



## Horticultural Vermiculite

### Does a Professional Job in Any Soil Environment

Vermiculite is the geological name given to a group of hydrated laminar minerals which are aluminum-iron magnesium silicates which have the appearance of mica, and is found in various parts of the world. When processed for horticultural use, the mineral is subjected to intense heat, expanding it into accordion-shaped granules with countless layers of thin plates. Horticultural vermiculite has the excellent property of improving soil aeration while retaining moisture and nutrients to feed roots, cuttings and seeds for faster, maximum growth.

- Horticultural vermiculite is permanent, clean, odorless, non-toxic and sterile. It will not deteriorate, turn moldy or rot. The pH is essentially neutral (7.0) but owing to the presence of associated carbonate compounds, the reaction is normally alkaline. The pH, colour and chemical composition of vermiculite will vary depending on the source from deposits around the world.
- Vermiculite possesses cation exchange properties, thus it can hold available to the growing plant ammonium, potassium, calcium and magnesium.
- Vermiculite, when combined with peat or composted pine bark compost, promotes faster root growth and gives quick anchorage to young roots. The mixture helps retain air, plant food and moisture, releasing them as the plant requires them.
- Vermiculite is very light in weight, easy to handle and easily mixes with soil, peat, composted pine bark, fertilizers, pesticides and herbicides. Its use as a carrier and bulking agent ensures more even distribution in mixing operations. Growing in a vermiculite containing soil mix



*Greenhouse plants growing in vermiculite mix (Picture courtesy of Palabora Europe)*

**ROOTING CUTTINGS** -Medium grade vermiculite is the standard among professional nurserymen for most horticultural uses including the insertion of cuttings. Vermiculite may be used directly as poured from the bag for root cuttings. Water thoroughly and insert cuttings. Over wetting is not a serious concern if container drainage is provided. Vermiculite will promote maximum root growth in less time.

**SOIL AMENDING OR SOIL CONDITIONING** -Where the native soil is heavy or sticky, gentle mixing of vermiculite up to one-half the volume of the soil is recommended. This creates air channels and allows the soil mix to breathe. Mixing vermiculite in flower and vegetable gardens or in potted plants will provide the necessary air to maintain vigorous plant growth. Where soils are sandy, mixing of vermiculite into the soil will allow the soil to hold water and air needed for growth.

**SEED GERMINATION** -Use vermiculite alone or mixed with soil or peat. Very little watering is required. More seeds germinate - faster germination too! When vermiculite is used alone, seedlings should be fed with a weak fertilizer solution when the first true leaves appear. A tablespoon of soluble fertilizer per one gallon (3.78 : 1) of water will do.

Where vermiculite is mixed half and half with soil, peat, or composted pine bark, no additional feeding is required up to the time of transplanting. Because vermiculite is sterile, the threat of damping-off is virtually eliminated. Seedlings can be removed from vermiculite with little danger of breaking-off hair roots, and the dense root growth enables the young plants to take hold immediately.



*Rooted plant in soilless mix with vermiculite (Picture courtesy of Pull)*

**HOUSE PLANTS** -Vermiculite eliminates the problem of packed-down soil in flower pots. Mix half and half with soil, peat and/or composted pine bark. It provides excellent air and moisture control for house plants. Lightens and aerates soil. Roots can spread out through the pot. Less frequent watering is required.

**TRANSPLANTING** -Dig hole at least six inches larger than plant roots. Mix vermiculite with top-soil that has been removed, then place mixture around roots. Vermiculite, when mixed with soil before transplanting shrubs, bushes or trees, will permit roots to branch-out and penetrate deep into the ground. Vermiculite protects roots from drying action of wind and sun. Provides even moisture control - assures healthier plants.

**SUMMER OR WINTER MULCH** - Use two or three inches of vermiculite as a mulch around shrubs, roses, tomatoes, dahlias, and garden plants. Prevents drying out, insulates plants against cold. Plants protected with vermiculite withstand wide variations in winter temperatures. Vermiculite does not mat down or become soggy because its pore structure prevents it from becoming saturated. Applied around plants after first heavy summer rain, it will prevent drying of soil and damage to plant. In spring the mulch can be mixed into soil as a conditioner.

**STORING BULBS AND ROOT CROPS** -Pour vermiculite around bulbs placed in container. If clumps are dug, allow to dry for a few hours in the sun and then place in cartons or bushel baskets and cover with vermiculite. The absorptive power of vermiculite acts as a regulator that prevents mildew and moisture fluctuation during the storage period. It will not absorb moisture from the inside of

stored tubers, but it does take up free water from the outside, preventing storage rot. Stored tubers are protected from even the most severe temperature changes.

**GREENER, HEALTHIER LAWNS** -When preparing seed bed for new lawns, mix 3 cubic feet (85 : 1.) of vermiculite per one hundred square feet (9.3 sq. meter) or (100 : 1. per 10 sq. meters). After seeding, cover entire area with vermiculite about one-quarter inch deep over seed. Water thoroughly with fine spray. Vermiculite hastens germination. More seeds germinate too, so your lawn is denser, richer. Vermiculite acts as a constant reservoir of moisture, retards drying out and scorching during dry spells.

**HOME FLORAL ARRANGEMENTS** -Dip your container into vermiculite -fill and level off. Hold container under water faucet and thoroughly saturate the vermiculite. Pour off excess water. Insert the flowers for a neat, colorful arrangement. Flowers arranged in vermiculite will remain erect and fresh for days and there are no water spillage problems to worry about. With taller containers all you need to use is vermiculite. With centrepieces chicken wire may be necessary.



*Tomato plants growing in vermiculite (Picture courtesy of Pull)*

**The Vermiculite Association**

2207 Forest Hills Drive  
Harrisburg, PA 17112  
Phone: 717-238-9902  
Fax: 717-238-9985

[tva@vermiculite.org](mailto:tva@vermiculite.org)

[www.vermiculite.org](http://www.vermiculite.org)

TVA is a Domestic Not for Profit Corporation Incorporated in the State of New York, USA

