

## Important Facts of Agriculture

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1. Father of agronomy is - **peter decresenzi**.
2. Dr. **Biwant Rajis** the founder of Relay cropping .
3. The Directorate of cropping System research is located at - **Modipuram , meerut, U.P.**
4. Scientific study of mixed cropping was firstly done by - **La-Flitze (1928)**
5. Relay cropping concept was derived from - Relay race
6. Natural Resource management is an example of sustainable agriculture
7. Cropping System is a component of - framing System
8. When the sub crop are sown to supplement of yield of the main crop , the sub crops are known as -- augmenting crops
9. The main crop is grown in the centre , surrounded by hardly or thorny crops, the sub crop is known as - guard crops
10. The yield of both crops , grown together are found to be higher than the yield of their pure crops on unit area , such cropping is known as -- synergetic cropping
11. What is a cash crops -- those crops , which may be sold directly from the field without processing like vegetables , potato, etc.
12. Formula of Cropping Intensity =  $\text{Total Cropping Area} / \text{total sown area} * 100$
13. The growing of two or more crops on the same field in a year is called -- multiple cropping
14. The practice of raising grasses or pasture , is also known as -- ley farming
15. In India , the maximum acreage and production of wheat is in UP
16. The type of fruit of wheat is Caryopsis
17. The optimum temperature for ideal germination of wheat is 20 to 25 °C
18. Norin-10 gene was brought to USA by - **S.c. salamone 1984**
19. The dwarf winter variety of wheat first time developed through using Norin gene by - Dr. O.A.Vogel (USA)
20. Triple gene dwarf variety were released in 1970
21. Which is double gene dwarf varieties of wheat - HD 2204, Janak, UP 215, Pratap, Kalyansona, Arjun, Sonara 64
22. Single gene dwarf varieties are - Sonalika , Girija, UP-262 ,WL 711,Lerma Rojo 64A
23. The protein found in wheat floor which is helpful for chapati making - Gluten
24. Central Zig - Zag axis of wheat is called -Rachis
25. Mexican dwarf wheat was evolved by - Dr. N. E. Borlaug
26. The toxic alkaloid found in the leaves of sorghum crops is - **Dhurin** or HCN
27. CSH 1 was released as first dwarf sorghum hybrid in 1964
28. Which crop is known as camel crops - Sorghum
29. Native of jowar is Africa (Ethiopia & Sudan)
30. The maximum area & Production of jowar is in Maharashtra
31. Jowar is poor in lysine but rich in - Leucine
32. The inflorescence of jowar is called – Panicle
33. First hybrid variety of bajara is HB-1 (1965) developed at PAU, Ludhiana
34. Protein content in Bajra is 11-12 %
35. Origin of bajra is Africa
36. Bajra is sensitive to - water logging and Acidic soil
37. The largest producer state of cotton in India is -Gujarat

38. Bad opening of balls is known as - Tirak
39. In cotton , the maturity of fibre is judged by – Arealometer
40. H-777 is the cultivar of cotton
41. Hybrid -4 is the first commercial cotton of the world developed by - Dr.C.T. Patel in 1970
42. The leaves of cotton becomes radish in colour due to decrease nutrient uptake and moisture .
43. Origin of cotton is from - India
44. Cotton belongs to- malvaceae
45. Intra - Specific hybrid of cotton is -Hybrid -6, savita, surya.
46. Interspecific hybrid of cotton is - Varalaxmi , DCH-32 , HB -224 etc.
47. One seed of cotton has 60000-80000 fibres
48. Ginning %= wt. of lint / wt. of seed cotton taken for ginning \* 100
49. The removal of lower leaves which come in contact with soil and lose their commercial value is known as priming process.
50. Priming method is used in - Cigarette and wrapper tobacco
51. The main aim of topping and Desuckering is - to divert the energy and nutrient of plant from flower to leaves.
52. The removal of the lateral branches or suckers or auxiliary buds is called - desuckring .
53. Central tobacco research institute is situated at - Raja - h - Mundri, AP (1947)
54. The richest source of protein among the food grain is - Pulses
55. Head quarter of directorate of pulses research is located in - Kanpur UP
56. Which pulse crop doesn't fix N<sub>2</sub> from atmosphere -Rajma
57. The word pulse is derived from - French word pottage or poride means - soup (dal)
58. The term legume is taken from - latin word - means to collect
59. India is the largest producer of – gram
60. The sour taste of gram leaf is due to presence of - Maleic acid(60%) and oxalic acid
61. Shelling % of Pea is 49
62. Harvest index of arhar is 19 %
63. Origin of aarhar is from – Africa
64. Queen of cereals is called Maize
65. The composite cultivars of maize are - Kisan , jawahar ,Amber ,Vijay , Sona , Vikaram, etc.
66. Maize is a C<sub>4</sub> Plant
67. In India the rank first state in area and production of maize is UP
68. The maize Protein is called- Zein
69. Male inflorescence of maize is called –Tassel
70. The critical stage for water application in maize is - Tasseling and silking stage
71. Which Indian scientist shared world food prize for miracle maize - Dr.Sruinder K.Vasal(2000)
72. Origin of maize from - Mexico
73. All India Coordinated Maize Improvement Project was started in -1957 at New Delhi
74. Double cross technique for hybrid seed production was developed by - D.F. Jones (1920)
75. The idea of hybrid maize was first conceived by : E.M. east and G.H. Shull (1910)
76. The criteria for harvesting of sugarcane - withering of lower leaves ,brix 20 % , sucrose 15 %
77. Algin planting method of sugarcane is evolved by - Allahabad agriculture institute , Allahabad , UP
78. Adsali sugarcane is common in Maharashtra
79. sugarcane is planted in furrows because - it reduce lodging
80. Inflorescence of sugarcane is generally called - Arrow or open panicle.

