

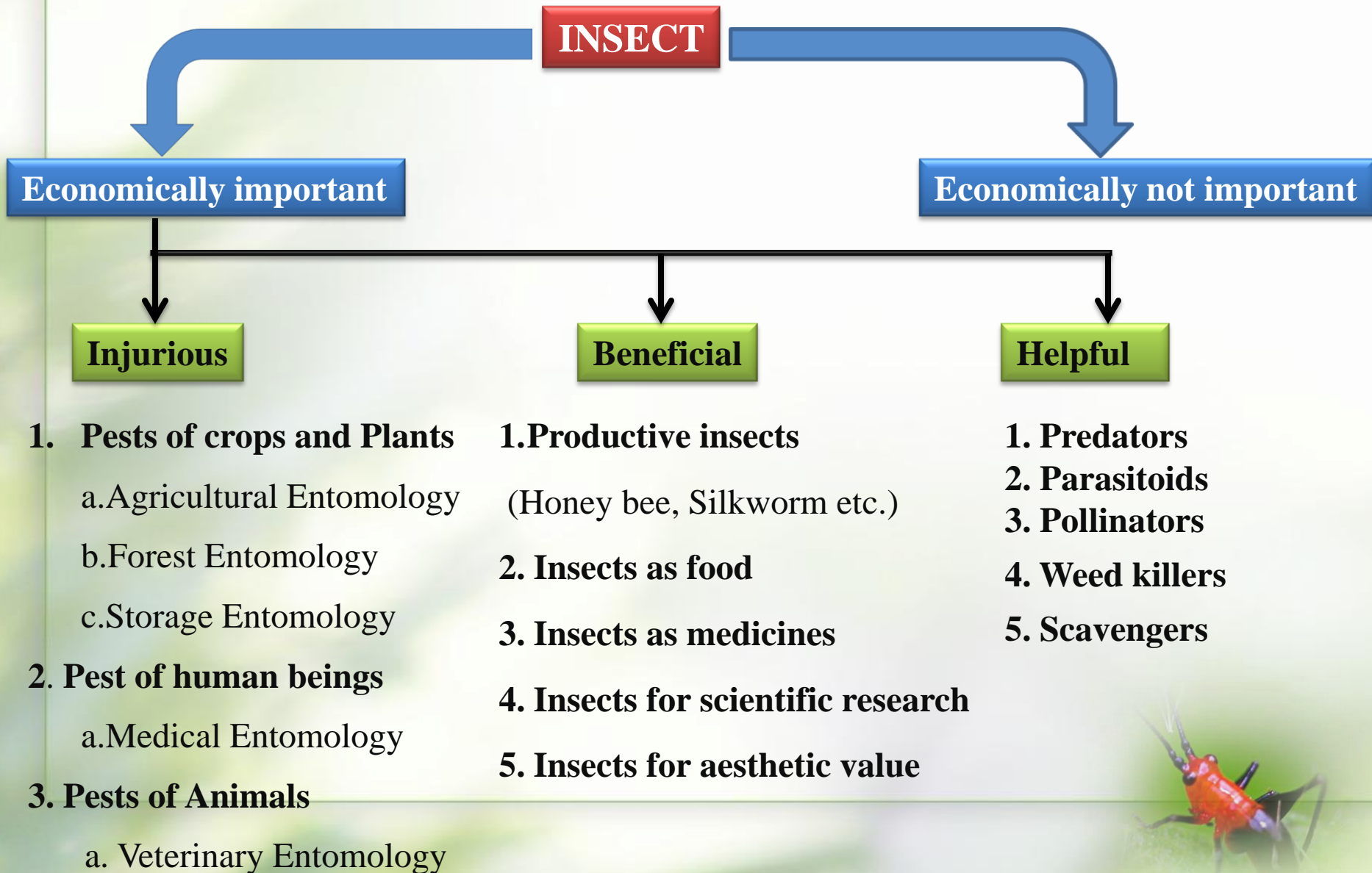


PEST, CAUSE FOR OUTBREAK AND CATEGORIES



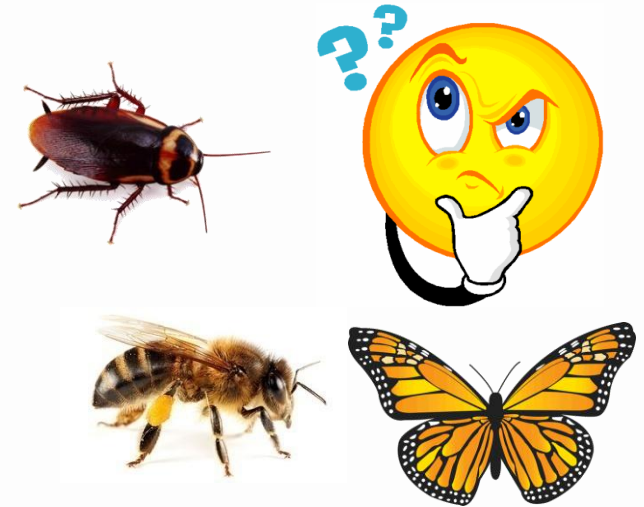
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Insect classification (based on economic importance)



What is a pest?

“Pest is an any organism whose population increases to such an extent as to cause economic loss to crops or a nuisance and health hazards to man and his live stock”



