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भाकृअनुप—भारतीय मृदा विज्ञान संस्थान

नबीबाग बैरसिया रोड, भोपाल- 462038 (म.प्र.)

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Application No. 276-5/IJSS/RTI/2023

Dated 26/06/2023

To,

Mr. Subhranshu Shekhar
Village Tikathi, P.O. Parasiya
District Bhojpur - 802158

Sub.: Reply to information under RTI Act, 2005- reg.

Dear Sir,

Please find enclosed herewith the information (one page) in response to your RTI application No. 276-5/IJSS/RTI/2023 dated 30/05/2023 received by online. Kindly acknowledge the receipt of this reply letter along with enclosures. Further it is informed that the Appellate Authority is Director, ICAR-IJSS, Bhopal and his telephone no. is 0755-2730946.

Yours sincerely,

Encl: Information containing one page

(R. Elanchezhian)

PS & Nodal Officer RTI cum-CPIO (Scientific)

Soil treatment

Soil treatment is required based on identified problems of the soil. It is not clear that what is the current problems of the soil.

If soil has pH imbalance: Acid (low pH <6.0) or alkali soil (high pH >7.5) is treated with lime or gypsum as applicable. Organic amendment can also help in neutralizing the pH problems.

If soil is contaminated with organic chemicals or wastes such as oil, heavy metals or some other non-degradable material, this can be treated using physico-chemical methods or using microbes in bioremediation approaches. In case of saline soil (EC >4 dS/m), the soil inundation with good quality irrigation water to leach down salts from soil is recommended.

For the soil with heavy infestation of soil borne pathogens, following measures can be taken:

- Deep summer ploughing
- Application of heavy dose of neem cake and FYM
- Soil mulching with black polythene mulch to raise the soil temperature in summer and kill pathogens
- Adopting crop rotation to break host pathogen cycle for 2-3 year (do not grow same crop or related crops).
- Use of biocontrol agents such as *Trichoderma* (*Trichoderma* enriched compost can also be used), other available bacterial biocontrol agents as seed treatment
- Seed treatment with fungicide (Carbendazim @2g/kg seed)
- In standing crop, the area around the infected plant can be drenched with fungicide solution (the advice can be taken from experts from Agricultural department officials or from KVKs of the concerned district). Before drenching, the field should be irrigated. If the flow of irrigation water should be restricted from plot to plot by making bunds to avoid the spread of inoculum.
- In extreme case, on a limited scale (in green house or pot soil), the sick soil (with soil borne pathogens) can be treated with formalin and covered with polythene for 1-2 days. Polythene is removed and soil is raked to escape the fumes and residual formalin (**do it only under strict supervision of experts' from agriculture department, as the formalin is dangerous to handle and may cause serious health problems**). Remember, use of formalin will kill most of the soil flora and fauna many of which are essentially required for growing crop and may take time to re-establish.