81. Sucrose content in cane is - 13-14 %
82. Sugar from juice is - 6-10%
83. Hand refractometer reading for sugarcane maturity is 20
84. Sugarcane breeding Institute is situated at - Coimbatore
85. Adhsali Sugar cane crop mature in 18 months
86. father of hybrid rice is - Yuan Long Pin
87. India's first dwarf variety released during 1968 was jaya .
88. World's first high yielding semi dwarf basmati rice variety is - pusa basmati - 1
89. World's first super rice variety for saline / alkaline soil – Lunishree
90. Harvesting of paddy is done at moisture content - 21-23 %
91. First mutant variety of rice is jagannath( gamma ray irradiation of T-141)
92. Which gas is released from field of paddy - Methane (CH<sub>4</sub>)
93. SRI technique was originated in Madagascar in 1987 by prof. Henry De Laulanie
94. First super fine aromatic basmati hybrid is - Pusa RH-10
95. Oilseed production programme was started during - 1990-91
96. Technology mission on oilseed was est. 1986
97. National Research Centre for groundnut was est.at Junagarh (Gujarat)
98. Indian central Oilseed Committee was est. 1947
99. All India Coordinated Project on Oilseeds was est. during 1967
100. Main adulteration in mustered - argemone mexicana oil
101. Mustard fruit is known as - siliqua
102. Pungency of mustard is done to - isothiocynate
103. National seed corporation was established in March – 1963
104. Seed Act was passed in 1966 (29 dec)
105. Tetrazolium Test is done for - viability and vigour
106. The Indian seed Act came into force on 2 oct 1969
107. NSC started functioning in July 1963
108. The head quarter of NSC is - Pusa compus , ND
109. National Seed project was launched in – 1976
110. The world meteorology is derived from- Greek language
111. International meteorological organization was est. in – 1873
112. Division of Agri. Meteorology at pune , Maharashtra was est. in 1932
113. Solar radiation is measured by – pyranometer(total incoming radiations)
114. Agro Ecological Zones in India is 8( by NARP ICAR), 21(by NBSSLUP)—but now only 20
115. Agro -climatic zones (15 nos.) are formed in India during 7th five year plan (1988)
116. The green Ouse gases are - CO<sub>2</sub> , CFC , CH<sub>4</sub>, etc.
117. Indian meteorological Dept. was est. in the year of -1875
118. Wind velocity is measured by -Anemometer .
119. Father of agro- climatology is - Koppen
120. Koppen classified the climate based on - temperature & Precipitation
121. The study of weather is called – meteorology
122. The term weed was firstly used by - jethrotull
123. National Research centre for weed science is situated at-Jabalpur (MP)
124. Commercial mycoherbices first appeared in market USA in early 1980s
125. National horticulture board was est.at Gurgaon (Haryana )

