



DILULU FOUNDATION

GROWING GREENER COMMUNITIES ACROSS AFRICA

GARDENING GUIDE

Mulching & Sheet Composting

*Compost in place with lasagna-style layers and protective mulches —
build rich garden beds with no turning and no hauling.*

COMPOSTING

ALL LEVELS

ENGLISH

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"Knowledge grows when it is shared."

DILULU FOUNDATION — ENVIRONMENTAL EDUCATION FOR AFRICA



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Sheet composting — often called lasagna gardening — is the art of composting in place. Layers of brown and green material are spread directly over the soil of a future bed, where worms and soil life do the turning for you. No piles, no turning, no hauling: the bed builds itself while you watch.

This guide covers the layer recipe, when to build a sheet-compost bed, planting into it, and the mulching practices that keep the soil — and the system — healthy all year round.

What Is Sheet Composting?

Sheet composting mimics the forest floor. Dead leaves, pulled weeds and kitchen scraps fall onto the soil, are colonised by soil life, and slowly become humus. Sheet composting does the same thing deliberately: you stack alternating layers of brown (carbon) and green (nitrogen) material in place and let the soil community do the rest.

Sheet Composting vs. Pile Composting

- **No turning:** the layers are never mixed — decomposition happens in place.
- **No transport:** finished compost appears exactly where the plants will grow.
- **No structure:** no bins, bays or equipment required.
- **Slower:** expect 4–12 months depending on materials and climate.

"Feed the bed, not the bin — and let the worms do the turning."

When Sheet Composting Shines

- **New beds on lawn or weeds:** build layers right on top and plant through them.
- **Poor or compacted soil:** the layers smother weeds and slowly rebuild structure.
- **Dry climates:** thick layers shade the soil and hold moisture.
- **Gardeners with limited strength or time:** no turning, no hauling, no bin-building.

The Layer Recipe

Build beds in autumn for spring planting, or at the start of the rains in warmer regions. Layer like a lasagna:

1. **Base — cardboard or newspaper:** a thick, overlapping layer of plain cardboard or 6–10 sheets of newspaper. Soak it well. This smothers weeds and grass.

2. **Browns — 8–10 cm:** dry leaves, straw, maize stalks, or shredded prunings.
3. **Greens — 3–5 cm:** grass clippings, kitchen scraps, green weeds without seeds, or aged manure.
4. **Repeat** the brown and green layers until the bed is 30–60 cm tall — it will sink dramatically as it decomposes.
5. **Top with 5–8 cm of browns or finished compost** as a tidy cap.
6. **Water each layer lightly** as you build, finishing with a good soak.

The Golden Ratios

- **Roughly two to three parts browns to one part greens** by volume.
- **In dry climates, lean heavier on browns** to hold moisture.
- **Never use glossy or coloured paper, or cardboard with plastic tape.**

Planting into a Sheet-Compost Bed

The Instant Bed (Autumn Build)

If the bed was built several weeks or months before planting, it has already begun breaking down. Pull the top layer aside, plant seedlings into the soft material beneath, and tuck the layers back around each plant. The bed will settle and feed the plants through the whole season.

The Immediate Bed (Same-Day Planting)

In a hurry, dig a planting pocket through the fresh layers and fill it with a shovelful of soil or finished compost. Plant into the pocket; the surrounding layers will decompose around the plant as its roots expand.

What Grows Best

- **First season:** heavy feeders — tomatoes, peppers, leafy greens, squash, maize.
- **Second season:** everything, especially root crops once the layers have settled.

Mulching — Sheet Composting's Everyday Cousin

Mulching is a thin, continuous sheet compost: a layer of organic material spread over the soil surface to feed it slowly while protecting it.

Why Mulch

- **Moisture:** a 5–10 cm layer can cut evaporation dramatically.
- **Weeds:** blocks light so weed seeds cannot germinate.

- **Temperature:** keeps roots cooler by day and warmer by night.
- **Soil life:** feeds worms and microbes from above, exactly like the forest floor.

Choosing Your Mulch

MATERIAL	BEST FOR	NOTES
Straw or hay	Vegetable beds	Spread 8–10 cm; keep away from stems
Dry leaves	Beds and paths	Shred roughly so they don't mat
Grass clippings	Fruiting crops	Spread thin — thick clumps turn slimy
Wood chips	Paths and trees	Use aged chips on beds
Cardboard	New beds, paths	Cover with a nicer mulch on top

Sheet Composting Through the Seasons

- **Before the rains:** build beds so the first rains soak and activate them.
- **During the rains:** top-dress beds with thin green layers and mulch heavily.
- **Dry season:** keep soil permanently covered; feed beds with thin brown layers.
- **Every season:** every harvest is followed by a fresh mulch layer — the bed never sits bare.

Troubleshooting

PROBLEM	LIKELY CAUSE	SOLUTION
Bed sinks too fast	Normal, especially with grass clippings	Top up with browns; build thicker next time
Weeds push through	Cardboard base too thin or gapped	Overlap cardboard 15–20 cm; add more layers
Plants look hungry	Too many browns, not enough greens	Add green layers or a compost tea drench
Bed stays dry inside	Not watered during building	Soak deeply; water layers as you rebuild
Slugs and snails	Moist shelter-rich layers	Use drier top mulch; keep material away from stems

Sheet Composting in Schools and Communities

Sheet composting is the easiest entry point for school and community gardens: no tools, no strength, no turning — just layers, water and time. A class can build a bed in an afternoon and watch it change every week. For public spaces, a tidy brown top layer keeps beds looking intentional, and planted edges of herbs or flowers invite visitors in.

Frequently Asked Questions

Can I sheet compost in a dry climate?

Yes — sheet composting is one of the best methods for dry areas because the thick layers shade the soil and hold moisture. Water the bed deeply at building time and top-dress with extra browns.

Do I need to wait before planting?

Not necessarily. Heavy feeders can be planted immediately into soil pockets; waiting 4–8 weeks gives even better results.

Will it attract pests?

Bury kitchen scraps inside the green layers and keep a brown cap on top. Avoid meat, dairy and oils entirely.

How is this different from mulching?

Mulching is a single protective layer; sheet composting is a full stack of green and brown layers built to become a growing bed.

Glossary of Terms

- **Lasagna gardening:** another name for sheet composting — layers of browns and greens like a lasagna.
- **Mulch:** a protective layer of material spread over the soil surface.
- **Browns:** carbon-rich dry material — leaves, straw, cardboard.
- **Greens:** nitrogen-rich fresh material — clippings, scraps, manure.

Further Learning

Combine sheet composting with the water-wise gardening guide for dry climates, and the building healthy soil guide to understand the soil life your layers are feeding.