



BIOLOGY

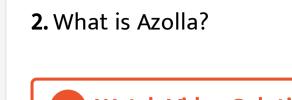
BOOKS - SARAS PUBLICATION

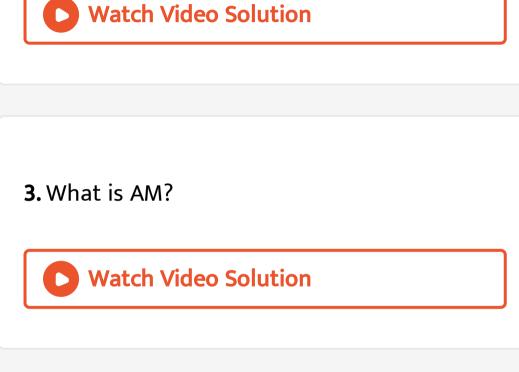
PLANT BREEDING



1. Give definition for organic farming?

Watch Video Solution





4. Define green in-situ manuring / Green leaf

manuring.

Watch Video Solution

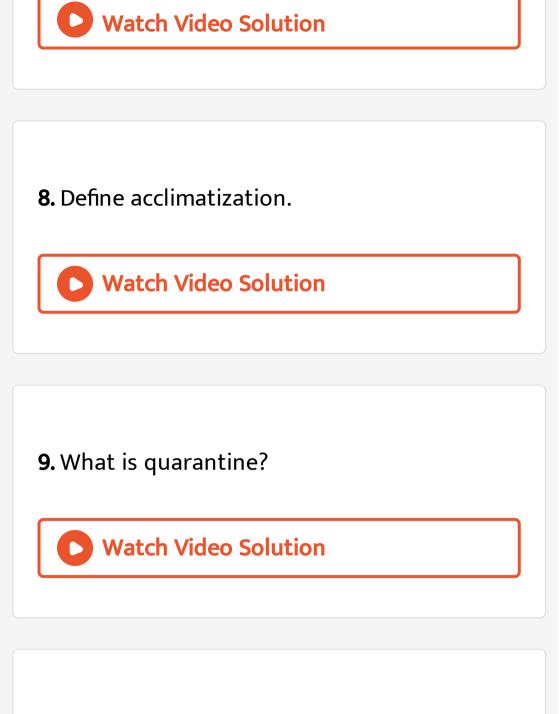
5. Define green in-situ manuring / Green leaf manuring.



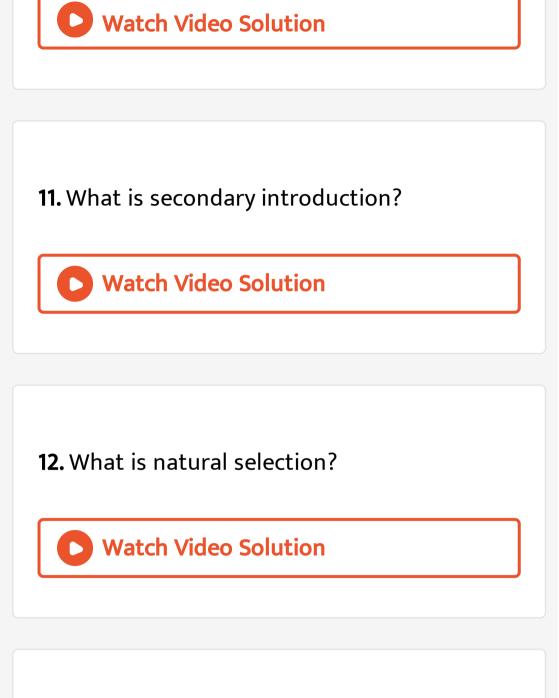
6. "Plant Breeding"



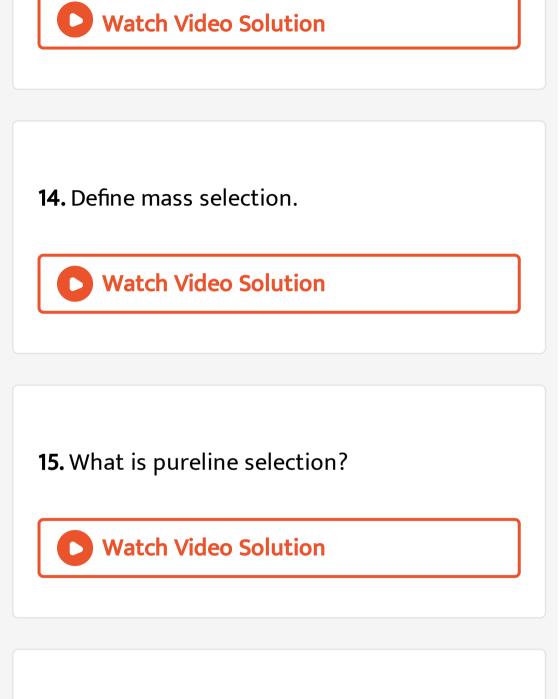
7. What is modern plant breeing ?



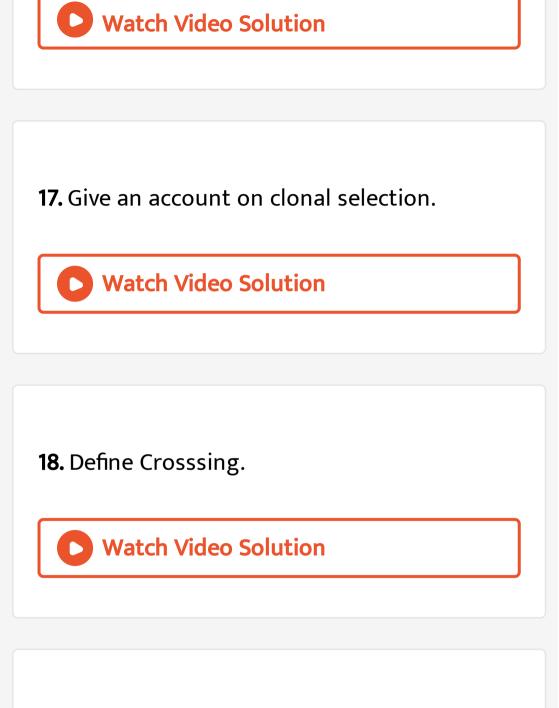
10. What is primary introduction?



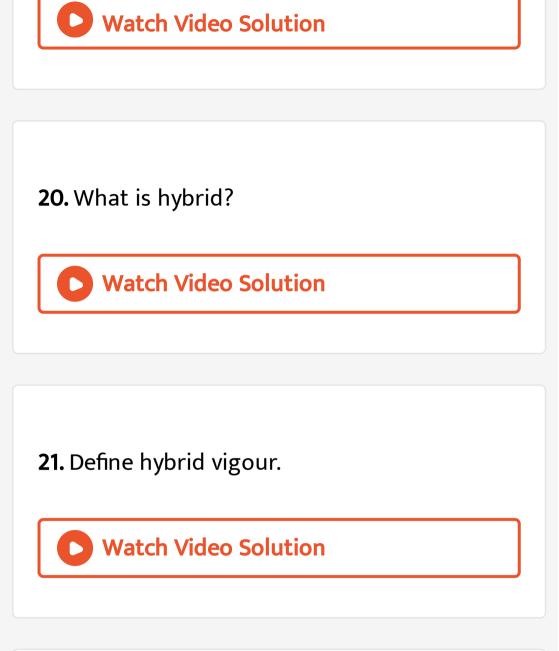
13. What is artificial selection?



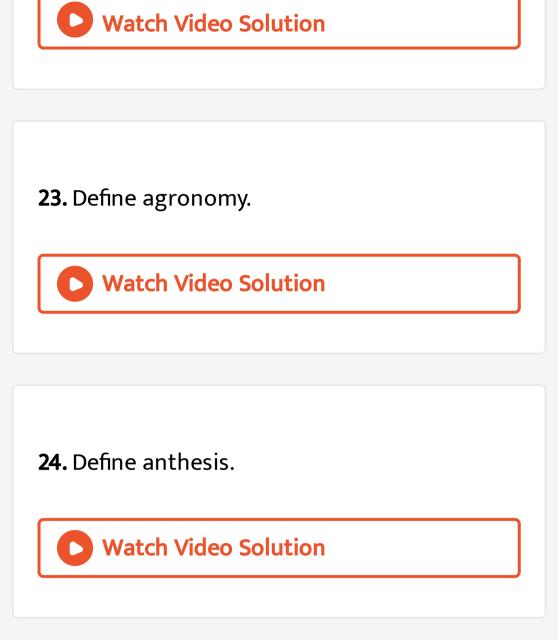
16. What is hybridization?