126. First all India coordinated floriculture Improvement project was started in 1971
127. Central temperate Horticulture Research institute is situated at - Srinagar (J&K)
128. International institute of horticulture is situated in – Brazil
129. Who is the father of pomology – Decandolle
130. National horticulture board was est. in the year 1984
131. Who was the first deputy director general of horticulture , ICAR - dr. K.L. Chadha
132. Which vegetable rank first among vegetable crops in production in the world – potato
133. In India , potato was introduced by Portuguese in 1965
134. Research on potato was started at IARI New Delhi in – 1935
135. The International potato centre was est. in 1971 at Lima (Peru)
136. Central potato Research Institute was est. in – 1949
137. Seed plant technique was developed by - Dr. Pushkarnath
138. The Head quarter of CPRI was Shifted from Patna to Shimla in 1956
139. True potato seed concept was first realized to raise commercial crop in India by Dr. S.Ramanujam (First director of CPRI)
140. Cauliflower was introduced in India by Dr. Jemson from Kew Garden, London in the year 1822
141. Male sterility in cauliflower was introduced by Pearson (1981)
142. The toxic substance of cucurbits is – cucurbitacin
143. Which hormones are used in cucurbits to modify sex and to induce femaleness - GA & NAA
144. Seedless variety of mango is - Sindhu (developed at FRS Vengurla )
145. Most exported variety of mango is - Alphonso
146. Black tip in mango is a physiological disorder due to brick kiln fumes mostly CO, SO<sub>2</sub> or deficiency of boron
147. Which type of incompatibility is found in mango - gametophytic
148. Mango variety , most suitable for high density planting is Amrapali
149. Mango inflorescence contains , which type of flowers - male and hermaphrodite
150. The off season mango variety is - Niranjan
151. The only mutant cultivar of mango is – Rosica
152. Magnifera contains about 41 species
153. The regular bearing varieties of mango are - Neelum , Banglora , pairi, etc .
154. Mosambi a sweet orange cultivar was introduced from - Mozambique
155. The edible portion of citrus fruits is -juicy placental hairs
156. The first record of the name grape fruit in Jamaica was in – 1814
157. The Banana breeding was first started at - Imperial college of tropical agriculture in Trinidad (1922)
158. Banana Breeding was started in India in 1949 at central Banana Research station , Aduthurai (TN)
159. Banana can be stored at - 13 C and 85 % RH
160. Banana initiate flowering 9-12 months after Planting
161. The native of papaya is tropical America
162. The yellow pigment in papaya is carotaxanthin
163. Papaya is the richest source of vitamin A next to mango it contains 2020 IU/ 100 g fruit
164. King of temperate fruit is - Apple
165. Family of apple is Rosaceae
166. Mother of all delicious group of cultivars is - red delicious
167. The king of arid fruit is ber
168. The commercial propagation method of grape is - hard wood cutting

169. In India the black soil is mostly found in - Maharashtra
170. Red soil is mostly found in – Tamilnadu
171. The soil which is most suitable for most crops is - sandy loam
172. Red colour in the red soils is due to presence of various oxides of iron
173. The vertical section of the soil showing the various layers from the surface to the unaffected parent material is known as - soil profile .
174. The arrangement of soil particles and their aggregate into certain defined is called - soil structure
175. Particle density of soil is also known as - true density
176. Generally the particles density of normal soil is - 2.65 gram/cm<sup>3</sup>
177. The bulk density of normal soil is - 1.33 g/cm<sup>3</sup>
178. The formula of porosity of soil is - porosity =  $100 - (\text{bulk density} / \text{Particle density})$
179. The cation exchange capacity (CEC) of montmorillonite is - 60-100 me / 100 gm
180. The first soil classification system was developed by - Russian scientist Dokuchaev (1880)
181. The U.S classification system the soil orders are – 10
182. Formula of bulk density is = wt. of soil / volume of solids and pores
183. Law of minimum was given by - Vn Liebig (1840)
184. Top most mineral horizon is - A horizon
185. exchangeable sodium %age is also known as soluble %age
186. The term pH was introduced by Sorensen (1909)
187. Energy exchange elements are H & O
188. K & Na is determined by Flame Photometer
189. Micro nutrient is also known as - trace element , Oligo -element or spured elements
190. Crop logging technique was given by - H. F. Clements
191. Metal nutrients are - K, Fe, Ca, Mg, Mn, Zn, Cu.
192. Highly mobile nutrients are - N, P, K.
193. Criteria of essentiality was proposed by Arnon & Stout (1939)
194. The term fictional nutrient was proposed by - Nicholas (1961)
195. Moderate mobile nutrient is Zn
196. FYM contains - 0.5% N , 0.2 % P<sub>2</sub>O<sub>5</sub> & 0.5 % K<sub>2</sub>O
197. The P is available at 6-7 pH
198. Bio fertilizers are - Rhizobium , Azotobacter, Azospirillum , PSB, VAM, BGA, etc.
199. Approx. 20 gram of rhizobium culture is required to treat one kg seed
200. One packet of rhizobium culture contains 20 gram of rhizobium culture
201. Azotobacter is used for - Rice , cotton , s.cane
202. Azospirillum bio fertilizer used for Sorghum
203. The cytoplasm and nucleus combinedly called - protoplasm
204. Cell theory was proposed by M.J. Schleiden and Theodo Schwann
205. The term Lysosomes was first used by Dave in 1955
206. The main function of Golgi bodies are - packaging of food materials such as protein , lipids etc.
207. The function of ribosomes are - protein synthesis
208. The term mitochondria was given by - C Benda (1897)
209. The simple microscope was invented by - Galileo (1610)
210. The shortest phase of all mitosis phase is - Anaphase
211. Meiotic division is also known as reducetional division
212. The term mitosis was coined by Fleming (1882)

