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CHANGES IN CHOLESTEROL CONTENT IN 'KHESARI' (*LATHYRUS SATIVUS* L.) SEEDS INFESTED WITH *ASPERGILLUS FLAVUS* LINK

CHOLESTEROL is one of the steroids found in the vegetable kingdom usually in its isomeric form, phyto-sterol. The substance has been reported from many plants¹ and seeds². However, no literature is available indicating its presence in the 'Khesari' seeds hence an attempt has been made to estimate cholesterol in healthy and *Aspergillus flavus* infested seeds of 'Khesari'. Healthy seeds of 'Khesari' were surface sterilized with 2% NaClO, treated with spore suspension of the *A. flavus* and incubated for 5, 10 and 15 days. Control was maintained to compare the result. The presence of cholesterol in healthy and infested seeds was confirmed by preliminary tests³ and then it

was estimated quantitatively by colorimetric method⁴. The results are presented in Table I.

TABLE I
Percentage of cholesterol in healthy and infested with *Aspergillus flavus* seeds of 'Khesari'

| Days of incubation | Healthy seeds | Infested with <i>A. flavus</i> | Percentage of increase over control |
|--------------------|---------------|--------------------------------|-------------------------------------|
| 0 | 0.1 | | .. |
| 5 | 0.1 | 0.12 | 20 |
| 10 | 0.1 | 0.18 | 80 |
| 15 | 0.1 | 0.44 | 340 |

It is evident from Table I that the healthy seeds had 0.1% cholesterol and no change was recorded within the 15 days of incubation whereas its amount increased in the infested seeds gradually with the increase of incubation periods. Fats (in 95%) are known to be present in 'Khesari' seeds⁵ which on account of fungal infestation may be hydrolysed to saturated fatty acids. These acids are reported to be the precursor for the synthesis of cholesterol^{6,7}. This possibly may be the reason for the increase in the amount of cholesterol in infested 'Khesari' seeds.

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