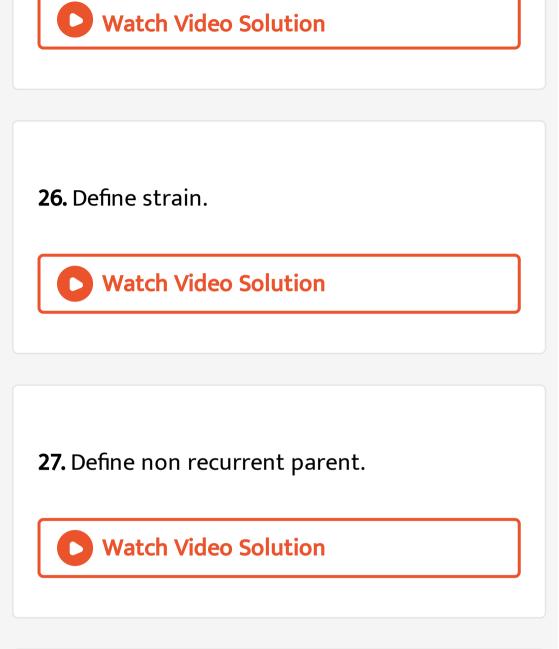
19. Write a note on heterosis.



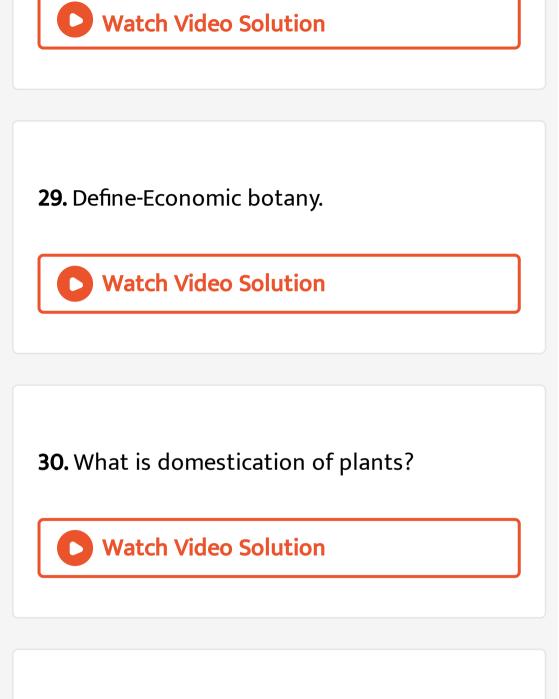
22. What is genome editing?



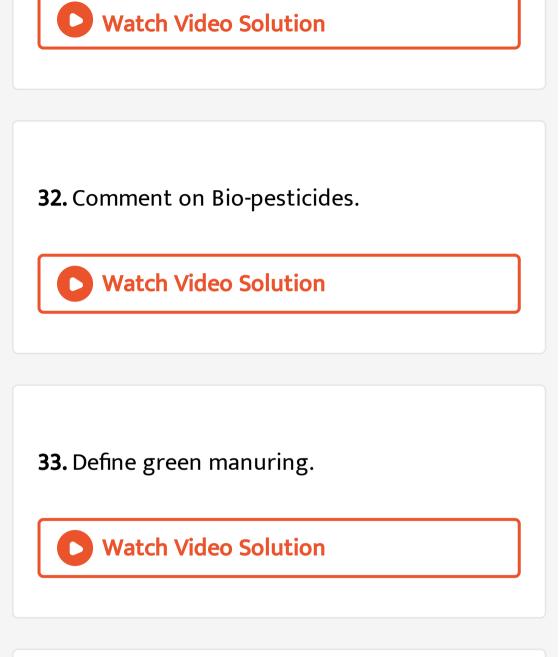
25. Define germplasm collection.



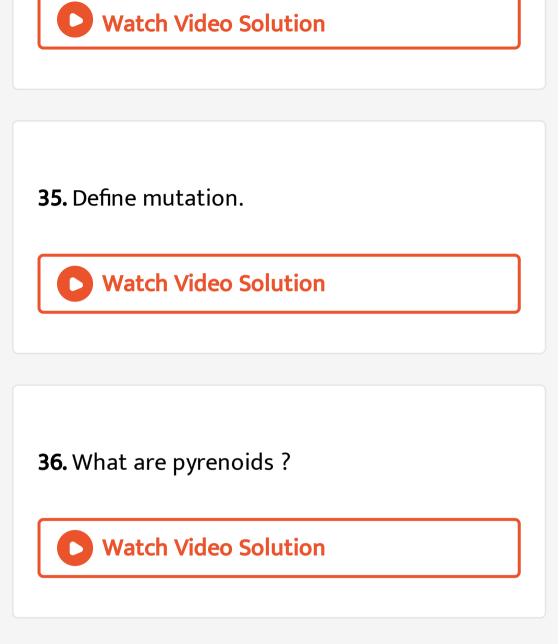
28. What is pseudoheterosis?



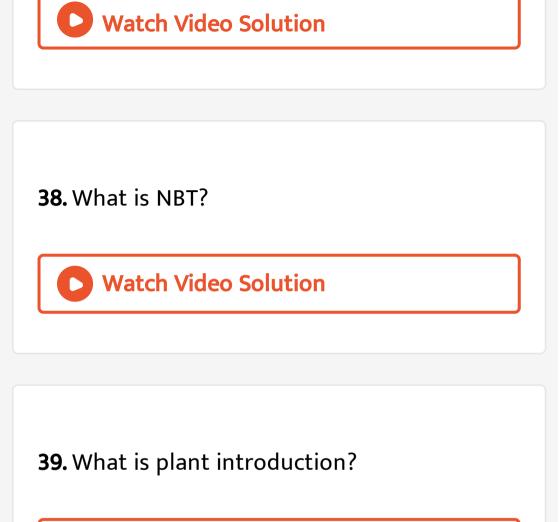
31. What are biofertilizers.



34. "Plant Breeding"

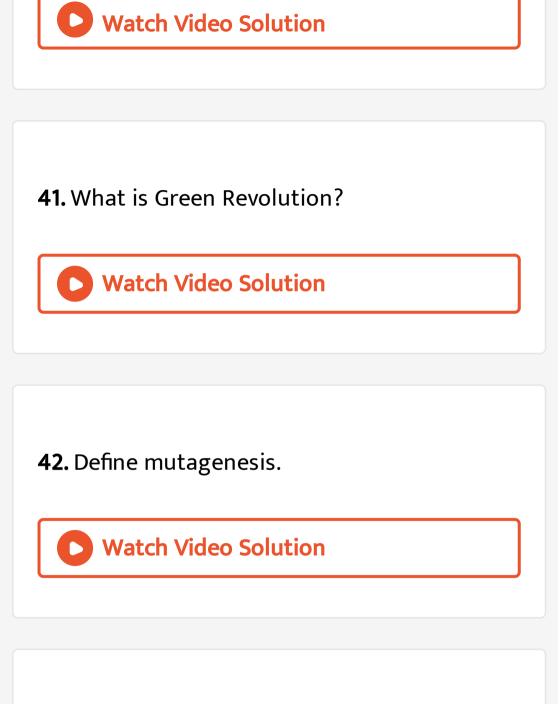


37. Define Biofortification.



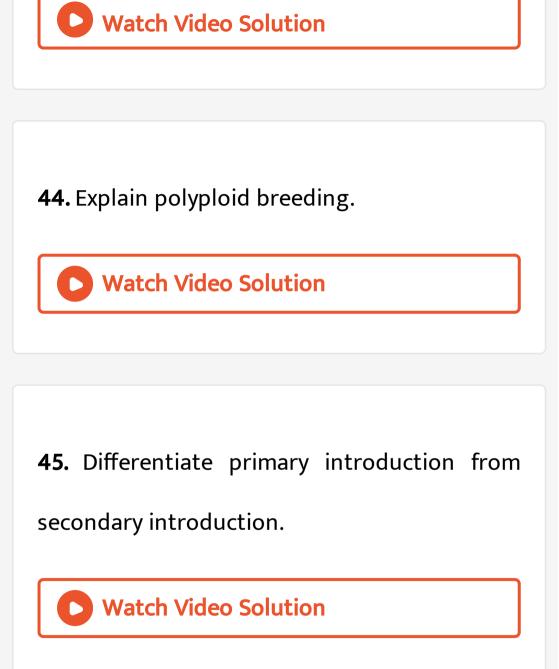


40. Comment on Parbharni kranti.



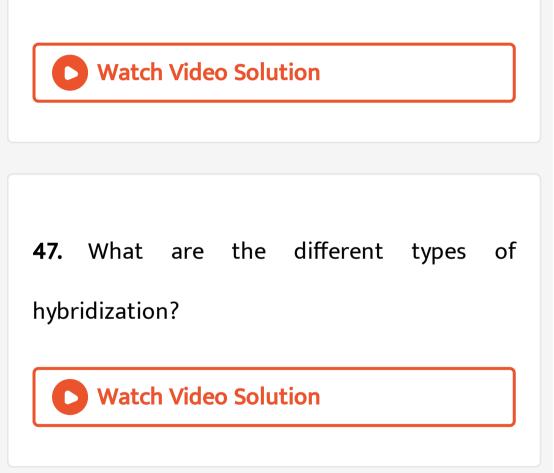
43. What is selection.

