

Soil Amendment vs NPK Fertilizer Decision Matrix and Application Rate Chart

Companion Reference Sheet for: Compost vs Fertilizer: What Garden Soil Needs First
Save this PDF to your phone or print a copy for field reference. Verify local conditions and manufacturer specs before use.

Key Takeaways

- **Choose compost first** when soil needs more organic matter, improved structure, or steadier moisture. Compost helps the growing environment; fertilizer does not loosen compacted soil.
- **Use fertilizer when plants need nutrients.** A soil test, crop requirements, or a well-diagnosed deficiency can help you choose what to add and how much.
- **Read test results alongside your amendment history.** A garden soil testing guide can help you understand what a test measures.
- **Build raised beds with a suitable mix.** Use the [raised bed soil and amendment calculator guide](#) to plan the quantities for a bed.
- **Apply measured amounts.** Excess compost or fertilizer can create nutrient imbalances, harm plants, or contribute to nutrient runoff.
- **Keep a simple application record.** For more practical growing help, visit [The Garden Den](#).

Start with the soil problem you need to solve

Comparison	Compost	Fertilizer
Main purpose	Adds organic matter and supports soil structure and biological activity.	Supplies specific plant nutrients to meet a crop or soil need.
Composition	Decomposed organic materials; nutrient content varies with feedstock and maturity.	One or more nutrients, often listed as an NPK ratio, such as 10-10-10.
Nutrient availability	Usually releases nutrients gradually and variably as it decomposes.	Soluble forms can supply nutrients quickly; slow-release forms provide them over a longer period.
Effect on soil structure	Adds organic matter and can improve moisture behavior and soil tilth.	Provides nutrients but does not rebuild compacted or poorly structured soil.
Practical application measure	A common garden range is a 1 to 2 inch surface layer.	Use the product analysis, soil test guidance, and stated application rate.

A field checklist for deciding what to add first

- ☐ **Name the planting goal.** Note whether the bed is new, established, or already planted, since that determines whether you can incorporate an amendment or should leave roots undisturbed.
- ☐ **Assess soil structure and moisture.** If the priority is organic matter, structure, or better moisture behavior, plan a measured compost application before considering fertilizer.

- ❑ **Review the soil test and amendment record.** Add fertilizer only when test results and crop needs support it, taking previous applications into account.
- ❑ **Choose the application method.** Incorporate compost before planting; use a surface layer in established beds, and measure rather than estimating by eye.
- ❑ **Apply fertilizer as directed.** Water or incorporate it according to its formulation, then record the date and amount so nutrients are not added repeatedly without a clear need.

Scotts All Purpose Flower and Vegetable Plant Food, 3 lb is listed at \$10.48.

Osmocote Smart-Release provides up to four months of balanced nutrients, with release adjusted by soil temperature. That extended feeding period can suit gardeners who want to apply less often while still matching fertilizer to a demonstrated plant need.

Use the field checklist before adding anything. Improve the growing medium when soil needs it, then supply nutrients only when the crop and evidence call for them.