

Growing Tortoise Food from Seed.

Tortoise Food Mix – Special thanks to Herbiseed for sponsoring this free sample pack for this conference delegate pack and for supplying this guide information

A grass-free seed mixture to produce palatable green food for tortoises

This wild plant mixture was originally formulated for Herbiseed by Lin King (known to many as 'the Tlady'), from her observations of the plants eaten by wild tortoises in Mediterranean areas. Today the blend has evolved through keeper feedback and now contains a selection which tortoises will readily feed on. It comprises a mixture of edible annual and perennial plants without grass. It is designed to allow tortoises to graze naturally and hence avoid the use of unsuitable shop-bought greens, whilst providing a wide range of nutrients for healthy growth.

Illustrations of the plants and further notes can be found in the Diet section of The Tlady's Guide at www.tortoises.net or www.tlady.clara.net/TortGuide/index.htm. The mix can be used in a number of ways, large and small scale, and is equally suitable for seeding larger paddock areas (where slow growing grass species may be added), and smaller enclosures, weed patches, containers and seed trays. The plants can also be used on a 'cut-and-come-again' basis from containers.

Some of the plants should be allowed to flower in parts of the planting area. This is important both as tortoises' wild diet includes a lot of flowers, and so that the annual species in the mix are allowed to seed. One way to achieve this is to divide the sown area into several sections, grazing each section in rotation while the resting sections regrow.

The mix can be sown in seed trays to be used in the bases of both indoor and outdoor units for juvenile tortoises, and a succession of these can be prepared and replaced as they are eaten down. Only normal unfertilised garden soil (or sterilised loam) should be used, since some of the plants have the ability to accumulate excessive quantities of nitrates from artificially enriched soils, and indeed most of these plants grow naturally on impoverished soils.

Twenty of the following species are included in Tlady mixture:

Dandelion	<i>Taraxacum officinale</i>	Ribwort Plantain	<i>Plantago lanceolata</i>
Catsear	<i>Hypochoeris</i>	Common Mallow	<i>Malva sylvestris</i>
Hawkbit	<i>Leontodon</i>	Musk Mallow	<i>Malva moschata</i>
Smooth Hawk's-beard	<i>Crepis capillaris</i>	Dwarf Mallow	<i>Malva neglecta</i>
Nipplewort	<i>Lapsana communis</i>	Shepherd's purse	<i>Capsella bursa-pastoris</i>
Chicory	<i>Cichorium intybus</i>	Hairy Bittercress	<i>Cardamine hirsuta</i>
Smooth Sow thistle	<i>Sonchus oleraceus</i>	Wavy Bittercress	<i>Cardamine flexuosa</i>
Great Plantain	<i>Plantago major</i>	White/Dutch clover	<i>Trifolium repens</i>
Hoary Plantain	<i>Plantago media</i>	Red clover	<i>Trifolium pratense</i>
Common Vetch	<i>Vicia sativa</i>	Creeping Bell-flower	<i>Campanula rapunculoides</i>

Growing Notes

HOW TO ESTABLISH YOUR Paddock

TIME OF SOWING: Seeds need warmth and moisture to germinate and establish. Early spring and early autumn are the seasons when these conditions are most likely to occur naturally outside. However, successful sowings can be made throughout the summer if adequate water can be applied to continually maintain moisture at the soil surface.

SOWING RATE: Sow at 1kg seed mixture per 100 square metres (100kg/hectare) on larger areas. This relatively low seed rate is inexpensive, but needs time to establish before being able to withstand being grazed. On smaller areas, sowing up to 50g per square metre will quickly achieve a thick cover and be able to withstand light grazing sooner after sowing.

PROCEDURE:

1. If unwanted perennial weeds are present, destroy them by frequent hoeing or cultivating in the growing season before sowing.
2. Correct any poor drainage problems which may exist on the site.
3. Cultivate the soil to produce a firm, fine seedbed.
4. Ideally, leave this for several weeks to allow any unwanted weed seeds to germinate. Remove the seedlings by shallow hoeing.
5. Thoroughly mix the seed mixture in a bucket and scatter it evenly over the soil surface.
6. Rake it in lightly.
7. For sowings made between March 1 and September 1, roll or tread the soil lightly to firm the soil around the seeds. This is particularly important for sandy soils or lumpy tilths. Do not roll the soil when sowing in late autumn or early winter.
8. Do not water prior to seed germination unless you are able to maintain a moist soil surface for at least two weeks. If this is not possible, it is better to allow the seed to germinate in response to natural rainfall.
9. Grazing with small animals such as tortoises and guinea pigs can begin when the grass (if added) has grown 8 to 10cm high and there is no bare ground visible between the plants ('grass fully tillered' in agricultural parlance). This will occur sooner if the heavier seed sowing rates are used.
10. Ideally, divide the sown area into several sections and graze each in succession while the others are allowed to recover.

MANAGEMENT

Do not overgraze. If the animals graze the vegetation down to soil level, remove some or all of them until the vegetation has recovered. Overgrazing will result in the loss of the herbs. If there is a tendency to overgrazing in summer, watering may improve the plant growth. Divide the area into sections and graze one part while the others are being rested. If any of the vegetation becomes too tall, trim it with a strimmer or shears.

SEED AVAILABILITY: Further mixture can be obtained from the below address or via Tortoise Club:

www.tortoiseclub.org

Tortoise seed mixes available locally through the Tortoise Club meetings and events. If you are not in the Norfolk area amounts can be bought via sales@herbiseed.com or please call telephone: (+44) or (0)1189 349464