Г



46. Differentiate Rhizobium from Azolla as bio-

fertilizers.



48. Differentiate primary introduction from

secondary introduction.

Watch Video Solution

49. How are microbial innoculants used to

increase the soil fertility?

Watch Video Solution

50. List out the new breeding techniques involved in developing new traits in plant breeding.

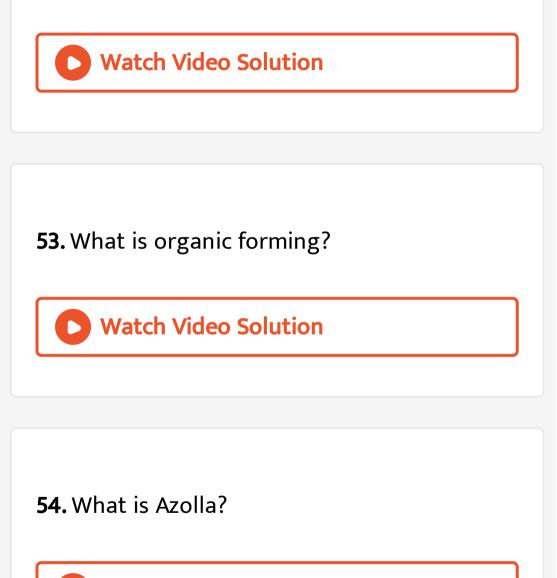


51. Explain the best suited type of breeding

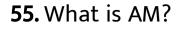
followed by plant breeders at present?

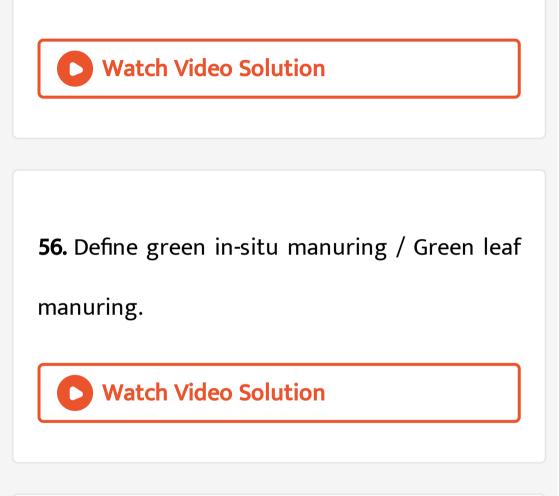


52. Write a note on heterosis.

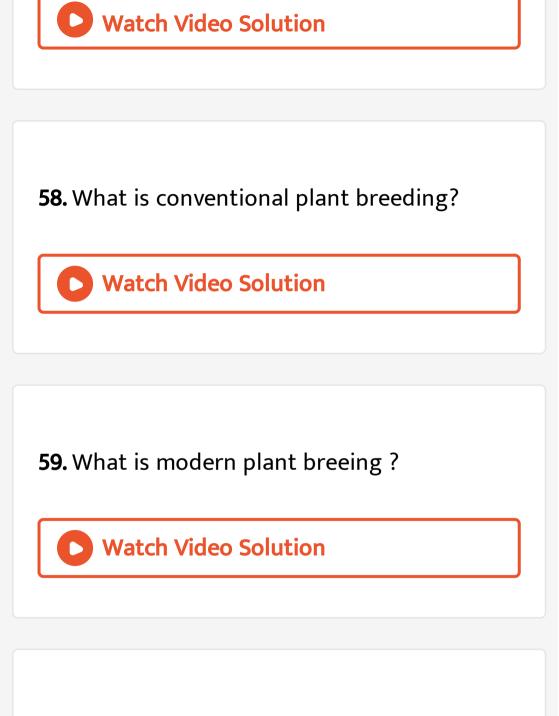


Watch Video Solution

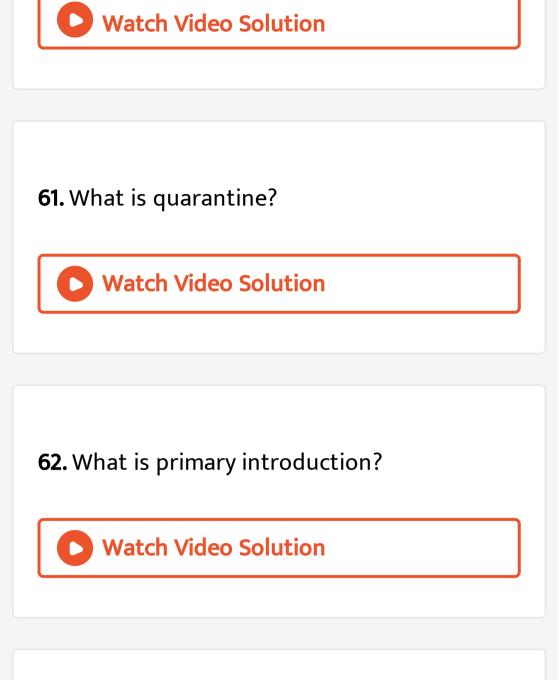




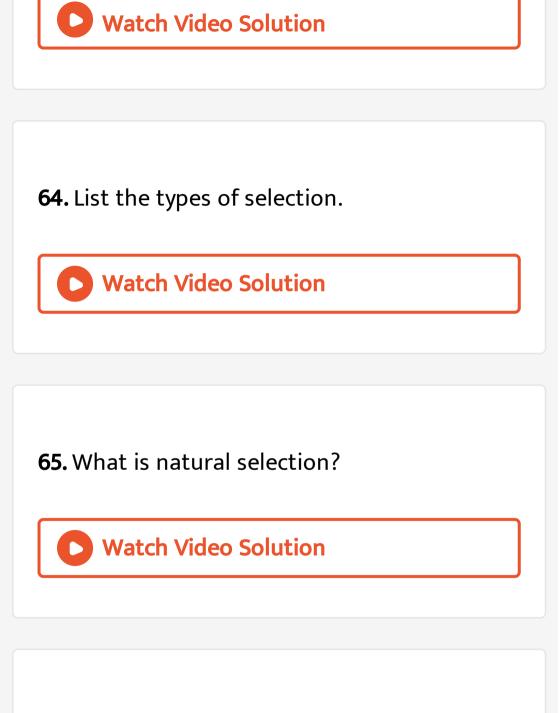
57. Define green in-situ manuring / Green leaf manuring.



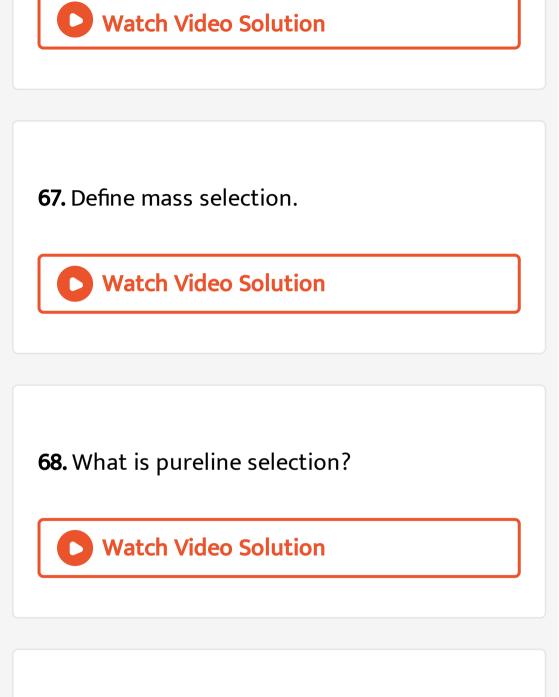
60. Define acclimatization.



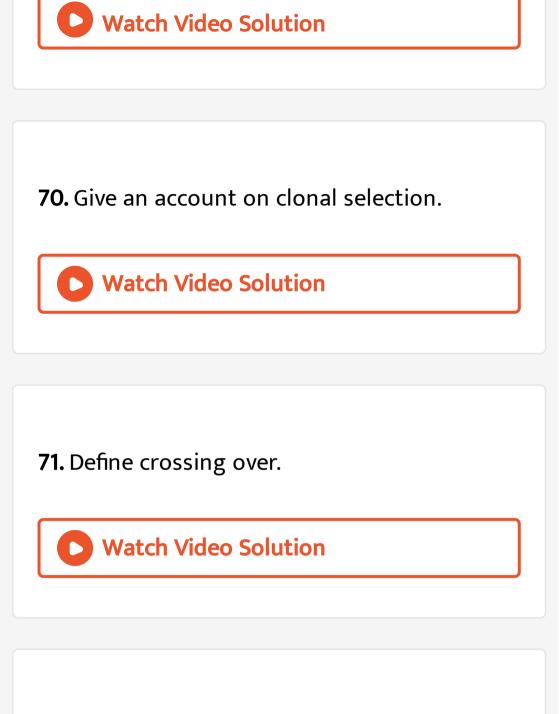
63. What is secondary introduction?



