



Pannai Organics

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Kaolin Clay – Natural Heat Shield for Crops | Summer Protection Spray

Product Overview

Kaolin clay is a naturally occurring mineral composed primarily of **hydrated aluminum silicate**, widely used in modern agriculture as a **protective foliar spray**. When applied to crops, it forms a **thin white reflective film** over leaves and fruits, acting as a natural barrier against intense sunlight and heat stress.

During peak summer conditions, crops often suffer from **sunburn, moisture loss, leaf scorching, and reduced photosynthesis**. Kaolin clay works as a **heat-resistant shield**, helping plants stay cool, healthy, and productive even under extreme temperatures.



How Kaolin Works on Crops

- Reflects excess sunlight and UV radiation
 - Reduces leaf temperature by 3°C to 6°C
 - Minimizes water loss through transpiration
 - Protects fruits from sunburn and cracking
 - Improves photosynthetic efficiency
 - Reduces stress during flowering and fruit setting stages
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Key Benefits

- ✓ Prevents sunburn in fruits and leaves
 - ✓ Enhances crop tolerance to drought and heat stress
 - ✓ Improves fruit color, size, and quality
 - ✓ Reduces flower drop and improves fruit retention
 - ✓ Acts as a mild pest deterrent (repels certain insects)
 - ✓ Safe, non-toxic, and suitable for organic farming
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Suitable Crops

Kaolin clay can be used across a wide range of crops:

- **Fruit Crops:** Mango, Grapes, Banana, Pomegranate, Citrus, Apple
- **Vegetables:** Tomato, Chilli, Brinjal, Capsicum
- **Plantation Crops:** Coconut, Arecanut, Coffee, Tea
- **Spices & Others:** Cardamom, Turmeric

- **Field Crops:** Groundnut, Cotton, Maize
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Best Time to Apply

- Start application **before peak summer** (March–April in South India)
 - Apply during **early morning or late evening**
 - Repeat during **heat waves or high-temperature periods**
 - Critical stages: **flowering, fruit setting, fruit development**
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Application Method

1. Mix kaolin clay thoroughly in water
2. Spray uniformly on leaves and fruits
3. Ensure full coverage for best protection
4. Maintain agitation during spraying to avoid settling

Age-wise Application Strategy

- **Young Plants (0–30 days):** Light spray (2–3 g/L) to avoid stress
 - **Vegetative Stage:** Moderate spray (3–4 g/L) for leaf protection
 - **Flowering Stage:** Regular spray (3–5 g/L) to reduce flower drop
 - **Fruiting Stage:** Higher concentration (5 g/L) for fruit protection
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Crop Type	Crop Stage	Dosage (per liter of water)	Spray Interval	Purpose
Grapes	Pre-flowering	3–5 g	10–15 days	Prevent flower drop
Grapes	Fruit development	5 g	10 days	Improve berry quality & color
Mango	Fruit setting	5 g	15 days	Prevent sunburn
Banana	Vegetative stage	3–4 g	10–12 days	Reduce leaf stress
Tomato/Chilli	Flowering stage	3 g	7–10 days	Improve fruit set
Pomegranate	Fruit development	4–5 g	10–12 days	Reduce cracking
Coconut	All stages	5 g	20 days	Reduce heat stress
Groundnut	Vegetative stage	3 g	10 days	Improve growth under heat

Why Farmers Prefer Kaolin in Summer

In regions like Tamil Nadu where summer temperatures can exceed 40°C, kaolin acts as a **cost-effective and natural climate protection tool**. It helps farmers maintain crop productivity without relying on expensive cooling systems or excessive irrigation.

Compatibility

- Can be mixed with most organic inputs
- Avoid mixing with strong acidic or alkaline solutions
- Always perform a small compatibility test before tank mixing