

# Fertilizer Engineering - Web course

## COURSE OUTLINE

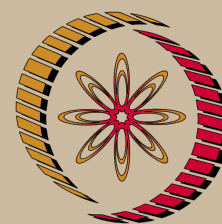
India is primarily an agrarian economy which also contributes the maximum to the GDP. In recent years India's output in the production of essential food items including vegetables, cereals, pulses, oilseeds etc has been increasing at a decreasing pace. Agricultural scientists have been critical of the use of fertilizers and organic fertilizers have come as a nice alternate. Let's discuss about the new technologies in fertilizer manufacturing, government policies, states usage of fertilizers and the trends among private and government manufacturers. Not to mention about the impact of fertilizers in the food production indirectly effecting the economy and the economic growth.

## COURSE DETAIL

Sl No.	Topic	No. of hours
1.	Chemical fertilizers and organic manures – types of chemical fertilizers, nitrogenous fertilizers – methods of production of ammonia and urea.	10
2.	Nitrogen sources - nitric acid, ammonium sulphate, ammonium sulphate nitrate, ammonium nitrate, ammonium chloride – their methods of production, characteristics, and storage and handling specifications.	10
3.	Phosphatic fertilizers - raw materials, phosphate rock, sulphur pyrites, process for the production of sulphuric and phosphoric acids, ground phosphate rock, bone, single super phosphate, triple super phosphate – methods of production, characteristics and specifications.	10
4.	Potassic fertilizers, potassium chloride, potassium sulphate, potassium schoenite – methods of production, specification, characteristics, complex fertilizers, NPK fertilizers, mono-ammonium phosphate, di-ammonium phosphate, nitro phosphate – methods of production.	10
Total No. Hours		40

## References:

- Collings, G.H., Commercial Fertilizers, 5th Edn., McGraw Hill, New York, 1955.
- Editorial board-Handbook of fertilizer technology, The Fertilizer Association of India, New Delhi, 1977.



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## Chemical Engineering

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3. Slacks, A.V., Chemistry and Technology of Fertilizers, Interscience, New York, 1966.