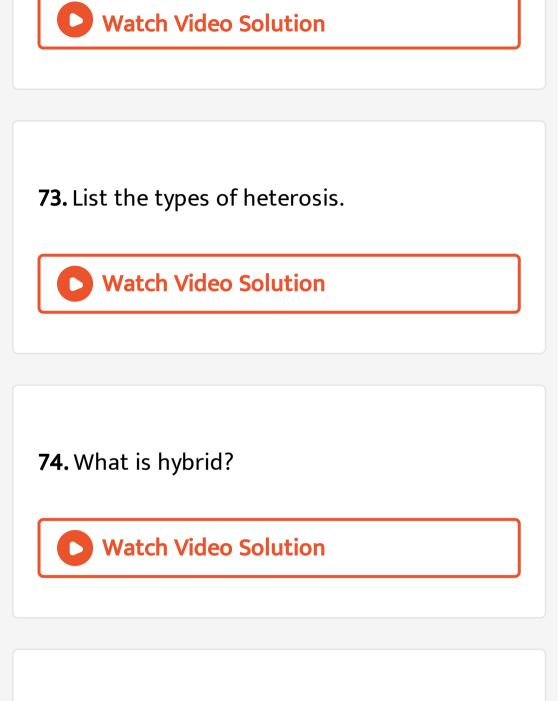
66. What is artificial selection?



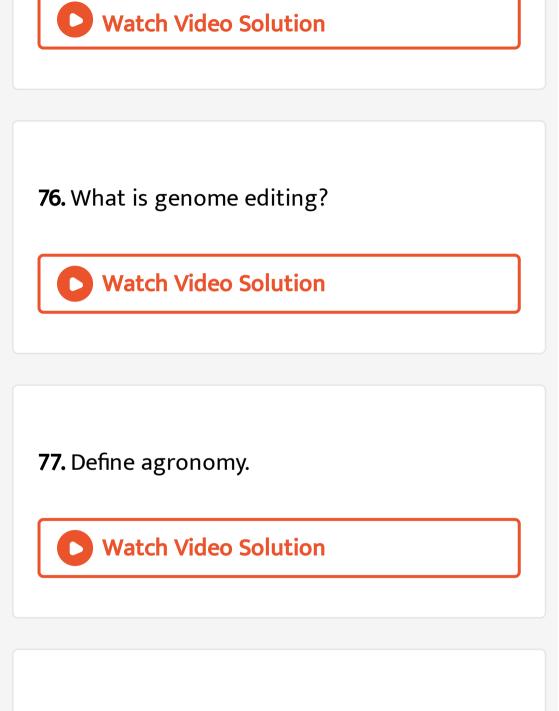
69. What is hybridization?



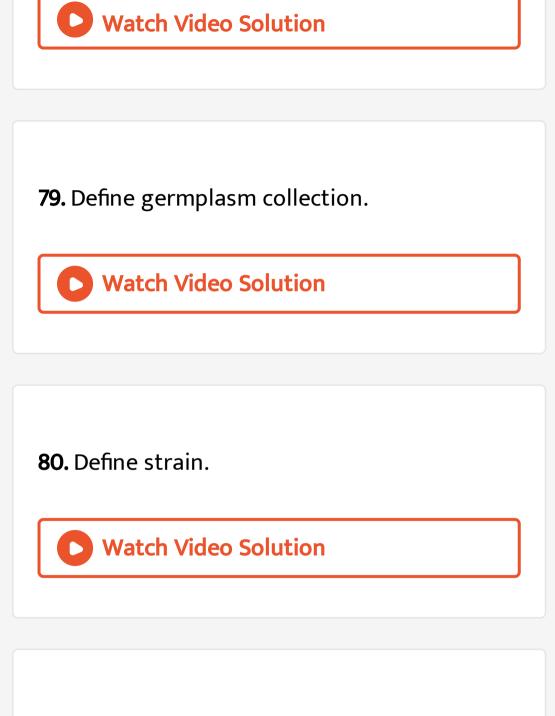
72. Write a note on heterosis.



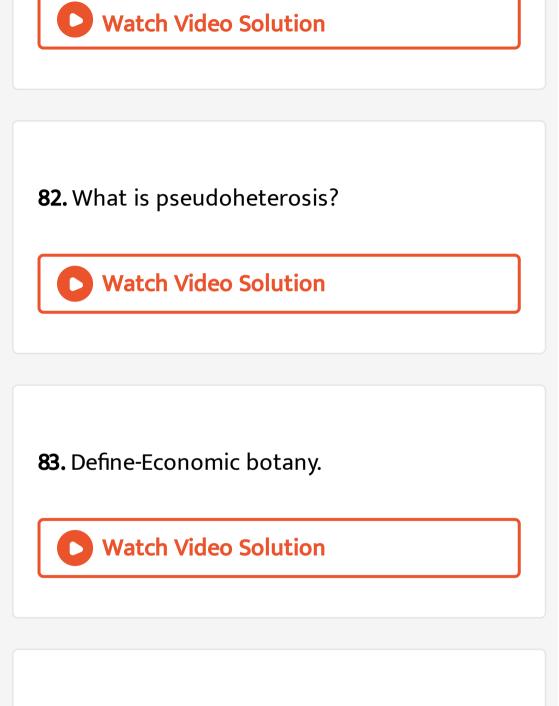
75. Define hybrid vigour.



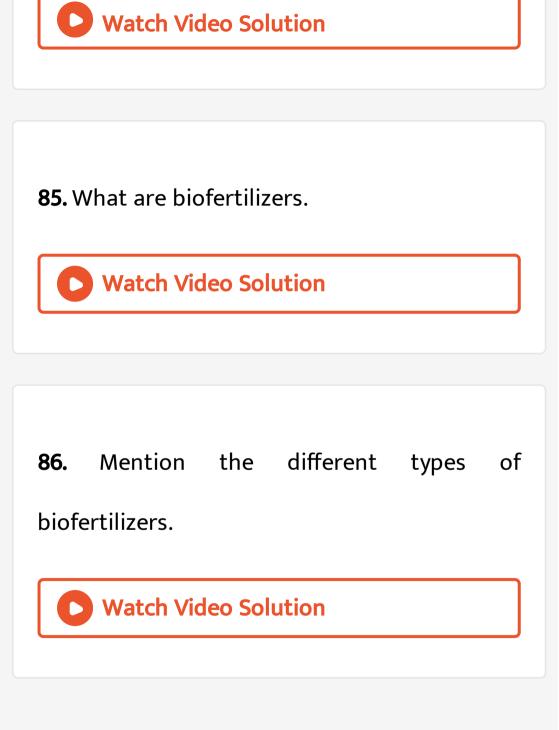
78. Define anthesis.



81. Define non recurrent parent.



84. What is domestication of plants?

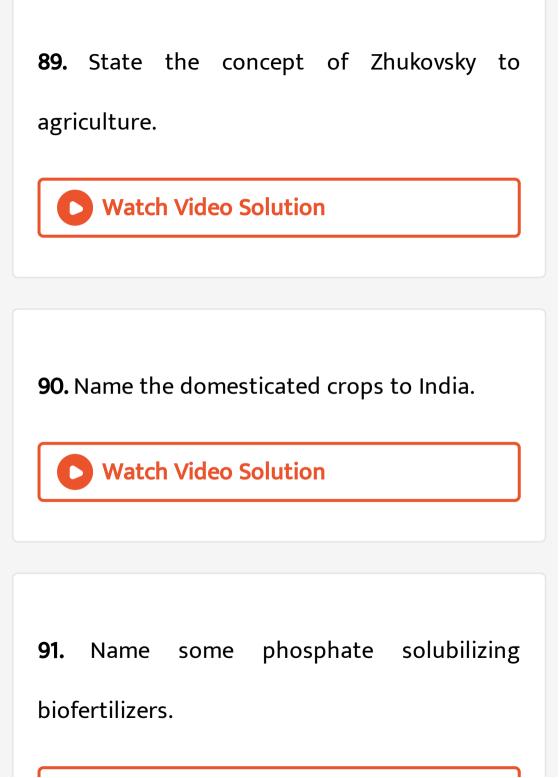


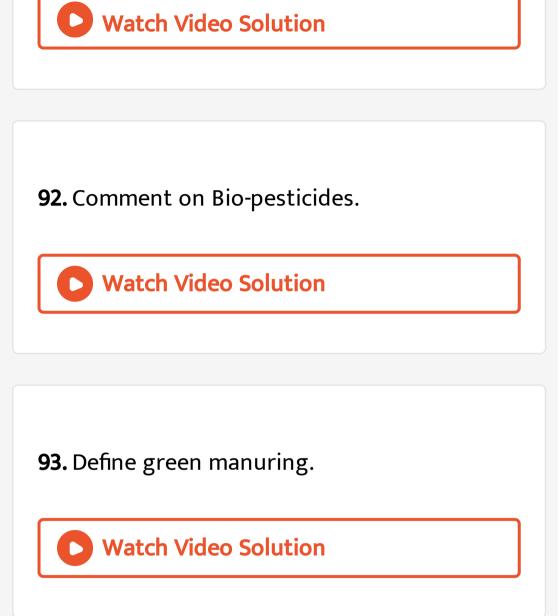
87. write the concept of Alexander Von
Humboldt on Agriculture.
Watch Video Solution

88. How can Darwin's evolutionary theory

influence agriculture?







