

Tecoma stans Linn (Bignoniaceae) – An overview

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ABSTRACT:

Tecoma stans Linn is an erect shrub commonly found in India. It is also known as yellow bells, yellow elder, trumpet flower, belonging to the family Bignoniaceae. *Tecoma stans*, showed exhibited antidiabetic, antioxidant, hypoglycemic, antitumor, free radical, anti-inflammatory and antimicrobial, properties. This review aims at describing the botanical description, classification, phytochemical profiles of *Tecoma stans*.

Keywords: Yellow bell, *Tecoma stans*, botanical, inflammatory, antimicrobial

I.INTRODUCTION

Vernacular Names

Piliya(hindi),
koranekelar(kannada),
sonnapatti(tamil),
panchagotla(telugu),
chandraprabha(bengali),
ghanti ful(marathi).

Preferred Common Name

- yellow bells

Other Scientific Names

- Bignonia incise Sweet
- Bignonia stans L.
- Gelseminum stans (L.) Knutze
- Stenolobium quinquejugum Loes.
- Stenolobium stans (L.) Seem.
- Tecoma incise hort. ex DC.
- Tecoma mollis Kunth

International Common Names

- English: trumpetflower; yellow elder; yellow trumpetbush
- Spanish: lluvia de oro; trompeta; trona frente; tronadora
- French: tecoma jaune
- Portuguese: amarelinho; ipê-mírim

Local Common Names

- Germany: Aufrechte Trompetenwinde
- Italy: tecoma giallo
- Pacific Islands: piti



Fig: 1 Yellow bells

LIGHT: Part Sun, Sun

TYPE: Shrub

HEIGHT: 3 to 8 feet

WIDTH: To 4 feet wide

FOLIAGE COLOR: Chartreuse/Gold

SEASONAL FEATURES:

Fall Bloom, Spring Bloom, Summer Bloom

PROBLEM SOLVERS:

Drought Tolerant, Good For Privacy

SPECIAL FEATURES:

Attracts Birds, Good for Containers

ZONES: 8-10

TAXONOMICAL CHARACTERS:

Domain: Eukaryota

Kingdom: Plantae

Phylum: Spermatophyta

Subphylum: Angiospermae

Class: Dicotyledonae

CULTIVATION AND COLLECTION:

SEED PROPAGATION:

Containers for starting seeds

Seed-starting soil mix

Seeds

Plant labels

A cardboard egg carton makes an excellent biodegradable seed-starting flat, as do cut-down milk jugs, yogurt cups, nursery flats, and disposable aluminum pans. You can also purchase biodegradable peat pots that can be set in the ground when it's time to move seedlings outdoors. Whatever you choose, make sure the container has holes in the bottom for good drainage.

Seeds are a little fussier about what medium you start them in. Because seeds contain enough food to support the

germinating seedlings in their first days, they don't need to start in an especially nutrient-rich medium. Use a sterile, weed-free seed-starting mix that holds water well. Good commercial seed-starting mixtures are available at nurseries and garden centers.

Many seedlings look alike, so labels are a good idea. Write the plant names on frozen-dessert sticks or other labels, and stick them in the soil. Keep your seed packages for reference.

To start seeds, sow them by scattering them evenly over the surface of the seed-starting mix.

Here's a hint: If you have really small seeds that are difficult to sow evenly, mix them in a saltshaker filled with sand. Mix them up and shake the seeds out with the sand.

Most seeds sprout best in a warm, humid environment. So loosely cover your containers with clear plastic wrap or a clear plastic cover to help hold humidity.

Keep your containers out of direct sun, otherwise too much heat may build up and bake your seeds. Also: Don't wrap the plastic cover too tightly when you are starting seeds; your seedlings need fresh air, otherwise they'll rot.

Plant Thinning



As seedlings develop their first set of true leaves (after the initial seed leaves), the containers will become crowded, and you'll need to thin them. It's hard to get rid of healthy plants, but if you let the crowding continue, all the plants will suffer and die.

Keep the largest, healthiest seedlings, and pull out unwanted plants or cut off their stems at soil level, leaving at least an inch of space between the remaining seedlings. As the survivors grow and outdoor temperatures reach the 50s and above, the seedlings are ready to harden off (get tough) by being set in a protected area outdoors, such as a garage or porch. After a day or two, they're ready for the garden.

How to Start Seeds Outdoors

Cool-season plants, such as pansy, cabbage, lettuce, and spinach, don't mind a bit of frost and can be planted before your area's average last spring frost date.

But heat-loving tropical varieties, such as tomatoes, peppers, eggplants, marigolds, petunias, and zinnias, may not sprout at all until soil temperatures reach 70°F or so. Wait to plant them until the soil has warmed.

Step 1: Prepare the Seedbed

Loosen the soil by tilling or working it. This make it easier for the started seeds and seedlings' roots to grow.

Here's a hint: If your soil tends to crust or has a high clay or sand content, add a handful of organic matter, such as compost.

Step 2: Sow the Seeds

Sow seeds just as you would indoors, evenly scattering them over the soil surface. Try not to get them too close together so you don't have to thin them out later.