The word pest is derived from French '*Peste*' and latin terms '*pestis*' means **plague or contagious disease** .

The pest status of an insect spices may be determined by numbers of ways such as

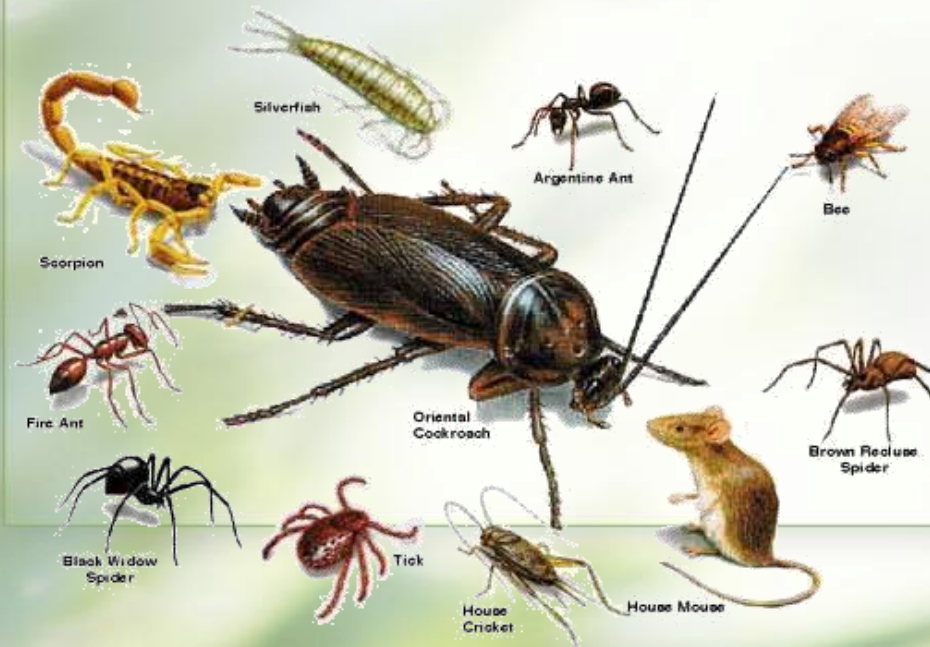
- Increase in the number of insects,
- change is the type of damage inflicted on the crop,
- change in method of cultivation or harvesting,
- fluctuation in the market value of the crop etc.



