

THE SOLVENT EXTRACTORS' ASSOCIATION OF INDIA

Indian Oilmeals Fertilizers From Nature

Oilcakes / oil meals find use as food / feedstuffs and as organic nitrogenous fertilizers. Apart from their contribution to N P K as shown in Table below they have a number of benefits in agriculture, which none of the synthetic fertilizers or pesticides can offer. They bring in the wonderful molecules that nature has designed to help the plants flourish naturally. They provide slow and steady nourishment, stimulation, protection from soil nematodes and insects, improve yields, and quality of product like taste, flavour, amino acid composition etc.

Mineralization & Slow Release of N:

The oil cakes are slow in mineralising and hence compliment quicker acting inorganic fertilisers whenever they are applied together. Gaseous N losses from oil cakes applied to the plough layer are much smaller than losses from NO₃ fertilisers. Some of these oil cakes retard nitrification of the soil / urea and thereby increase N uptake by the plants. P uptake from calcium phytate ex oilcakes is higher than that from the superphosphate in maize plants.

TABLE
Chemical Composition of Extractions [Cake]

No	Extractions	N %	P ₂ O ₅ %	K ₂ O %	S %
1	Rape-mustard	4.8	2.0	1.3	-
2	Neem	5.2 - 5.6	1.1	1.5	1.4
3	Castor	4.0 - 4.4	1.9	1.4	-
4	Mahua	2.5	0.8	1.9	-
5	Karanja	4.0	0.9	1.3	-
6	Linseed	4.7	11.7	1.3	-

Nematode Control:

Oil cakes containing 2-7% protein N applied at rates 4-10% suppress soil nematodes thereby controlling fungal diseases of plants. Neem, peanut, castor, mustard, linseed, mahua and coconut oilcakes suppress parasitic nematodes (particularly *Meloidogyne javanica*) and those associated with wheat, mung, potato and betel leaf. They also improve plant health and thereby offer greater resistance to infection.

	De-Oiled Meals	Plants	For
1.	Mustard / Rape Seed Cake	Sugar Cane Tea Berseem Jute Leafy Vegetables Papaya Orchids Plankton Tobacco Lac	Increasing Productivity Increasing Growth of New Shoots Increasing Fodder Production Nematode Control Natural Fertilizer Increasing Yield Improves Growth Increasing Production in Fish Ponds Reducing Fertilizer Costs Increasing Yield
2.	Neem Cake (With Urea)	Orange Tomato Tobacco Areca Catechu Fodder Trees Tectona Grandis Rice	Controlling Citrus Nematodes Controlling Tomato Seedling Nematodes Controlling Root Knot Nematodes Reducing Nematodes

			<p>(Yellow Leaf Disease) Controlling Nematode Increasing Dry Mass Increasing N Uptake Slow Release of Fertilizer Urea Regulating Rate of Nitrification of Urea</p>
3.	<p>Castor Cake</p> <p>(With Ammonium Sulphate)</p>	<p>Maize</p> <p>Sugar Cane</p> <p>Rice</p> <p>Banana</p> <p>Jute Tomato Wheat/Barley</p> <p>Potato Tobacco</p>	<p>Increasing Yield Improving Soil P Indices Increasing Cane Yield and Sucrose % in Juice Increasing N content in grain and straw Increasing yield Urea and Castor Cake (1:1) is economical Controlling Nematodes Reducing Nematodes Improving Yield Reducing Nematodes Increasing Tuber Yield Improving Yield and Quality</p>

4.	<p>Mahua Cake</p> <p>(Ammoniated Cake)</p>	<p>Leucaena Leucocephala</p> <p>Soyabean</p>	<p>Increasing Growth and Dry Weight</p> <p>Increasing Seed Yield</p>
5.	<p>Karanja Cake</p> <p>(With Urea)</p>	<p>Leucaema Leucocephala</p> <p>Acacia Nilotica Tobacco Pinus Caribaea Rice</p>	<p>Increasing Growth and fodder</p> <p>Increasing Growth and fodder</p> <p>Controlling Root Knot Nematodes</p> <p>Increasing Growth and Dry Weight</p> <p>Increasing Yield And N Uptake</p> <p>Slow Realease Fertilizer</p>