94. Name the important plant species useful

for green leaf manure.

Watch Video Solution

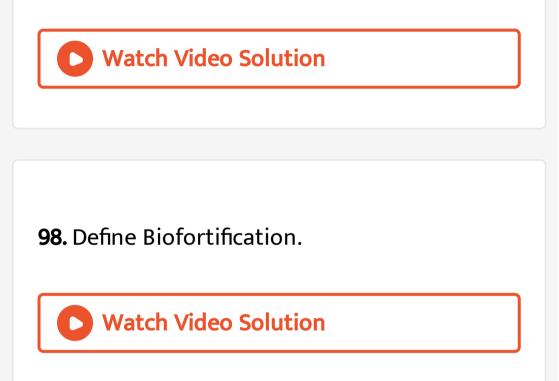
95. "Plant Breeding"

Watch Video Solution

96. Mutation

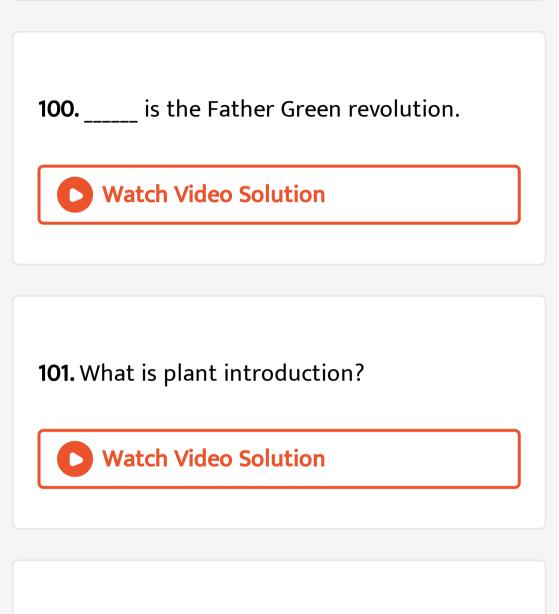
Watch Video Solution

97. What are polyploids ? Mention its nature.

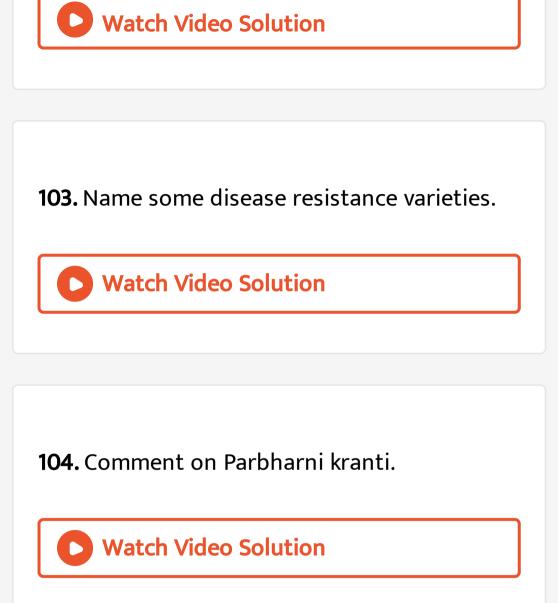


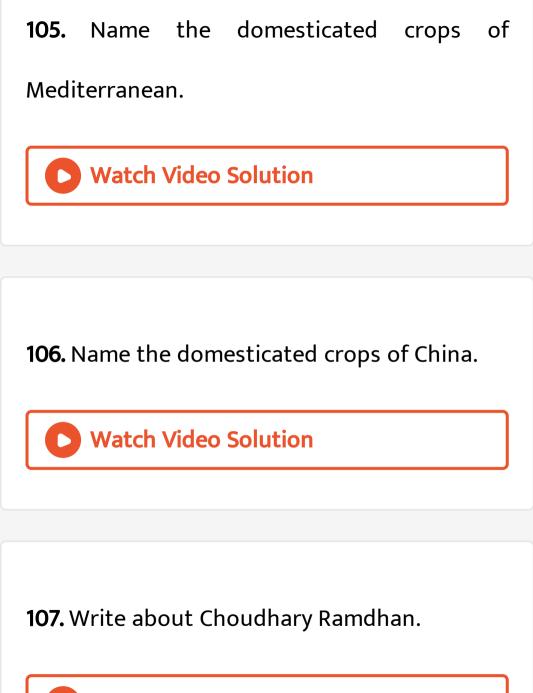
99. What is NBT?

Watch Video Solution

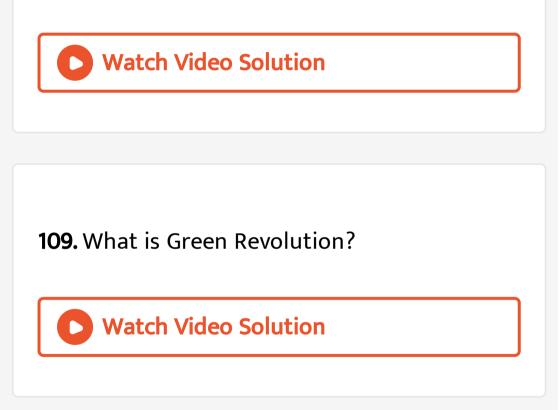


102. Name some introduced plant varieties and their natives.





108. Factors which induce mutatiom.



110. Define mutagenesis.

111. What is selection.

Watch Video Solution

112. NBPGR stands for

Watch Video Solution

113. Write the disadvantages of intergeneric hybridization.



114. What are the roles of Arbuscular mycorrhizae in soil fertility?

Watch Video Solution

115. Why are gene mutation considered as

important in plant breeding?

116. Name few semi dwarf varieties of wheat

and rice.

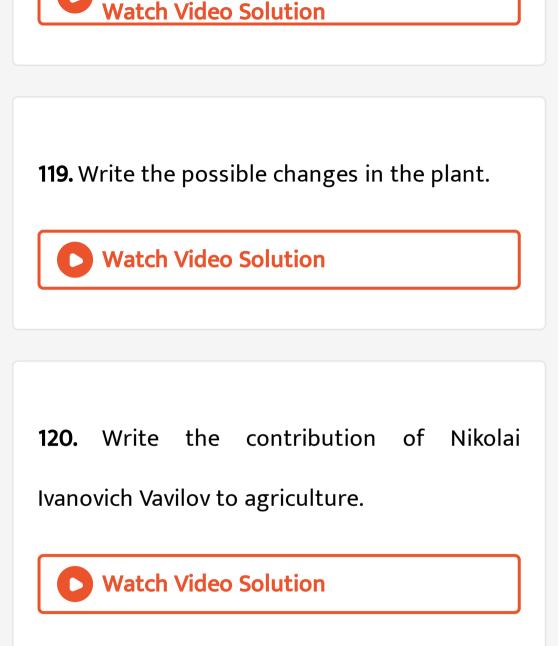


117. List out the different methods of conventional breeding.

Watch Video Solution

118. What is intravarietal hybridization?





121. Write short notes on organic agriculture.



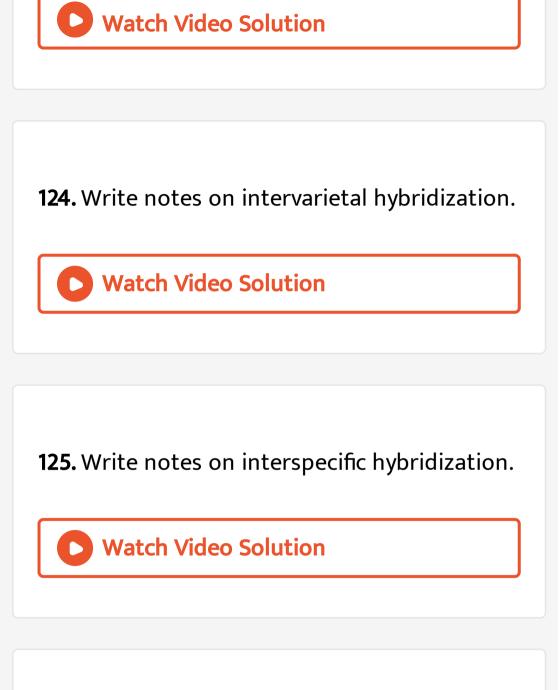
122. Mention Indian plant breeders and their

contributions.