213. Mitosis occurs in Somatic cells
214. Segregation occurs during meiosis
215. The longest mitotic phase is -Prophase
216. Absorption Spectrum of photosynthesis is blue and red
217. Action Spectrum of photosynthesis is red and blue
218. Dark reaction was discovered by Blackman
219. Dark reaction is also known as - Blackman reaction or C3 – cycle
220. The main site for dark reaction of photosynthesis is – stroma
221. The evaporation of water from plants is called - transpiration
222. Evaporation from soil and transpiration combined are called ET
223. C4 Plants proposed by Hatch and slack (1970)
224. The dark reaction process of photosynthesis has been named variously - Calvin cycle or Blackman reaction
225. Light reaction is also known as Hill reaction
226. In photosynthesis , the solar energy converts into - Chemical energy
227. The OSMOSIS term was given by - Abbe Nollet (1748)
228. The term “diffusion pressure deficit “ was introduced by - Meyer in 1938
229. The term Imbibition was coined by - Sachs
230. Imbibition Pressure is also known as - Matric Potential
231. Root pressure word was coined by- Stephan Hales
232. Father of Physiology - Stephan Hales
233. Soil less cultivation of plants is known as Hydroponics
234. Rate of transpiration is determined by - Potometer
235. The loss of sap (water) from the injured parts of plants is called - Bleeding
236. Approximately 90% of the world photosynthesis is carried out by - Marine and fresh water algae
237. Net production of ATP in Glycolysis is 2
238. Growth rate is measured by Auxanometer & Cresco graph
239. Photoperiodism term was coined by -TD Lysenko (1920)
240. Apical Bud dominance is caused by which hormone - Auxin
241. Which hormone is used as a herbicide=auxin
242. Which hormone is related to drought tolerance- abscisic acid (ABA)
243. Dormancy break by which hormone - Cytokinin
244. Stress hardening in plants can be active by which hormone ABA
245. Fruit ripening hormone is - ethylene
246. The term auxin was used by - Frits Went (Holland) 1905
247. Went's auxin is now known as - Indole -3-acetic acid (IAA)
248. Which hormones are the Auxin - IAA, IBA, NAA , 2,4-D,2,4,5-T' MCPA ,IPA TIBA etc
249. Shedding of plant parts is due to- ABA hormones
250. Cycocel (CCC) is a growth retardant
251. The most widely used auxin herbicides are 2,4-D,2,4,5-T' MCPA
252. Gibberellins were first discovered in Japan
253. The hormones also known as - Photo hormones , growth hormones , growth substances
254. Main auxin is also known as -IAA
255. Root promoting hormones is IBA
256. The precursor of IAA is - Tryptophan

257. Synthesis of IAA in plants requires Zinc
258. The term phytohormone for hormones of plants is suggested by - Thimann (1948)
259. The term genetic resources was coined by - Frankel
260. Mendel began his famous experiments on Pea in 1857
261. Mendel Paper entitled "Experiments in Plant Hybridization" was presented in German Language in two papers in 1865 (Feb 8 and March 8)
262. Mendel Paper published in the annual proceeding of society in 1866
263. The term "Genetics" was coined by - Bateson (1905)
264. The term gene, genotype and phenotype were used by - Johannsen in 1903
265. Germplasm theory was proposed by Weismann
266. Crossing over term was used first time by - Morgan and Stettin in 1911
267. Operon model of gene regulation was discovered by - Jacob and Monod 1961
268. The term chromosome was coined by - Waldeyer in 1888
269. One gene one enzyme hypothesis was proposed by - Beadle and Tatum in 1941
270. First time gene was divided into cistron, muton and recon by Benzer (1955)
271. Sex chromosomes are also known as allosomes
272. Crossing over occurs in - Pachytene stage
273. The tendency of two or more genes to remain together in the same chromosome during inheritance is referred to as - Linkage
274. Chiasma type theory of crossing over was proposed by - Janssens
275. Genic balance system of sex determination was proposed by - Bridges in 1922
276. Monogenic sex determination is found in - Asparagus, Papaya, maize, spinach etc.
277. The homozygous progeny of a self-pollinated homozygous plant is known as - Pure lines
278. The concept of pureline theory was developed by - Johannsen (1903), Danish biologist
279. Breeding method for self-pollinated crops are - Pure line selection, Mass Selection, Progeny selection, Bulk Method, Pedigree method, single seed descent method, Back cross Method
280. A multiline variety is a mixture of - Several pure lines
281. Bulk method was first used by - Nelson Ehle in 1908
282. The modification of bulk method is - Single seed descent
283. In pure line Theory, Johannsen was working on - Princess variety of Rajma
284. Mass Pedigree Method was proposed by - Harrington in 1937
285. The oldest method of selection is - mass Selection
286. Progeny test was developed by - Louis de Vilmorin
287. Progeny Test is also known as - Vilmorin isolation principle
288. Single seed Descent method applied for the first time in oat in 1965 by - Graphius
289. The term recurrent selection was coined by - Hull in 1945
290. The use of synthetic varieties for commercial cultivation was first suggested in maize by - Hayes and Garber, 1919
291. Synthetic varieties are maintained by - open Pollination
292. A synthetic variety can be developed from - Inbreds, clones and open pollinated varieties.
293. The general or basic concept in the development of synthetic varieties is - Exploitation of hybrid vigour
294. The concept of disruptive mating and selection was developed by - Mather (1953) and Thoday (1958)
295. The Concept of diallel selective mating system was originally developed by - Jonsen in 1970
296. The heterosis is also known as - Hybrid vigour
297. The term heterosis was first used by - Shull in 1914