Step 3: Cover the Seeds & Water

Cover most seeds with a light layer of soil, compost, or other material. This will help keep birds and other pests from eating them, as well as allow the soil to hold moisture better.

Water the seeds carefully with a sprinkler or watering can. Try not to apply too much water at once -- you don't want your seeds to wash away.

Step 4: Mark Your Seeds

Mark the rows or areas where you've planted your seeds so you can more easily discern your seedlings from any emerging weeds. And so you know which varieties are planted where!

Troubleshooting when Starting Seeds

Seeds are fairly forgiving of variances in growing conditions, producing healthy plants like the one here, but things can go wrong, including:

- **Damping off.** Seedlings suddenly wilt and die for no apparent reason. This is caused by fungi. To prevent damping off, avoid overwatering, space seeds evenly, and thin seedlings at the first sign of crowding. To discourage fungi, use a sterile growing medium. If your seedlings have already wilted, there's nothing you can do; they must go to that garden in the sky.
- **Leggy plants.** Seedlings with long, spindly stems and lots of space between the leaves may be the result of too little light, overly warm conditions, or overcrowding.
- **Discolored leaves.** A nutrient deficiency can cause leaves to change color. Remediate with a weekly dose of a liquid fertilizer containing trace minerals, diluted to half strength. Don't overfertilize or you risk damping off.
- **Curled leaves.** This is likely due to overfertilizing. Most seedlings don't need fertilizer until they begin developing true leaves. Even then, small frequent feedings are better than occasional large doses.
- **STEM CUTTING:**
- **Types of Cuttings**



There are several types of cuttings you can use to propagate your plants. These cuttings use different kinds of stems. Happily, you can treat them pretty much the same way.

Softwood cuttings are from fresh, new growth, usually in spring or early summer. Plants such as butterfly bush and dogwoods root well from softwood cuttings.

Greenwood cuttings are from young stems that are starting to mature, but still in the first year. They're usually taken in early to midsummer. Plants such as gardenia and boxwood tend to root well from greenwood cuttings.

Semi-ripe cuttings are tougher and more mature. They're usually taken from midsummer to fall. Plants such as camellia and honeysuckle often root well from semi-ripe cuttings.

Hardwood cuttings are taken from woody stems that have gone dormant in late fall or winter. Trees and shrubs such as mock orange and viburnum often root well from hardwood cuttings.

Supplies for Cuttings

- Sharp knife or pruning shears
- Containers for potting up the cuttings
- Potting mix, perlite, vermiculite, or sand
- Rooting hormone

Step 1: Cut Off a Section of Stem



To make your cuttings, select healthy growth that's 3 to 6 inches long. Try to make a sharp cut; mashing the stems may make it more difficult for the shoots to develop new roots.

Step 2: Remove the Lower Leaves

Clip off the leaves on the lower half of the shoot so you have a bare stem to insert into your potting mix. Then, if you want, dip the end of your stem in rooting hormone. This helps many cuttings root more quickly.

Step 3: Pot Up Your Cutting

Plant part	Pharmacological Activity
Root	Diuretic, Anti syphillic, Tonic, Vermifuge
Bark	Stomach Pain, Mild Cardiotonic, Smooth Muscle Relaxant.
Flower	Stomach Pain
Leaves	traditional ant diabetic remedy

Immediately pot up your cutting in moist potting

mix, sand, perlite, or vermiculite. Keep your cutting humid by loosely wrapping it in clear plastic or keeping it under a cloche.

Some plants root more quickly than others, so be patient. On average, it takes a month or two for your cuttings to root and become established enough that you can plant them.

Tips for Cuttings

- Early morning is usually the best time to take cuttings because the plant usually has the most moisture at this time.
- Keep cuttings cool and moist until you've potted them up. Avoid exposing the cuttings to direct sun if you can.
- Many cuttings root faster if they're kept warm and humid, so misting the cuttings frequently can help them grow.

Chemical Constituents Of *Tecoma stans*

- 1) Alkaloids
- 2) Carbohydrates
- 3) Saponins
- 4) Tannins

- 5) Phenolic compounds

Medicinal uses

Medicinal uses Traditional Uses-Almost all the parts of *Tecoma stans* are of medicinal importance and used traditionally for the treatment of various ailments. South America and Latin America used traditionally for reducing blood glucose. The *Tecoma stans* leaves, barks and roots have been used for a variety of purposes in herbal medicine. Bark shows smooth muscle relaxant, mild cardiostimulant and choleretic activity. Applications include the experimental treatment of diabetes, digestive problems, control of yeast infections and other medicinal applications. It contains several compounds that are known for their catnip-like effects on felines. The root of the plant is reported to be a powerful diuretic, vermifuge and tonic. A grinding of the root of *Tecoma stans* and lemon juice is reportedly used as an external application and also taken internally in small quantities as a remedy for snake and rat bites.

CONCLUSION

Finally concluded the yellow bells roots, barks, flower, and leaves beneficial effect in humans, the pharmacological activity of diuretic, antispasmodic, tonic and vermifuge produce that effect from root portion. The stomach pain, mild cardiostimulant, smooth muscle relaxant effect from the portion of bark. The flower also having the worthwhile effect of stomach pain. The leaves are commonly used in the antidiabetic purposes.

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