Watch Video Solution

123. Write notes on the symbiotic bacterium

that resides inside the root nodules.



126. Write notes on intergeneric hybridization.

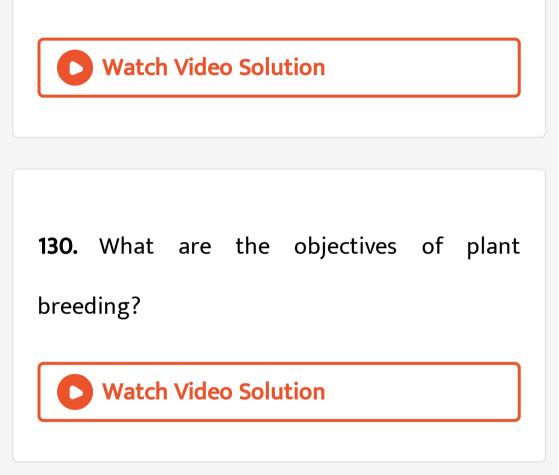


127. Name a fern that fixes the atmospheric nitrogen and descibe it.

Watch Video Solution

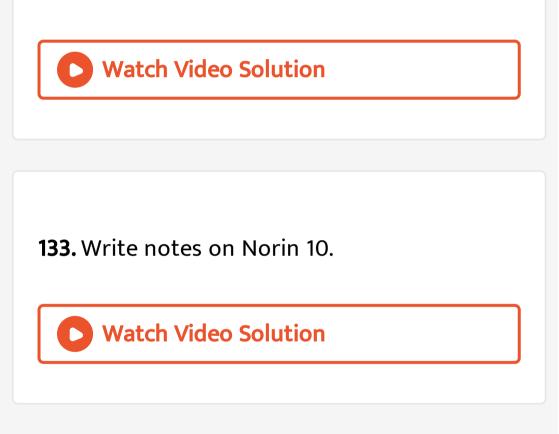
128. Write notes on Seaweed Liquid fertilizer.

129. Define green manuring.



131. Write a note on NBPGR.

132. Write notes on Gamma garden.



134. Write the objectives of biofortification.

135. List out the vegetable crops that are released by Indian Agricultural Research Institute.

Watch Video Solution

136. Write the disadvantages of mass selection

and pureline selection.

137. Who coined the concept, "Agriculture originated independently in three different areas in different times or simultaneously"? Write notes about him.



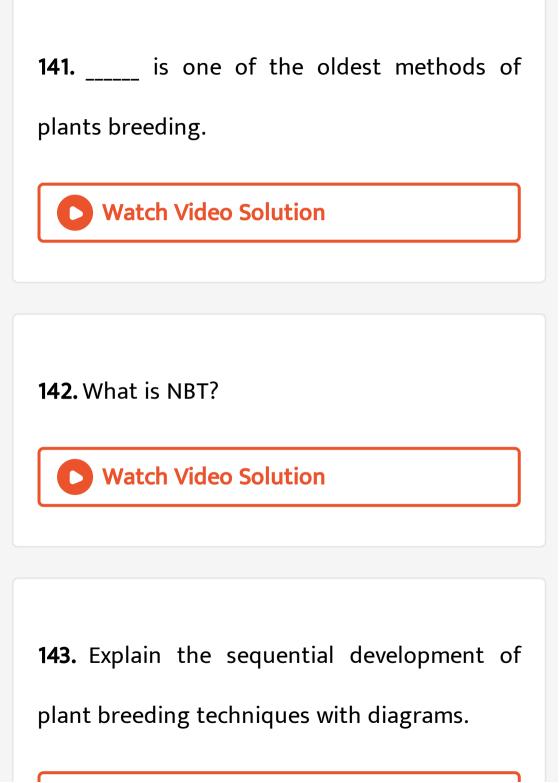
138. Draw a flow chart for mass selection Vs

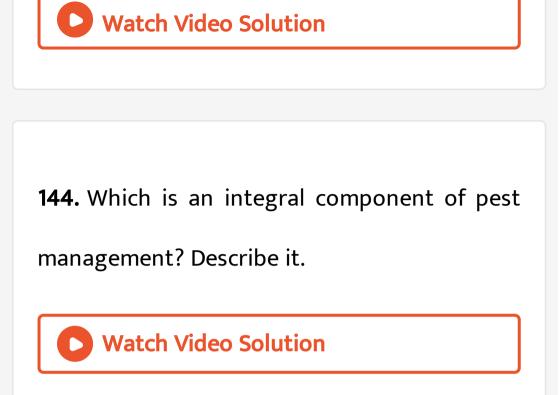
pureline selection.

139. Who devoted his life at the International maize and wheat improvement centre at Sonora in MeXIIco? Write notes about him.

Watch	Video	Solution

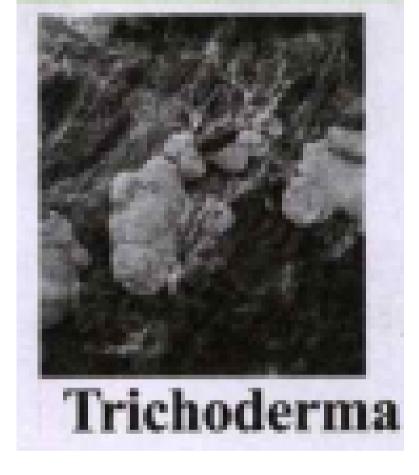
140. What are the qualities exhibited by polyploidy?





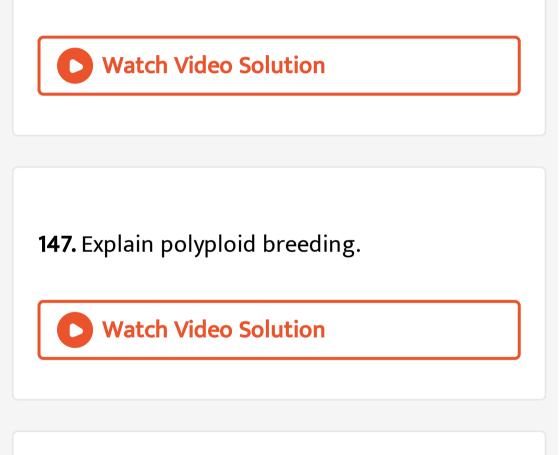
145. Identify the figure given below and write a

note about this.



146. Write notes on fungus which cause white

muscardine disease on arthropods.



148. What is meant by autopolyploidy?

149. Describe allopolyploidy.

Watch Video Solution

150. Who was a disciple of Dr. Nammalvar?

Write his contibution on agriculture.



- 1. The quickest method of plant breeding is
 - A. Introduction
 - **B.** Selection
 - C. Hybridization
 - D. Mutation breeding

Answer:



2. Dwarfing gene of wheat is

A. pal 1

B. Atomita 1

C. Norin 10

D. pelita 2

Answer:

Watch Video Solution

3. Which of the following is incorrectly paired?

A. Wheat-Himgiri

B. Milch-Sahiwal

C. Rice-Ratna

D. Pusa komal-Brassica

Answer:

Watch Video Solution

4. Bagging is done to

A. Avoid cross pollination

B. Avoid self pollination

C. Achieve desired pollination

D. Prevent contamination from foreign

pollen

Answer:

Watch Video Solution

5. Polyploidy is induced through

A. Irradiaiton

B. Ethylene

C. Colchicine

D. Prophylene

Answer:



6. What are the different types of hybridization?

7. Differentiate primary introduction from

secondary introduction.

Watch Video Solution

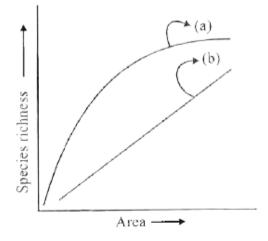
8. List out the new breeding techniques involved in developing new traits in plant breeding.

