



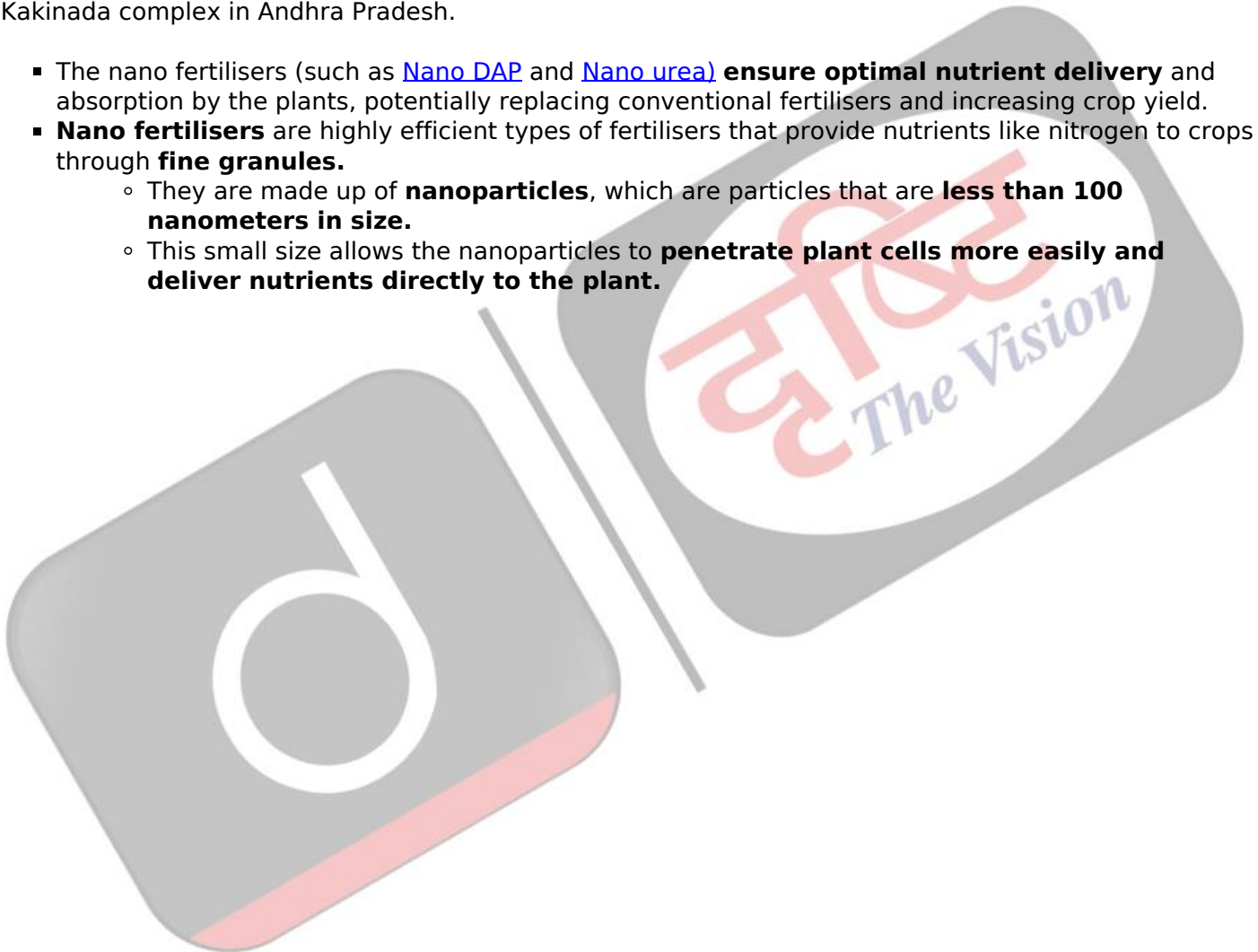
Nano-Fertilizer Plant at Kakinada

[Source: TH](#)

Recently, Coromandel International (an agriculture solutions provider) has opened a [nano-fertiliser](#) plant at its Kakinada complex in Andhra Pradesh.

- The nano fertilisers (such as [Nano DAP](#) and [Nano urea](#)) **ensure optimal nutrient delivery** and absorption by the plants, potentially replacing conventional fertilisers and increasing crop yield.
- **Nano fertilisers** are highly efficient types of fertilisers that provide nutrients like nitrogen to crops through **fine granules**.
 - They are made up of **nanoparticles**, which are particles that are **less than 100 nanometers in size**.
 - This small size allows the nanoparticles to **penetrate plant cells more easily and deliver nutrients directly to the plant**.

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Comparison item	Nano-fertilizers	Traditional-fertilizers
Solubility and dispersion of mineral nutrients	Improve solubility, reduced soil fixation & its absorption and increased nutrient bioavailability	Lower bioavailability to plants based on large size of particle and less its solubility
Nutrient uptake efficiency	Increase fertilizer efficiency (50-70%), uptake of nutrients by root and reduced applied fertilizer doses	Lower nutrient efficiency by roots (20-50% based applied nutrient)
Controlled release modes	High release rate and its pattern of nutrients due to its encapsulation or coating	High release of nutrients may cause toxicity and ecological problem in soil
Effective duration of nutrient release	Long duration of nutrient supply into soil up to 50 days	Short duration up to 10 days depends on nutrient
Loss rate of nutrients in applied fertilizers	Reduce loss rate of nutrients into soil by leaching due to nano-structured formulation	High loss rate by leaching and/or runoff process

Read more: [Nano Fertilisers](#), [Nano DAP](#)

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