298. Dominance theory was proposed by - Devenport in 1908
299. The cross between inbred line and open pollinated variety was done in - top cross method
300. The resistance of host to the particular race of a pathogen is known as - vertical resistance
301. vertical resistance is governed by- One or few genes
302. The resistance of host to the all race of a pathogen is known as - Horizontal resistance
303. The concept of gene for gene hypothesis was first developed by- flor in 1946
304. The disease resistance is governed by- several genes
305. Who developed the concept of vertical and horizontal resistance - j. E . Vender Plank (1963)
306. Father of genetic engineering is - Pual Berg
307. Polymerase chain reaction (PCR) was developed by - Dr. Karl Mullis (1980)
308. Golden rice was developed by Ingo protrykus and peter bayer
309. The plant part , which is used for regeneration is called - Explant
310. A mass of regenerated cells i culture medium is called - Callus
311. the suspension of free cells of callus in a liquid medium is known as - Suspension culture
312. the regeneration capacity or ability of a plant cell to develop into whole plant is known as – Totipotency
313. What is the embryogenesis - It is the process of formation of somatic embryos from callus
314. the process of dirrerentiation of shoot & root from the somatic embyos is called – organogenesis
315. Regeneration of whole plant from anther is called - anther culture
316. Haploid are developed by - Anther culture
317. The Blue biotechnology is a term that has been used to describe - The marine and a uatic application of to describe
318. The biotechnology applied to agriculture process is known as -Industrial Biotechnology
319. the first genetically modified food product was a -Tomato , which was transformed to delay its ripening
320. M-RNA is primarily used for - Transcription of DNA
321. RFLP stands for - Restricting fragment length polymorphism
322. Plant tissue culture was begun by - G. Haberlandt (geman botanist ) in 1808
323. research in the area of tissue culture was first stared in india at - Department of Botany , DU in 1960s
324. National bureau of plant genetics resources is situated at -New Delhi
325. The project on Indian mustard oil with higher b-carotene is initiated by - TERI
326. A genotype developed by the process of genetic engineering is called - Transgenic
327. what is gene cloning - A technique of genetic engineering , which is used to make several identical copies of a gene is called gene cloning
328. which soil borne bacterium is used for developed of transgenic plants - agrobacterium tumifaciens
329. In potato , the protein quality has been improved by - transferring serum albumin gene from human
330. In tobacco , cold resistance power has been achieved by tranering gene from -Arabidopsis thaliana
331. Little leaf of citrus is caused by - MLO,s
332. Pahala blighted s.cane is caused due to deficiency of - Mn
333. Reclamation disease is caused due to the deficiency of – Cu
334. Late blight of potato is caused by - Phytophthora infestence (fungi)
335. Bunchy top of banana is caused by – virus
336. Grassy shoot disease of s.cane is caused by – mycoplasma
337. kresek in rice is caused by - Xanthomonas oryzae
338. heart rot of sugar beat is casued by - Deficiency of boron
339. Most dangerous disease of potato - Late blight of potato
340. Philology disease in plants is caused by - Mycoplasma



341. Club root of cauliflower is caused by- *Plasmodiosphora brassicae*
342. Sheath blight of rice is caused by- *Rhizoctonia solani*
343. vector of leaf -curl disease in cotton is - White flies
344. Orobanche is a parasite associated with – tobacco
345. Akiochi disease is due to - sulphur toxicity
346. White rust of crucifers is caused by - *Albugo, candida* , fungi
347. Ufra disease in rice is caused by- Nematode
348. Whiptail of cauliflower is due to the deficiency of - Mo.
349. Vector of rice tungro virus is - Green leaf hopper
350. Kresek symptom is found in - Bacterial blight
351. loose smut disease of wheat is a - Internally seed Borne
352. Mantek Disease of rice is caused by - Rice root nematode
353. Yellow leaves of tea occur due to the deficiency of – Sulphur
354. Die back of shoots occur due to deficiency of - Copper
355. die back is the major disease of rose in India
356. Crop showing maximum resistance to nematode is - marigold
357. The late blight disease destroy the potato crop of Ireland in 1845
358. Father of pathology is - Anton de berry
359. Father of mycology is - P.A. Micheli
360. Life cycle of wheat rust is given by - K.C. Mehta
361. Top sickness of tobacco is caused by - Deficiency of boron
362. The pathogen associated with the discovery of bordeause mixture is - *Plasmosphora viticola*
363. Loose smut of wheat can be controlled by seed treatment of – Vitavax
364. Late blight of potato was introduced in India for first-time in - nilgiri –hills
365. Black heart of potato is caused by - Poor ventilation in storage (lock of oxygen)
366. The tundu disease of wheat is usually associated with nematode known as – *anguina tritici*
367. Udabatta disease of rice is due to -- *Ephelis oryzae*
368. Ring rust of Aonla is caused by - *Ravenellia emblica* var. *fructoidae*
369. Flag smut of wheat is caused by - *Urouystis* gramineae
370. Leaf curl disease of tobacco is caused by virus and it is transmitted by - White fly
371. Leaf blight of cotton is caused by - *Alternaria macrospora*
372. father of nematology – *Bastian*
373. Father of Microbiology - Louis Pasteur
374. Bacterium was discovered by – Antony van leewenhock
375. fungicide used in the control of smut is – Vitavax
376. father of modern Plant pathology is - Anton de Berry
377. bordeaux mixture was developed by - P.M.A. Millardet
378. Common nematicides are - *DD* Mixture , Phorate , Etylene bromide , etc.
379. Central Plant protection training institute is situated at - Hyderabad ( AP)
380. first plant protection adviser to govt. of India - H.S. Pruthvi.
381. integrated pest control term was coined by - Bartlett ( 1956)
382. The Term “ Pest Management “ was given by - Geier (1970)
383. The blood colour of insects is - Green with yellow
384. Honeybees belongs to the order of – Hymenoptera
385. Entomology word was taken from - Greek language

