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The Five-Gallon Garden

Grow real vegetables in buckets and pots on a balcony, patio or back step.



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Contents

Start with one bucket

01 Find your light

02 Pick the right container

03 Mix the dirt that isn't dirt

04 Choose plants that fit

05 Plant at the right time

06 Water like you mean it

07 Feed a plant that lives in a box

08 Stakes, strings and wind

09 Fix what goes wrong

10 Harvest, replant, repeat

A Quick reference: 20 crops in containers

B Your season planner

Sources and further reading

Start with one bucket

Most first gardens fail in the same way. Someone buys a raised-bed kit, a flat of seedlings, three bags of the wrong soil and a hose they don't have room to coil. By July the bed is a jungle on one end and bare on the other, the tomatoes are splitting, and the whole thing has quietly become a chore. The next spring, nothing gets planted.

This book is built on the opposite idea. You start with one container, one plant and one season, and you learn what that plant needs by watching it closely. Then you add a second container. By the end of a summer you might have six or ten, and you will know why each one is where it is.

A five-gallon bucket is the right unit for this. It is cheap, it is everywhere, it holds enough root space for a full-size pepper or a compact tomato, and you can still pick it up and move it when the light changes. Most of what you learn from one bucket scales straight up to a patio full of half-barrels.

Who this book is for

You have a balcony, a patio, a stoop, a flat roof, a driveway edge or a sunny strip by the back door. You may rent. You may have never grown anything you could eat. You want real food from it, not a decorative herb pot that dies in August.

The advice here is written for the continental United States, with temperatures in Fahrenheit, sizes in inches and gallons, and timing based on your local frost dates. If you garden elsewhere, the methods work the same; you will only need to translate the calendar.

How the book is laid out

The chapters follow the order of decisions you actually make. Light comes first, because it decides what you can grow at all. Then the container, then what goes in it, then which plants, then when to plant them. Chapters 6 to 9 are about keeping plants alive and productive through summer: water, food, support and problems. Chapter 10 is about harvest and doing it again, better.

Each chapter opens with what you will be able to do by the end of it. Along the way you will find four kinds of boxes:

- **Tip** boxes hold shortcuts that save time or money.
- **Watch out** boxes flag the mistakes that actually kill plants.
- **Worked example** boxes walk through a realistic situation with numbers.
- **Checklist** boxes are things to do or buy, in order.

At the back you will find a quick-reference table for twenty crops and a season planner you can print and fill in.

A word on the numbers

Gardening advice is full of confident numbers that turn out to be somebody's habit. Where this book gives a figure, such as a container size, a temperature or a spacing, it comes from university

Cooperative Extension publications or other sources listed at the back. Where sources disagree, we say so and tell you which way we lean and why. Where a number is our own estimate, we label it as one.

> ***Grow one plant well before you grow ten plants badly.***

The single best tool you own is attention. Five minutes with a cup of coffee next to your containers each morning will teach you more than any book, including this one. Use the book to know what to look for.

CHAPTER

01

Find your light



IN THIS CHAPTER

- Measure how many hours of direct sun each spot really gets
- Match every crop you want to the light you actually have
- Spot the places that are too hot, not just too dark

Before you buy a single seed, find out where the sun lands and for how long. Light is the one thing you cannot add with a bag from the garden center, and it quietly decides almost everything else in this book.

1.1 Why light comes first

A plant is a small factory that runs on sunlight. Leaves turn light into sugar, and the plant spends that sugar on roots, more leaves and, if there is enough left over, flowers and fruit. Fruit is the most expensive thing a plant makes. That is why a tomato in four hours of sun will look healthy, grow tall and give you a handful of fruit, while the same plant in eight hours will bury you in them.

Extension services put it plainly. Texas A&M AgriLife notes that all vegetables grow best in full sun and that fruiting crops "need the most sun of all" (Masabni, 2014). The University of Maine recommends at least six hours of sun a day for container vegetables (UMaine Extension, 2008).

Direct sun versus bright light

When this book says "hours of sun" it means **direct sun**, the kind that throws a sharp shadow. A bright spot that never sees the sun itself, like the floor of a covered porch, can feel sunny to you and still be shade to a plant. Dappled light through a tree counts for roughly half, at best.

> **NOTE**
>
> All directions in this book assume the Northern Hemisphere. In the continental US the sun travels across the southern part of the sky, so south-facing spots get the most light.

1.2 Map your sun in one day

You do not need an app or a light meter. You need a clear day, a sheet of paper and a reminder on your phone.

Pick a day as close as you can to when you will be growing. A spot that is in shade in March can be in full sun by June, and the reverse happens too. On balconies with another balcony above them, the high summer sun is blocked by the overhang, so the back half of the balcony often gets *less* sun in June than in April. Only the front edge, near the railing, gets the full benefit of summer.

1. Sketch your space from above. Mark walls, railings, the door, and any spot that can hold a container.
2. Write the date at the top. If it is more than a month before planting, plan to repeat the mapping later.
3. Set an hourly reminder from 7 a.m. to 7 p.m.
4. Each hour, look at every marked spot. If it has direct sun with a crisp shadow, put a tick next to it.
5. Note anything odd: a reflection off a window across the street, a hot wall, a gap between buildings that lets in one hour of afternoon light.

6 At the end of the day, count the ticks for each spot. That number is its sun hours.

7 Circle the two best spots. Your most demanding crops will go there.

If you can't stand by your containers all day, take a photo from the same place each hour and read the shadows in the evening. You can also check the morning on one day and the afternoon on another, as long as both are clear.

