

INDORAMA GRANULAR UREA

INDORAMA NEEM COATED UREA

INDORAMA NPK



Uniform granule size.

■ Low moisture, anticaking properties, low biuret content & Free flowing.

 Higher crushing strength, which prevents caking.

 Standards Organization of Nigeria (SON) Certified.



■ Enhances the nitrogen use efficiency and crop remain green for longer time.

It increases crop productivity

Protect crop from pest and diseases.

Prevent Urea application losses by Volatilization and Leaching.



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- Indorama NPK maintains quality and have a perfect balance of nitrogen, phosphorus, and potassium.
- Nitrogen is needed for vegetative growth.
- Phosphorus is needed to produce strong roots and shoots.
- Potassium is needed to produce quality fruit and flowers, also increases resistance to diseases.
- Calcium from limestone granules helps in decreasing soil acidity.



Ruling Nigeria with the King Of The Grains or Crowning Glory, Nigeria's Wheat

INDORAMA

Essential materials. Better lives.

Wheat is one of the most important food crops. Total area of the wheat production in the world is around 225.2 million hectares with a production of 685.6 million metric tons. About 1.0 million metric tons of wheat is produced annually in Nigeria. The major producing countries in the world are China, India, USA, Russia, Ukraine, Canada, Australia, France, Turkey, Pakistan, and Egypt. Agriculture department from Federal Government of Nigeria is making all efforts to increase the wheat crop production in the country with special emphasis in the states of Kano, Jigawa, Sokoto, Kebbi, Zamfara, Bauchi, and Kaduna.









Land Preparation and Soil Requirement

- Wheat requires cool weather with optimum temperature of about 25 °C.
- The cool weather is especially important during the early growth stage and tillering.
- Wheat is best grown during the harmattan season (November February).
- The land selected should be void of debris or stubbles from previous crops.
- Wheat requires fertile loam and clay loam soils with high water holding capacity.
- Avoid heavy or sandy soils and select medium textured soils.
- Also, avoid acidic soils, wheat prefers neutral to slightly alkaline soils.
- Select site with permanent source of water for irrigation.
- The field should be harrowed to fine tilth.
- Raised beds are made just before sowing, followed by pre-sowing irrigation and land leveling.
- The raised beds should be divided into basins for easy irrigation.
- Pre-planting herbicide Pendimenthalin at 2-3 L/Ha should be sprayed two weeks to planting.
- Post-emergence herbicide 2,4-Dimethyl aminesate (shortly called 2,4-D) can be used.
- Organic manure should be incorporated into the soil two weeks before sowing at the rate of 8-10 tons/ha. This will improve the soil physical structure and maintain soil health.
- Irrigate at intervals of 5 10 days depending on weather and soil type.
- Irrigation is essential at sensitive growth stages (tillering, heading and grain filling).
- Excess water should be adequately drained as waterlogging reduces crop performance.

Seed Rate and Time of Sowing

- Obtain seed from reputable licensed seed companies or research institutes.
- Drill seeds at the rate of 80 kg ha-1 using 15 20 cm spacing between rows.
- The drilling method is the best practice.
- The optimum time for sowing is decided by temperature (optimum temperature of 25 °C).
- Seed should be treated with seed dressing chemical (such as 20 % Metalayxl + 20 % Imidacloprid) at the rate of 10 g chemical for 4 kg of the seeds
- Some important varieties of wheat include;
- LACRI WHIT-11 (ATTILA7) heat tolerant, good baking quality and high yielding 7.1t/ha
- LACRI WHIT-9 (PASTOR) heat tolerant with good baking quality and high yielding 7.7t/ha
- LACRI WHIT-7 (REYNA15) resistant to Septoria leaf and glume botch diseases, yields 5.1t/ha
- LACRI WHIT-5 (NORMAN) adapted to irrigated Sudano-Sahelian zones.
 High yielding 6t/ha