386. Father of Insect Physiology is – Wiggelworth
387. The first pesticide was discovered by -Millardet-(1882)
388. DDT was discovered by - Zedler scientist
389. First insecticide discovered was – DDT
390. Plant protection and quarantine Act was passed in the year of – 1912
391. insecticide act was passed in 1968
392. destructive insect and Pest Act was passed in – 1914
393. Maximum %age of insecticide is used in which crop - Cotton (54 %)
394. “Warfarin “ is a rodenticide
395. Contact insecticides are - DDT, Malathian , Aldicarb , Monocrotophos , Aldrin , etc.
396. Bio pesticides are - NPV, GV, Bacillus thuringiensis etc.
397. Pest population should be kept below the - Economic Threshold level
398. Very safest insecticide for honeybee – Endosulphon
399. Rat poison is known as - Zinc phosphide (Zn<sub>3</sub>P<sub>2</sub>)
400. Lead arsenate was first used in 1832 by Moulton
401. Overhead cost is known as - Fixed cost
402. Price theory is a branch of - Micro- Economics
403. Average cost is equal to - Total cost / Output
404. Land rent is an example of fixed cost
405. prime cost is also known as - Variable cost
406. opportunity cost is also known as - alternative cost
407. The father of economics is - Adam Smith
408. Diminishing return is also known as - Law of variable
409. The most effective way to overcome the defects of agricultural marketing is - Regulating marketing
410. the law of variable proportion is generally referred to as the - law of diminishing return production is a function of - Factors
411. AGMARK act was enforced in a year – 1937
412. In mixed farming , the contribution of livestock to gross farm income is at least
413. Input -Output relationship is also known as - production function
414. Those product , in which two product produced together are called - joint product
415. Dumping activity is seen under - monopoly
416. Export - Import bank of India was set up on - 1st January , 1982
417. IRDP was started in the year of - 2 Oct , 1980
418. When marginal production is zero , then total production is – maximum
419. National demonstration \project was started in the year
420. KVK is also known as - Farm science centre
421. KVK was started in the year 1974
422. Operational Research Project was started in the year 1974-75
423. lab to land programme was started in the year - 1979 June 1
424. National agri. technology project was started in the year 1998-99
425. KVK was recommended by- Mohan Singh Mehta Committee (1974)
426. Community Development Project was started on – 1952
427. National Extension Service (NES) was started in the year of 1953
428. Firka Development Scheme was launched under the guidance of National Commission of Agriculture was set up by government of India – 1970