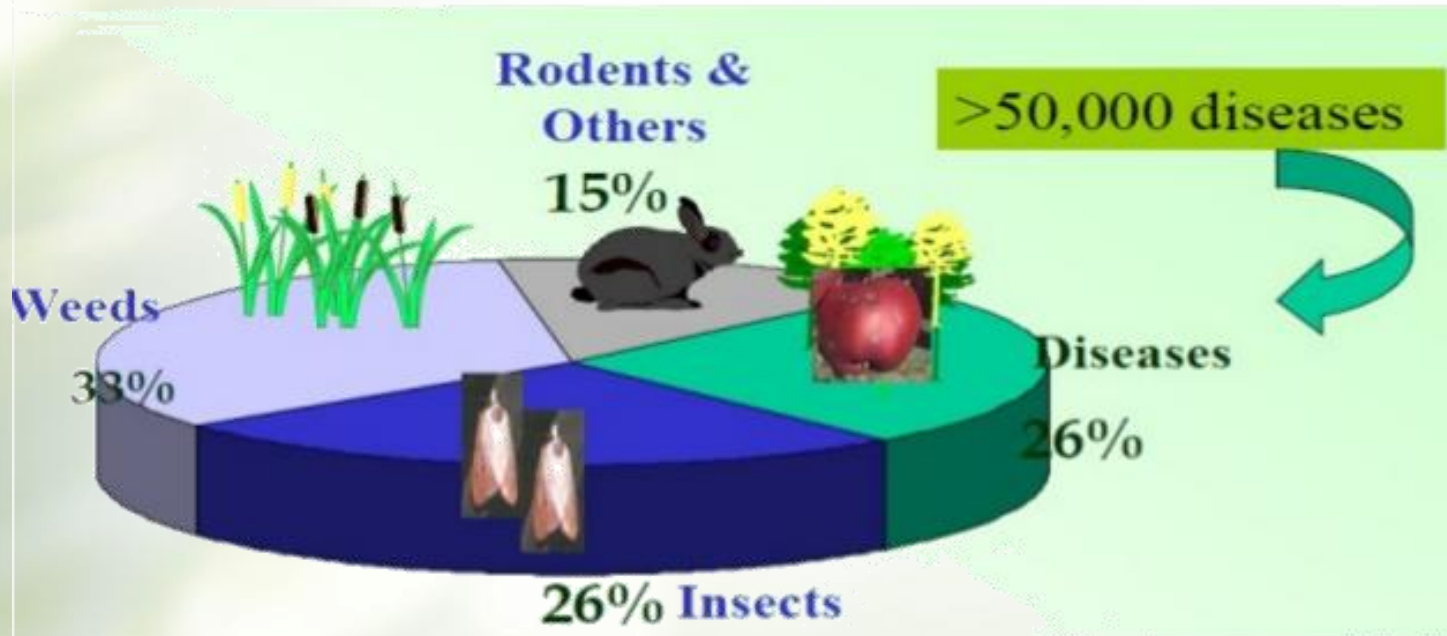
Pests are organisms which impose burdens on human population by causing

- (i) Injury to crop plants, forests and ornamentals
- (ii) Annoyance, injury and death to humans and domesticated animals
- (iii) Destruction or value depreciation of stored products.

Pests include insects, nematodes, mites, snails, slugs, etc. and vertebrates like rats, birds, etc.



Crop losses due to pest



Average 18% of the crop yield is lost due to pests.

Annual monetary loss in India is: Rs.60,000 Crores.

Estimation of losses caused by insect pests to major agricultural crops in India

Crop	Approx. estimated loss in yield		Hypothetical production (MT)	Value of loss in million Rs
	%	Total (MT)		
Cotton	30	18.9	62.9	339660
Rice	25	32.2	128.9	240138
Maize	20	4.8	23.8	29450
Sugarcane	20	87.1	435.3	70667
Rapeseed-mustard	20	1.5	7.3	26100
Groundnut	15	1.6	10.8	25165
Other oilseeds	15	2.6	17.3	35851
Pulses	15	2.6	17.4	43551
Course cereals	10	2.0	19.9	11933
wheat	5	4.1	82.7	41368
Total/average	17.5			863884

Production and MSP fixed by GOI for 2007-08, are adopted from anonymous (2010)

HOW INSECTS BECOME PESTS? (Reasons for out break of Pest)

A. Destruction of forest or bringing forest area under cultivation



B. Destruction of natural enemies



<http://www.pestcontrol.com/2020/01/15/pest-control-site/otgStory.acds?instceid=9678775&context=1874407>

C. Intensive and extensive cultivation of crops: Eg. Stem borers in rice and sugarcane.



D. Introduction of new crops and improved variations Introduction of new crop may
some as new host for the pest Eg: Sunflower and head borer

E. Improved agronomic practices



F. Introduction of new pest in new areas

G. Accidental introduction of foreign pest