GOVERNMENT OF INDIA
MINISTRY OF DEFENCE
DEFENCE RESEARCH & DEVELOPMENT ORGANISATION
RAJYA SABHA
UNSTARRED QUESTION NO.2439
TO BE ANSWERED ON 20th DECEMBER, 2021

BIO-TOILET DEVELOPED BY DRDO

2439. SHRI SATISH CHANDRA DUBEY:

Will the Minister of Defence be pleased to state:

(a) the main features of the bio-toilet developed by Defence Research and Development Organisation (DRDO) and the details thereof;

(b) whether cow dung is being used in the bio-toilets developed by DRDO, if so, the details thereof; and

(c) the number of bio-toilets manufactured in the country and number of beneficiaries, State-wise details thereof?

A N S W E R

MINISTER OF STATE (SHRI AJAY BHATT)
IN THE MINISTRY OF DEFENCE

(a) The major features of bio-toilet developed by Defence Research and Development Organisation (DRDO) are as under:

- It makes use of an anaerobic (without oxygen) process through which the human waste is digested by consortium of bacteria.
- Bio-toilet has been customized and different designs have been developed for use under different geo-climatic conditions.

(b) Yes, Sir. The cow dung is used for the enrichment bacterial consortium. Following four types of bacteria are present in the consortium.

- Hydrolase
- Acidogenase
- Acitogenase
- Methogens

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(c) DRDO has transferred the technology to approximately 60 industries all over the country. These industries have installed bio-digesters across the country. A total number of about 16000 bio-digesters have been installed in more than 20 states. In addition, more than 2.5 lakhs bio-digesters have been installed in Indian Railways coaches, which cater to the need of more than 100 lakh passengers on daily basis.

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