429. HYVP was started in the year of 1966
430. Marthendam programme was started by - Dr. Spencer Hatch in 1921
431. Etawah Pilot project was started by - Mr. Albert Mayer in Sep 1948
432. Indian village Service was started in 1945 by - Mr. Arther T. Mosher and Shri BN gupta
433. The aim of Etawah Pilot project is - Introducing intensive work on the Rural reconstruction front
434. Intensive Agriculture District programme was popularly known as - Package programme
435. IRDP was launched on - 2 oct 1980
436. National Agricultural Research project was launched in - Jan, 1979
437. T&V system was evolved in - 1973 by Israeli expert Daniel Benor At Turkey
438. Training of Rural Youth for Self Employment ( TRYSEM) in 1979
439. Total number of KVK operating in the country till Dec 2011 – 600
440. Antuadya Yojana was started in 2 oct 1977
441. Sampoorna Grammeen Rojgar Yojna was started in the year of 2001
442. FCI was started in 1970
443. **FISCAL** commission was appointed in 1949
444. Multiple Cropping Programming was Started in 1966
445. First irrigation commission was appointed in 1901
446. first deptt. of agriculture was established in 1881
447. the extension work must be based on the - Need and interest of people
448. Father of Extension- J paul Leagons
449. father of Sociology- August Commte
450. National agricultural innovation project was started in – 2005
451. Total number of national bureaux are – six
452. Formula of coefficient of variance is -  $SD/Mean * 100$
453. t test is generally used , when sample size is  $< 30$
454. The correlation coefficient lies between - -1 to + 1
455. The experimental design ,which simultaneously control the variation in two directions is known as LSD
456. The basic principles of field experimentation - 1 Replication 2 Randomized 3 Local control
457. The technique of analysis of variance was developed by - R.A. Fisher
458. If fertility gradient of land is in two directions , the experimental design will be - Latin Square design
459. the most commonly used measure of control tendency is - Arithmetic mean
460. Cumulative frequency is also known as – Ogive
461. The term ' Kurtosis ' was given by - Karl Pearson (1906)
462. Laplace used the normal distribution in - Analysis of errors of experiments
463. the important method of least squares was introduced by - Legendre in 1805
464. The name “ Normal distribution “ was coined independently by - Peirce Galton and Lexis , (1875)
465. Normal distribution is also known as - Law of error ,law of facility of error, lapace's second law , gaussian law etc.
466. Generalized mean is also known as - Power mean or Holder mean
467. The standard deviation is widely used measure of - Variability or dispersion
468. The term standard deviation was first used by - Karl Pearson in 1894
469. if mean , median and mode is equal , then skewness will be – zero
470. Correlation's are useful because they can indicate a - Predictive relationship
471. which ANOVA is used when the experimenter want to study the effects of two or more treatment variables - Factorial ANOVA

472. Which ANOVA is used when the subjects are subjects to repeated measures , in which the same subjects are used for each treatment - Two- Way Anova
473. The completely randomized design is considered to be most useful in situation where
1. The experimental units are homogeneous
  2. The experimental are small such as Laboratory experiments
  3. Some experimental units are likely to be destroyed
474. In field experiments the commonly used design is – RBD
475. For chi- square test , the minimum sample size should be – 50
476. Define biometry - It deals with observation with living thing
477. mean , median and mode are equal in - normal distribution
478. most frequent number in a data set , is known as - mode
479. the well-known example of skewed distribution is - Personal wealth
480. Harmonic mean is the - Reciprocal of arithmetic mean
481. the term z - test is often used to refer specifically to the - one sample location test
482. t Test is a - Parametric test
483. the goodness of fit test is also known as - kolmogorov - smirnov test
484. The number of independent pieces of information that go into the estimate of a parameter is called - Degree of freedom
485. The typical symbol for degree of freedom is - d.f.
486. F-test was coined by - George W. Snedecor , in honour of sir Ronald A fisher
487. The term “ water harvesting “ was first used by – myors
488. The force working with the attraction of water molecules toward each other is known as - Cohesion
489. The force working with the attraction of water molecules toward solid particles is known as – Adhesion
490. The water held tightly to the surface of soil particles by adsorption forces is known as - Hygroscopic water
491. Water held by force of surface as continuous film around soil particles and in capillary space is known as - capillary water
492. Capillary water is held between tension of 31 and 1/3 atmosphere
493. the movement of water from the surface into the soil is Called - Infiltration
494. The water moves freely in response to gravitational force and drain out of the soil is called as gravitational water
495. the water between field capacity & permanent wilting point is called as - Available water
496. Drip irrigation concept was proposed by - Simcha blass
497. One ha. Cm of irrigation is equal to 100000 liters
498. major source of irrigation in India is wells (52%)
499. Which irrigation method is widely used in fruit orchard - Bain method
500. Intermittent on & off system used in irrigation method is
501. the automatic method of surface irrigation is - Coblegation
502. leading state in drip irrigation in India is - Maharashtra
503. Soil moisture is measured by - Tension meter
504. Water requirement of irrigation wetland rice is about -1500MM
505. total water requirement of sugarcane crop is 200-300 cm
506. in saline soil , the method for irrigation used s - flood method
507. pF value was first introduced by- Schofield
508. vertical movement of water in soil is known as – Percolation