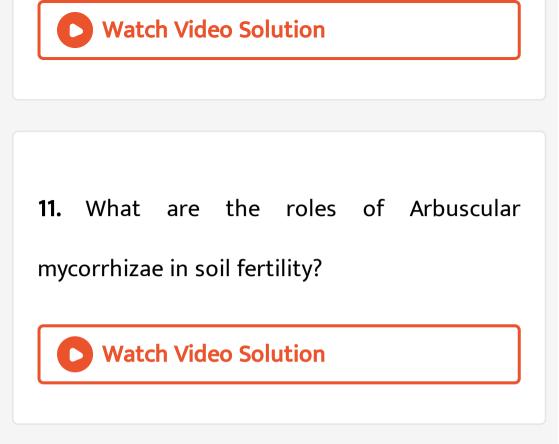
9. Define mass selection.



10. A graph on species richness is given below. Complete the equations (a) and (b) according

to Alaxander von Humboldt.

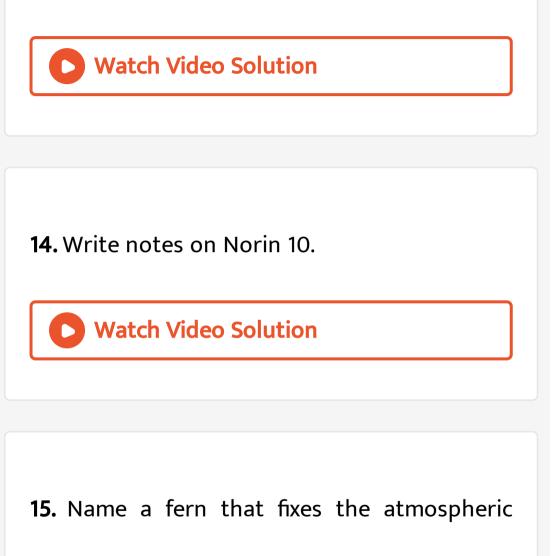




12. How are microbial innoculants used to

increase the soil fertility?

13. Write a note on heterosis.



nitrogen and descibe it.

16. Write the objectives of biofortification.



17. Explain the best integral component of

pest management?

Watch Video Solution

18. Describe the pest management.





19. Assertion (A): Genetic variation provides the raw material for selection. Reason (R): Genetic variations are differences

in genotypes of the individuals.

A. Assertion is right and reason is wrong.

B. Assertion is wrong and reason is right.

C. Both reason and assertion is right.

D. Both reason and assertion is wrong.

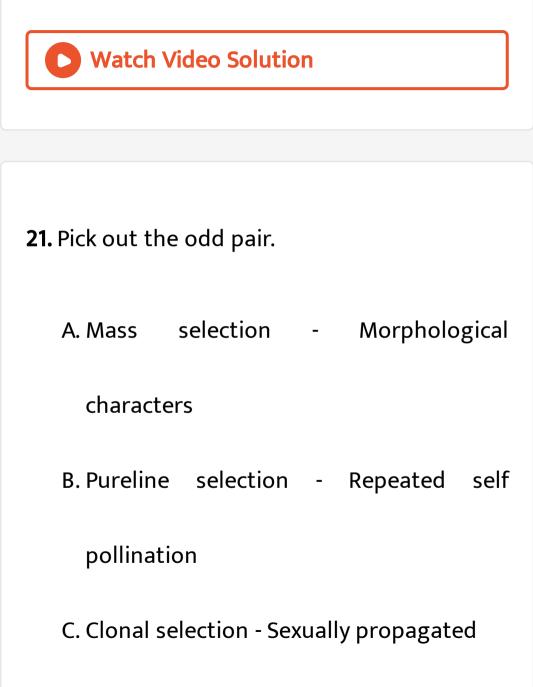
Answer:



20. While studying the history of domestication of various cultivated plants were recognized earlier.

- A. Centres of origin
- B. Centres of domestication
- C. Centres of hybrid
- D. Centres of variation





D. Natural selection - Involves nature

Answer:

Watch Video Solution

22. The quickest method of plant breeding is

A. Introduction

B. Selection

C. Hybridization

D. Mutation breeding

Answer:



23. Desired improved variety of economically useful crops are raised by

A. Natural selection

B. hybridization

C. mutation

D. biofertilisers

Answer:



24. Plants having similar genotypes produced by plant breeding are called

A. clone

B. haploid

C. autopolyploid

D. genome

Answer:



25. Importing better varieties and plants from outside and acclimatising them to local environment is called

A. cloning

B. heterosis

C. selection

D. introduction





26. Dwarfing gene of wheat is

A. pal 1

- B. Atomita 1
- C. Norin 10
- D. pelita 2





27. Crosses between the plants of the same

variety are called

A. interspecific

B. inter varietal

C. intra varietal

D. inter generic





28. Progeny obtained as a result of repeat self pollination of a cross pollinated crop is called

A. pure line

B. pedigree line

C. inbreed line

D. heterosis

Answer:

29. Jaya and Ratna are the semi dwarf varieties of

A. wheat

B. rice

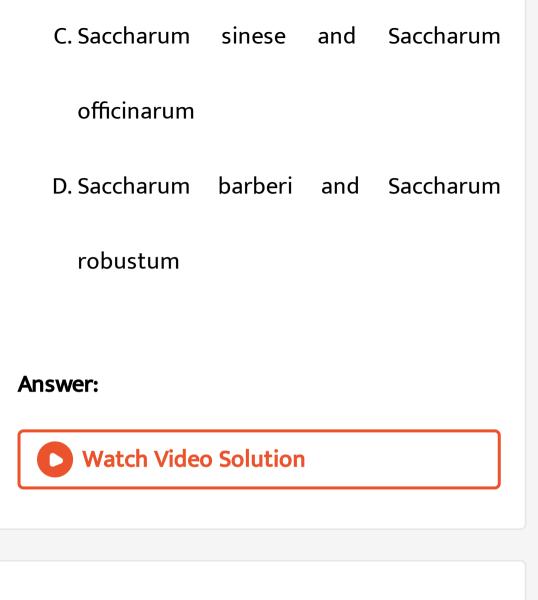
C. cowpea

D. mustard

Answer:

30. Which one of the following are the species that are crossed to give sugarcane varieties with high sugar, high yield, thick stems and ability to grow in the sugarcane belt of North India?

A. Saccharum robustum and Saccharum of officinarumB. Saccharum barberi and Saccharum officinarum



31. Match column I (crop) column II (Corrsponding disease resistant variety) and

select the correct option from the given codes.

Column I

(I) Cowpea(II) Wheat(III) Chilli(IV) Brassica

Column II

(i) Himgiri
(ii) Pusa komal
(iii) Pusa Sadabahar
(iv) Pusa Swarnim

A. I-iv, II-iii, III-ii, IV-i

B. I-ii, II-i, III-iii, IV-iv

C. I-ii, II-iv, III-i, IV-iii

D. I-i, II-iii, III-iv, IV-ii

Answer:



32. A wheat variety, Atlas 66 which has been used as a donor for improving cultivated wheat, which is rich in

A. iron

B. carbohydrates

C. proteins

D. vitamins

Answer:

33. Which of the following is incorrectly paired?

A. Wheat - Himgiri

B. Milch breed - Sahiwal

C. Rice - Ratna

D. Pusa Komal - Brassica

Answer:

34. Match list I with list II

List I	List II
Biofertilizer	Organisms
i) Free living N ₂	a) Aspergillus
ii) Symbiotic N2	b) Amanita
iii) P Solubilizing	c) Anabaena azollae
iv) P Mobilizing	d) Azotobacter

A. i-c, ii-a, iii-b, iv-d

B. i-d, ii-c, iii-a, iv-d

C. i-a, ii-c, iii-b, iv-d

D. i-b, ii-a, iii-d, iv-c



35. Which one of the following crop varieties

correct matches with its resistance to a

disease?