Fertilizer Management with 4R Nutrient Stewardship

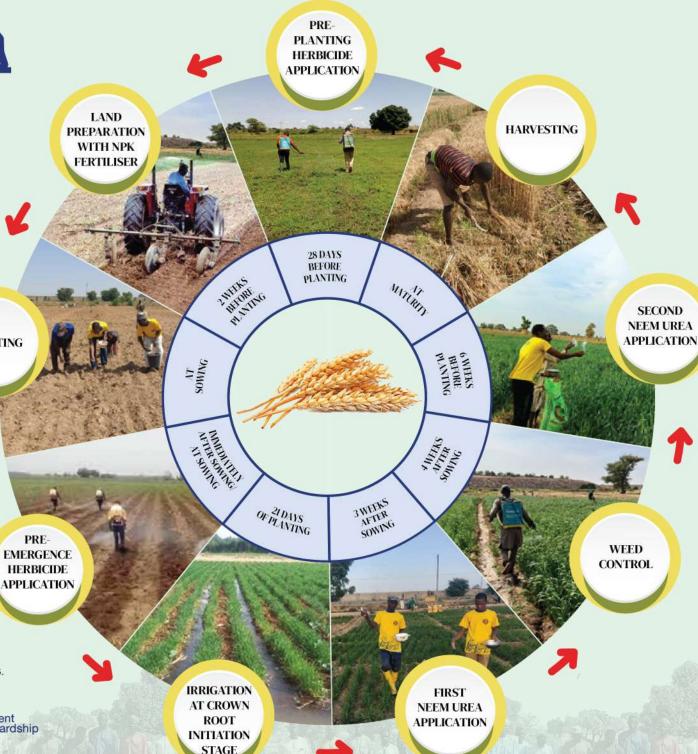


PLANTING

- Before fertilizer application, it is important to ensure that the soil is moist and weed free.
- Apply fertilizer at the rate of 120-150 kg N: 40 kg P2O5: 40 kg K2O/ha.
- Apply 8 bags (400kg) of Indorama NPK per hectare during land preparation.
- Top dress with 1.5 bags (75kg per hectare) of Indorama Neem Coated Urea at 3 weeks and 1 bag (50kg) at 6 weeks after sowing.
- Apply the fertilizer 10 cm away from the crop using dibbling method.

WHEAT CROP





How to Reduce Fertilizer Loss

- Apply fertilizer early in the morning or in the evening time.
- Avoid fertilizer application when it is about to rain or when the weather is cloudy.
- Always apply Indorama Neem Coated Urea fertilizer in split doses for better efficacy.
- Always cover applied fertilizer with soil to prevent volatilization losses.
- Apply nitrogen fertilizer(ie Indorama Neem Coated Urea) after weeding to prevent weed invasion.

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Apply only the recommended dose of fertilizer.

Pests Control

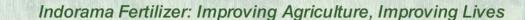
- Field pest problems are minimal on irrigated wheat crop.
- Chlorpyriphos 20 EC at 2-2.5L per ha can be applied in irrigation water to control cutworms and termites attack.
- Employ seed treatment to control seed-borne diseases.
- Ensure field sanitation by removing weeds that could serve as alternate hosts to diseases.
- Use improved varieties that are resistant/tolerant to pests and diseases.
- Practice crop rotation with non-host crops.
- Use bio-pesticides such as neem-extracts to control insect pests.

Weed Control

- In wheat production, weeds are not a serious problem where good land preparation is done; in addition to timely sowing, good spacing, adequate irrigation and fertilizer application.
- Hoe weeding at 4 weeks after sowing could be done to control weeds.
- Chemical weed control using:
- Pre-emergence herbicides such as Pendimenthalin, 2-3 L/Ha
- Post-emergence herbicides such as Basagram 480EC at 2.5 L ha-1 at 3-4 weeks after sowing or Bentazone at the rate of 3-4 L/ha.
- Precaution must be followed to ensure safe use of herbicides.

Harvesting and Crop Storage

- Wheat is harvested when the grain and the straw are golden brown.
- Harvesting is done manually with a sickle or mechanically with a combine harvester.
- Manual threshing is done by beating the head with a stick on a floor or on a metal surface like drum.
- Where harvesting and threshing are done manually, winnowing must be done to separate the grain from the chaff.
- Drying to low moisture content (10-12 %) and thoroughly cleaning of the grains are required for storage.
- Storage structures and containers including bags should be treated with chemicals.
- Yield may reach up to 3-7 tons/ha depending on the variety and management.



BEST FARMING PRACTICES