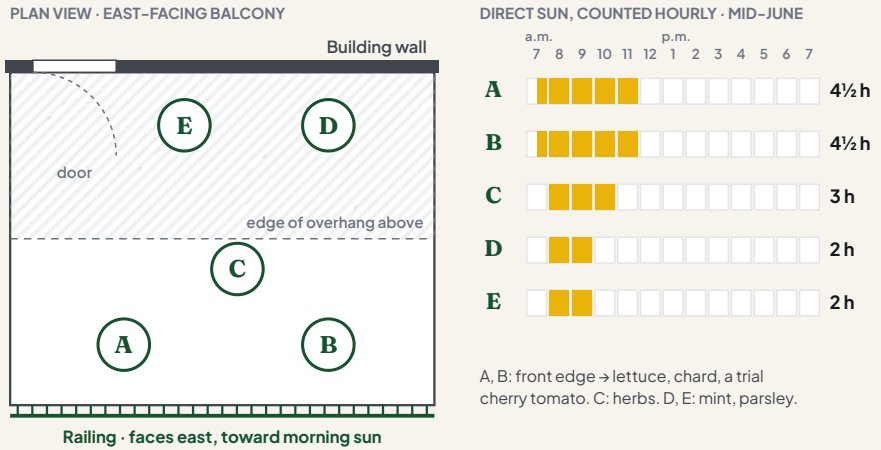


Figure 1.1 A sun map of an east-facing balcony, like the one in the worked example below. Ticks show hours of direct sun counted in mid-June. The overhang shades the back wall from late morning on.

What each direction usually gives you

The table below is a rule of thumb for open spaces in summer. Buildings, trees and overhangs change it a lot, so treat it as a starting guess and trust your own count.

YOUR SPACE FACES	TYPICAL SUMMER SUN	WHAT USUALLY WORKS
South	6–10 hours	Anything, including tomatoes, peppers, squash
West	5–7 hours, hot afternoon	Peppers, eggplant, beans; watch tomatoes in heat waves
East	4–6 hours, mild morning	Greens, herbs, peas, chard; cherry tomatoes at the edge
North	0–3 hours	Lettuce, mint, parsley; little else will fruit

Table 1.1 Typical direct sun by orientation in the continental US (Technitea estimate for open sites in June and July; your own count always wins)

1.3 Match crops to the hours you have

Once you know your numbers, the planning gets simple. Crops fall into three rough groups by how much light they need to give a worthwhile harvest.

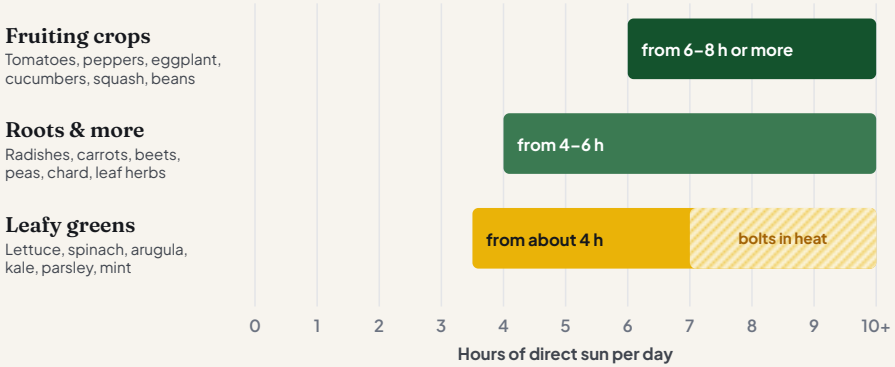


Figure 1.2 The sun ladder. Find your hours on the left and read across to the crops that will give you a real harvest. Plants on a lower rung will also grow higher up, but often bolt or wilt in strong heat. Based on Masabni (2014) and UMaine Extension (2008).

Six to eight hours or more. These are the fruiting crops: tomatoes, peppers, eggplant, cucumbers, squash and beans. Anything you eat that started as a flower belongs here. Texas A&M lists every one of them as a full-sun crop (Masabni, 2014).

Four to six hours. Root crops and a few others that tolerate less: radishes, beets, carrots, chard, peas and most herbs grown for leaves. Roots will be smaller in four hours than in six, but they will form.

Around four hours. Leafy crops: lettuce, spinach, arugula, kale, Asian greens, parsley, chives and mint. Texas A&M lists lettuce, onion, parsley and radish as tolerating partial shade (Masabni, 2014). In hot regions these plants often do better with afternoon shade, because heat makes them bolt, which means they rush to flower and turn bitter.

> **TIP**
>
> If a spot is on the edge between two rungs, plant the crop from the lower rung there first. A happy lettuce beats a sulking tomato every time, and you will learn what the spot can do before you risk your best plant on it.

When you only have shade

Three hours of sun is not nothing. Salad greens, herbs like mint and parsley, and microgreens will all produce. What you should not do is put a tomato there and hope. If your best spot gets under four hours, read Chapter 4 with an eye for leafy crops and accept that fruit will come from the farmers market this year.

1.4 Heat, reflection and too much sun

The opposite problem is real too, especially in the South and Southwest and on high balconies. A west-facing wall of brick or glass soaks up afternoon sun and keeps radiating it after dark. Concrete floors do the same. A black plastic pot in that spot can cook the roots on its sunny side.

Tomatoes are the first to complain. Alabama Extension reports that when day temperatures go above 85°F and nights stay above 72°F, tomato flowers often abort, and that warm nights alone can do it for some varieties (Alabama Cooperative Extension System, 2023). The plant looks fine; it just stops setting fruit. On a west-facing balcony in Texas, that can mean no new tomatoes from late June to September.