Variety	Resistance to disease
a) Pusa Komal	Bacterial blight
b) Pusa Sadabahar	White rust
c) Pusa Shubhra	Chilli mosaic virus
d) Brassica	Pusa swarnim

36. Pioneer mutation breeder is

A. Choudhary RamDhan

B. Dr. M.S. Swaminathan

C. Sir. T.S. Venkataraman

D. Dr. K. Ramiah

Answer:

37. Which of the following is not used for crop improvement?

A. Intravarietal hybridization

B. Intravarietal hybridization

C. Interspecific hybridization

D. Intergeneric hybridization

Answer:

38. Crosses between the plants of the different

genera are called

A. Hybridization

B. Selection

C. Mutation breeding

D. Introduction

Answer:

39. Which is the oldest breeding method?

A. Irradiation

B. Ethylene

C. Colchinie

D. Prophylene

Answer:

40. Polyploidy is induced through

A. Heterozygosity

B. Homozygosity

C. Homo and heterozygosity

D. None of the above

Answer:

41. Pure line breed.

A. 1865

B. 1926

C. 1940

D. 1953

Answer:

42. Hybrid breeding started in

A. Sonalika

B. Jaya

C. Ratna

D. Pusa

Answer:

43. Which one is an improved variety of wheat?

A. Dr. BP. Pal

B. N. GP. Rao

C. Dr. K. Ramiah

D. C.T. Patel

Answer:

44. Cotton hybrid was developed by

A. De Candolle

B. Nicolai

C. Alexander

D. Harlan

Answer:

45. The concept of "centre of origin of cultivated plants was proposed by

A. South East Asia - Banana, Hemp

B. Central East - Pea, Cotton

C. The near East - Rye, Tropical fruits

D. Ethiopia - Potato, Carrot

Answer:

46. Which of the following is incorrectly paired?

A. i-D, ii-A, iii-B, iv-C

B. i-B, ii-C, iii-A, iv-D

C. i-c, ii-D, iii-A, iv-B

D. i-C, ii-B, iii-A, iv-D

Answer:

47. Match the column I with column II

Column I	Column II
i) Trichoderma	- A. Biofertilizer
ii) Kelp	- B. Biopesticide
iii) Azolla	- C. Liquid Fertilizer
iv) Cassia fistula	- D. Green leaf manure

- A. Clonal selection
- B. Mass selection
- C. Hybridization
- D. Pure line selection





48. Rhizobium increases the yield of paddy by

A. Rhizobium

B. Azolla

C. Beauveria

D. Arbuscular mycorrhizae

Answer:

49. Match the column I with column II

Column I	Column II
i. Mendel's laws	- A. 1940
ii. Mutagenesis	- B. 1994
iii. Hybrid breeding	- C. 1865
iv. GMO	- D. 1926

A. i-C, ii-A, iii-D, iv-B

B. i-B, ii-D, iii-B, iv-A

C. i-C, ii-D, iii-B, iv-A

D. i-A, ii-B, iii-D, iv-C





50. Development of improved varieties by combining good characteristics from two parents.

A. Mutagenesis

B. Targeted breeding

C. Marker assisted selection

D. Cross breeding





51. A plant introduced with foreign gene.

A. GMO

B. Hybrid

C. Breed

D. Selection

Answer:

52. Development of improved varieties by working directly with DNA is

A. Plant breeding based on genetic information

- B. Plant breeding based on mutation
- C. Plant breeding based on hybridization
- D. Plant breeding based on selection



53. Targeted breeding involves

A. Selection

B. Mutagenesis

C. Genome editing

D. Hybridization

Answer:

54. Assertion: The newly introduced plant has to adapt itself to the new environment.
Reason: Introduced plant has to be carefully examined by the process called acclimatization.

A. Assertion is right and reason is wrong.

B. Assertion is wrong and reason is right.

C. Both reason and assertion is right.

D. Both reason and assertion is wrong.



55. Pusa komal- a variety of cowpea, is resistant to

A. Leaf rust

B. Bacterial blight

C. Black rot

D. White rust





56. Pusa swarnim variety of Brassica species show resistance to

A. Hill bunt

B. Curl blight

C. Chilly mosaic

D. White rust

Answer:

57. Semi dwarf rice IR8 was developed in

A. India

B. Taiwan

C. China

D. Philippines

Answer:

58. Wheat varieties of Sonora 63, Sonora 64

introduced from

A. MeXIIco

B. China

C. North East India

D. Kolkata

Answer:

59. Sonalika' and 'Kalyan Sona'[are high yielding varieties of

A. Rice

B. Wheat

C. Maize

D. Sugarcane

Answer:

60. The adjustment of the introduced plant in

the changed environment _____.

A. Domestication

B. Acclimatization

C. Quarantine

D. Selection

Answer:

61. Who coined the word pureline selection?

A. Johannsen

B. T.S.Venkataraman

C. De Candolle

D. Nicolai

Answer:

62. Which one of the following is an example for interspecific hybridization?

A. Triticum durum and Secale cereale.

B. Brassica oleraceae and Raphanus sativus

C. Saccharum barberi and Saccharum

officinarum

D. Gossypium hirsutum and Gossypium

arboreum







63. G.H. Shull was the first scientist to use the

term heterosis in the year......

A. 1910

B. 1912

C. 1914

D. 1916

Answer:



64. The term mutation was coined by_____

A. Muller and Stadler

B. William S. Gaud

C. M.S. Swaminathan

D. Dr. N.E. Borlaug

Answer:

65. Triticale is an example of

A. Auto polyploids

B. Allopolyploidy

C. Euherterosis

D. Pseudoheterosis

Answer:

66. Green revolution scheme began in

A. India

B. China

C. MeXIIco

D. America

Answer:

67. The former director of IARI

A. Mohapatra

B. Dr. B.P. Pal

C. Dr. N.E. Borlang

D. William S. Gaud

Answer:

68. Who is popularly called as the "father of

green revolution in India"?

A. M.S. Swaminathan

B. Dr. K. Ramiah

C. C.T. Patel

D. Dr. B. P. Pal

Answer:

69. When was semi dwarf wheat of Mexico

introduced in India?

A. 1950

B. 1953

C. 1963

D. 1973

Answer:



70. Which one of the following is semi dwarf

fertilizer responsive hybrid variety of rice?

A. IR8

B. Jaya

C. Ratna

D. TN1

Answer:

71. Which one is first semi dwarf rice variety?

A. Taichung Native - 1

B. Ratna

C. Sonora

D. Himgiri

Answer:

72. Which one of the following is resistance to

yellow mosaic virus?

A. Prabhani Kranti

B. Pusa Gaurav

C. Pusa Sem

D. Himgiri

Answer:

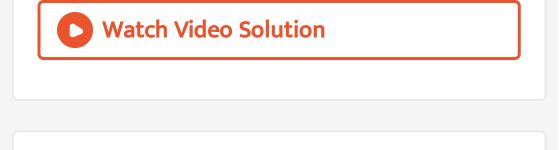
73. Match the following and select the correct

option

i. Hairy leaves	- A. Mustard
ii. Brassica	- B. Bhindi
iii. Okra	- C. Resistance to
a rational summers	Mosaic virus
iv. Pusa Sadabahar	- D. Resistance to
	insect

- A. i-C, ii-A, iii-D, iv-B
- B. i-D, ii-A, iii-B, iv-C
- C. i-D, ii-B, iii-a, iv-C
- D. i-C, ii-A, iii-D, iv-B

Answer:



- 74. IRRI stands for
 - A. Indian Rice Research Institute
 - B. Indian Rye Research Institute
 - C. International Rice Research Institute
 - D. International Rye Research Institute

Answer:

75. Which of the following variety has poor sugar content and yield?

A. Saccharum barberi

B. Saccharum officinarium

C. Saccharum sinese

D. Saccharum robustum

Answer:

76. The new varieties of plants are produced by

A. Introduction

B. Mutation

C. Hybridization

D. Selection

Answer:



77. Bagging is done to

A. Avoid cross pollination

B. Avoid self pollination

C. Achieve desired pollination

D. Prevent contamination from foreign

pollen

Answer:

78. Dwarf wheats were developed by

A. Vavilov

B. Borlaug

C. Swaminathan

D. None of these

Answer:



Watch Video Solution

79. The main aim of plant breeding is

A. To produce improved varieties

B. To make soil fertile

C. To control pollination

D. To become more progressive

Answer:

Watch Video Solution

80. Breeding crops for improving nutritional

quality _____.

- A. Bio fertilization
- B. Bio remediation
- C. Bio fortification
- D. Bio information

Answer:

Watch Video Solution

81. NBPGR stands for

A. National	Breeding	g of	Plant	Genetic	
Resources					
B. National	Bureau	of	Plant	Genome	
Research					
C. National	Bureau	of	Phyto	Genome	
Research					
D. National	Bureau	of	Plant	Genetic	
Resouces.					

Answer:

82. Assertion: One of the main objectives of the green manuring is to increase the content of nitrogen in the soil.

Reason: Green in-situ manuring refers to the growing of green manuring crops in the border rows.

A. Assertion is right and reason is wrong.

B. Assertion is wrong and reason is right.

C. Both reason and assertion is right.

D. Both reason and assertion is wrong.

Answer:

Watch Video Solution

83. Beauveria is a

A. Alga

B. Fungus

C. Bacterium

D. Virus





84. Who was awarded a Nobel prize for peace in 1970?

A. Norman E Borlang

B. M.S. Swaminathan

C. Nel Jayaraman

D. Dr. B. P. Pal

Answer:



85. Which is not a conventional method of breeding?

A. Hybridization

B. Mutation breeding

C. Somatic hybridization

D. Pure line selection





86. Identify the conventional method of plant breeding.

A. Genetic engineering

B. Mass selection

C. Tissue culture

D. DNA finger printing



