpot Transplanter
TILTHING	Power Harrow or Precision Depth Roller (With no tractor: Tither)
AERATION	Meadow Creature Broadfork
SHAPING	Bed Preparation Rake
WEED CONTROL	Flame Weeder
CULTIVATION	Wheel Hoe w/Bio-Disc Cultivator, or collinear hoe

BED PREPARATION

- Broadfork the bed to aerate and loosen the soil
- Smooth and shape the bed with a bed preparation rake, removing any debris
- If the previous crop was fertilized, bunching onions will do fine without reapplication. If not, here are two options:
 - 1) Layer on 1" of compost, enough to mostly cover the native soil
 - 2) Sprinkle on a combination of alfalfa meal and pelleted chicken manure
- If layering compost, do not till in hopes of smothering any surface weed seed
- If adding amendments, till the top 1-2" of soil to mix in amendments
- Irrigate for 10-14 days*, allowing any weed seed in top layer of soil to germinate
- Flame weed the bed when the cotyledons of the weed seeds have emerged

SEEDING

- Prepare trays with 6" paper chain pots, and fill with potting mix.
- Install Paperpot bottom plate and specified top plate into Kwik Klik™ (KK) Drop Seeder.
- Pour seed onto top plate and rotate until approximately 5-7 seeds fill each hole.
- Position the KK Drop Seeder over the tray, ensuring the holes are lined up with the cells, and click to drop the seeds.
- Water the trays, then place in germination chamber for 72 hours at 78°.
- Transfer the trays to greenhouse tables after germination.
- Keep onion tops trimmed to 4" tall, channeling more energy in to root development.

TRANSPLANTING

- Thoroughly water trays before heading to the field for transplanting.
- Using the Paperpot Transplanter, plant the four rows of bunching onions.
- There should be 7.5" between rows, and 3.75" from the outer rows to the edge of the bed.
- Reference <https://paperpot.co/learn/> for instructional videos if needed.

IRRIGATION

- Water the beds thoroughly with overhead irrigation, or four rows of drip.
- Overhead irrigation poses risk of downy mildew for bunching onions if ventilation is inadequate.
- Dry conditions can lead to unpleasant flavor in bunching onions.

CULTIVATION

- 10-14 days after transplanting, cultivate using a Terrateck Wheel Hoe with the bio-disc cultivator attachment. This tool provides a hilling effect, while cultivating both on the row and in between rows in a single pass.
- A long handled collinear hoe is also an effective approach to cultivating, just not as fast.

HARVEST

- Bunching onions are ready for harvest when the white base of the onion is 3-4".
- Harvest in the kneeling position, bunching two plantings together with rubber bands, creating bunches with 10-12 onions each.
- Harvest a planting within 14 days after reaching maturity to maintain optimum tenderness.

WASHING AND PACKING

- Dunk the bunches in cold water, then spray all sides of the roots with the high pressure Washdown Gun. Avoid the green tops with the gun to prevent damage.
- Transfer the washed bunches to totes, and store at 35° until taken to market.