

NO-TILL RAISED BEDS VERSUS TRADITIONAL TRENCHING METHODS FOR SUSTAINABLE TULIP PRODUCTION IN CUT FLOWER FARMING

Growing Tulips in No Till Raised Beds

A practical guide for annual cut-flower production in cold-winter climates. Our farm trial found easier harvesting and visibly longer, more uniform stems in no-till beds than in traditionally trenched plots.



MATERIALS

Healthy tulip bulbs, mature compost suitable for growing, hardware cloth, wire and staples for rodent protection, wheelbarrow or tractor; shovel, rake, irrigation, labels, measuring tape and record sheets. Optional: low hoops, seasonal covers and shade cloth. Have clean harvest crates and cooler space ready for spring.





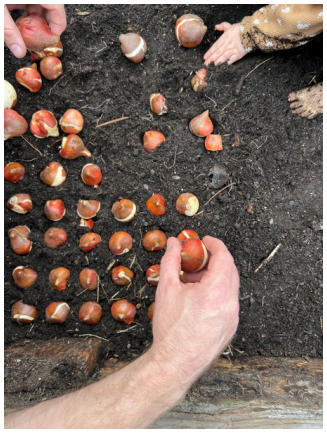






DIRECTIONS





1 Choose and measure the site. Use a sunny, well-drained location with access for watering and harvest. Select a bed width you can reach from the paths without stepping into it.

2 Build above the existing soil. Level and secure the frame without trenching the planting area. Fit hardware cloth where rodent protection is needed and secure edges. Add mature compost to create a rooting layer and enough depth to cover the bulbs; allow for settling. Keep drainage outlets clear.



3 Plant and label. Plant in fall when soil is 55°F or cooler, ideally 5-6 weeks before freezing. Set bulbs upright. For annual cut flowers, leave ¼-½ inch between bulb surfaces. Follow supplier depth guidance; a 1½-inch-tall bulb generally needs 4-5 inches of cover. Label each variety and record bulb counts and planting dates.



4 Water and protect. Water after planting, then monitor moisture rather than watering on a fixed schedule. Avoid saturation. Secure any temporary rodent cover; remove or adjust it before shoots reach it. Check beds after storms and thawing.



5 Harvest and reset. Harvest when buds show color before opening. Gently pull from the base, keeping the bulb attached when possible; loosen resistant bulbs rather than forcing stems. Move flowers promptly to cool storage. Remove crop debris and record results. Bulb-on harvest is an annual system requiring replacement bulbs.



SEASONAL TIMELINE

LATE SUMMER
ORDER BULBS, MEASURE BEDS, SOURCE MATERIALS

FALL
BUILD BEDS, PLANT, LABEL, WATER AND INSTALL PROTECTION BEFORE GROUND FREEZES.

WINTER
CHECK COVERS, DRAINAGE AND SIGNS OF RODENT ACTIVITY WHEN ACCESSIBLE.

EARLY SPRING
CLEAR SHOOT OBSTRUCTIONS; MONITOR MOISTURE, DISEASE AND WEATHER.

SPRING HARVEST
HARVEST BY VARIETY;STORE IN COOLER TO EXTEND HARVESTING WINDOW





BENEFITS AND CONSIDERATIONS

Our trial used 200 bulbs per variety (split equally between systems)

Easier harvesting and less strain. Loose compost allowed bulbs to be pulled by hand with less digging and fewer broken stems. Faster than traditional methods. Bulbs came out cleaner, reducing washing and handling.

Improved flower quality. No-till tulips had visibly longer, more uniform stems. Keeping bulbs attached also supported our storage workflow.

B**ed management.** Raised beds drained well while trenched plots had early spring pooling. Defined bed edges made protective covers and shade cloth easier to manage, and secured hardware cloth helped reduce wildlife pressure.

Upfront materials and labor. Frames, compost and hardware cloth add costs. Hauling compost can be demanding but tractor access helped our farm.

NORTHEAST SARE SUPPORT

We gratefully acknowledge Northeast Sustainable Agriculture Research and Education (SARE) for supporting our farmer-led research on no-till raised beds and traditional trenching for tulip production. This support made it possible to evaluate practical growing methods and share what we learned with other flower growers.

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Project information

No-Till Raised Beds vs Traditional Trenching for Sustainable Tulip Production

Project number: FNE25-107

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