Tea Shading: The Pre Harvest Step for Matcha and Gyokuro

From the teas.co.uk wiki

> **Tea shading, in summary:** A pre-harvest technique that defines matcha and gyokuro. It drives real chemistry shifts (amino acids up, catechins down), boosts colour and umami, and reduces yield, which is why shaded teas cost more.

Shading is unusual: it changes the leaf before it is even picked. This sits in the processing cluster beside tea processing steps.

Last reviewed by the teas.co.uk team in March 2026.

What shading is

Shading means covering the tea plants with shade structures for a period before harvest, used for gyokuro, kabusecha and matcha leaf. What makes it unusual is the timing: unlike withering or firing, this processing decision happens on the living plant, before anything is picked. It is a Japanese tradition, refined in Uji from the sixteenth and seventeenth centuries, and it runs for roughly one to four weeks before harvest, progressively blocking 70 to 95% of the sunlight with rice-straw mats over bamboo frames or modern synthetic netting. See what is matcha for the headline product.

Aspect	Answer
What it is	Pre-harvest covering of tea plants to reduce direct sunlight before plucking
Where it's used	Specifically Japanese matcha and gyokuro tradition; also some kabusecha
Origin	Japanese tradition; Uji refinement from 16th-17th century
Duration	1-4 weeks before harvest depending on target product
Shading method	Rice straw mats over bamboo (traditional) or synthetic netting (modern)
Light reduction	70-95% sunlight blocked progressively
Chemistry shift	More amino acids (L-theanine), less catechins, more chlorophyll
Flavour effect	Pronounced umami sweetness, vivid green colour, reduced astringency
Tencha	Shaded leaves processed into matcha; long shading 3-4 weeks

Aspect	Answer
Gyokuro	Shaded leaves rolled into needles; intense umami; 2-3 weeks shading
Kabusecha	Shorter shading 1-2 weeks; lighter umami enhancement
Yield impact	Significant reduction (30-50%) vs unshaded growing; justifies premium pricing
Cultivar interaction	Some cultivars (Samidori, Asahi) particularly suited to shaded growing
Framing	Pre-harvest "process"; real chemistry; defining for premium Japanese tea

The chemistry

The mechanism is well understood and explains the flavour. Shading limits photosynthesis, and the plant compensates by producing more chlorophyll, which gives the vivid green colour. With less sunlight it also accumulates L-theanine and other amino acids that would otherwise convert to different compounds, and L-theanine is exactly what delivers the characteristic umami sweetness, markedly higher in shaded than unshaded leaf. At the same time catechin production falls, which is why shaded teas are far less astringent than a brisk unshaded sencha, and caffeine biosynthesis dips slightly too, though that effect is modest. These are real, measurable changes, and they drive the dramatic differences in both flavour and colour.

Methods and duration

Both the method and the length are dials, not switches. Traditional shading uses rice-straw mats woven over bamboo frames, hand-applied over weeks; it allows nuanced adjustment, is considered to produce a more refined character, and commands premium positioning. Modern synthetic netting with a specified light-block percentage is mass-deployable, consistent and less labour-intensive, the commercial standard, sometimes combined with straw mats for the final week. Duration sets the product: kabusecha gets a light 1 to 2 weeks (a gentle umami lift, still sencha-like), gyokuro a moderate 2 to 3 weeks (strong, broth-like umami, rolled into needles), and tencha for matcha an intensive 3 to 4 weeks with near-total light block at the end (maximum umami and chlorophyll). Longer shading means more umami but more yield loss and labour.

Cultivar, and tencha to matcha

Not every cultivar responds equally well to shading, so premium production matches plant to method. Shade-suited cultivars include Samidori (bred for matcha), Asahi and Yamakai (gyokuro tradition) and Okumidori, and a vendor who names the cultivar alongside the shaded designation is showing real sourcing depth. The path from shaded leaf to matcha is specific: shade for three to four weeks, pluck only the top leaves, steam for 15 to 30 seconds to halt oxidation, dry the leaves without rolling, then remove the stems and veins to leave only leaf flesh, which is "tencha". The tencha is then stone-ground, traditionally in granite mills at a slow speed (around an hour per 30g for ceremonial grade), into the ultrafine powder that is matcha. Ceremonial grade uses the youngest spring leaf ground slowly; culinary grade uses later harvest, ground faster. See samidori.

Yield, pricing and verifying it

Shading's economics explain the price. Properly shaded production yields 30 to 50% less than unshaded growing because reduced photosynthesis means less leaf mass, and the setup (especially traditional straw

mats) takes substantial labour weeks before harvest, with storms a real risk to the structures. So genuine matcha and gyokuro simply cannot compete with unshaded sencha on price, and very cheap "matcha" is usually unshaded or briefly shaded tea ground to powder, not the same product. To verify the real thing, look for a vivid green colour (the chlorophyll signature), a pronounced umami sweetness (the "amami" character), and a marine, seaweed undertone ("kaiso"), and favour sellers who state the shading duration, the grade and the producer. See how to judge tea quality.

A natural follow-on: the English tea range and loose leaf range.

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