509. ET are measured by – Lysimeter
510. parsall flume is used for measurement of - water Flow
511. Sericulture is also known as -Silk Farming
512. the rearing of silkworms for the production of raw silk is known as – Sericulture
513. How much silkworms are required to produce 1kg of silk 5500
514. How much people are engaged in various sericulture activities in the country - 60 lakh
515. Central Sericulture research & Training Institute is situated at - Mysore , Karnataka
516. Sericulture has been practiced for at least 5000 years in china
517. Apiculture is also known as bee keeping
518. Apiculture word was taken from - Latin world
519. A location where bees are kept is called An Apiary
520. A beekeeper is also known as - Apiarist
521. A beekeeper bee in order to - Collect honey , bee wax, to pollinate crops , to produce bees for sale
522. What is beekeeping - I is maintenance of honey bee colonies , commonly in hives , by humans
523. the two economically important products of bee keeping is Honey and wax
524. average yield of Indian bee is - 6-8 Kg /Cony / year
525. The main freshwater fish are - Cop and catfish
526. the main brackish - water fish are - Hilsa and mullet
527. central Institute of marine Fisheries Research was established - Kochi , kerla
528. The central inland fisheries Institute was established at - Barrack pure (W.B)
529. The central institute of fisheries technology was est. at - Wwellindon Island near Kochi , Kerala
530. Hydroponics' is also known as - Soil less culture
531. The Method of growing plants using minerals nutrients solutions , in water, without soil is called - hydroponics
532. In 1699 john Woodward published his water culture experiment with the crop of – Spearmint
533. Hydroponics traditionally known as - solution culture
534. First time who promoted that solution culture can be used for agriculture crop production - Prof. William Frederick Gericks , University of California at Berkeley in 1929
535. The term Aquaculture for hydroponics was used for the first time by Prof. William F.G.
536. The Mutant Varity of rice is - Jagannath
537. The Pecursor of vitamin - A is - Bitacarotene
538. Azolla is a - a uatic fern
539. The Blue revolution in India was started during - fifth five year plan (1970)
540. Evergreen revolution is related to - Sustainable crop Production
541. Precision Farming is also known as - Site specific management
542. SRI technique Was developed in – Madagascar
543. The term synecology was given by - Schroter & Kirchner (1902)
544. Pusa Mukta is the cultivar of Cabbage
545. World's super rice variety , which is suitable for saline / Alkaline soil conditions is –Lunishree
546. NRCMAP is currently est. at- Anand (Gujarat)
547. IPR stands for - intellectual Property Right
548. Beaufort Scale is used to measure - WIND pressure / strength
549. What is dioeciously ? Those plants which contain on male and female flowers
550. The element that play an important male and female protoplasm constituent is – calcium
551. Wheat is a C3 plant

552. The plant parasite nematode was first time reported by -Kanche
553. Mean ,Median and Mode is equal in - Normal distribution
554. The inflorescence of jowar is called – Panicle
555. Gromer , SCU and CDU are the - Slow release fertilizers
556. Low of tolerance was introduced by - SHELFORD
557. End product of glycolysis is – Pyruvate
558. define lithophytes - The plant grown in rock crevices are called lithophytes
559. During glycolysis , the Net gain of ATP is - 2
560. Phosphorus is extracted by - Olsen method
561. The correlation between price and demand of a commodity is –negative
562. The limit of partial correlation coefficient is - -1 to +1
563. For reclamation of saline and Alkaline soils used are - Gypsum and Pyrite
564. The term ecosystem was coined by - A.G.Tansley (1935)
565. What is parthenocarpy - The development of fruit without fertilization
566. The development of embryo without fertilization is called - Apomixes
567. Relative humidity is measured by- Psychrometer
568. Father of Indian pale botany is - Birbal sahani
569. The weed used for ornamental purpose is- Lantana Camara
570. The core component of chlorophyll is – Mg
571. The soybean is sown at the depth of - 3 cm
572. The most prominent soil of India is - Alluvial soil
573. Chiasma is seen during - Diplotene sub - Phase
574. The current method used for control of bollworm in cotton is - Bt. transgenic cotton produced
575. Photo- Respiration occurs in – Chloroplast
576. Water use efficiency is highest in which plants - CAM Plants
577. Chromosomal theory of inheritance was proposed by- Sutton & Boveri
578. The price fixed by govt. is called - minimum support price
579. The present farming system of India has become - Market oriented
580. Which chemical is mostly used for breaking tuber dormancy in potato-thiourea
581. The term water harvesting was first time used by - Mayers
582. The first commercial hybrid cotton of the world is - Hybrid -4
583. International Day for biological diversity - 22 May
584. Measuring of heights one by – Clinometer
585. The number of electrons for conversion of  $\text{NO}_3$  to  $\text{NH}_4$ -16
586. Bangalore is also known as Garden city
587. origin of potato is from - Peru (S. America)
588. Dormancy breaking hormone is – cytokinin
589. the element involved in energy transfer and storage in plants is - Phosphorus
590. Fruit ripening hormone is – Ethylene
591. which is the antidote of insect poisoning -Atropine
592. Minimum support price is formulated by- CACP(total 28 crops)
593. Luxury consumption or maximum uptake nutrient is- K
594. Crop canopy temperature is measured by - Infra red thermometer
595. Secondary Plant nutrients are- Ca, Mg, & S
596. hulling %age in rice is - 65 %

597. First agriculture chemist of Imperial Agricultural Research Station was
598. Which method of s.cane sowing prevents the lodging - Trench method
599. Inflorescence of sugarcane is called – Arrow
600. Shedding of plants part is due to - ABA hormone
601. First hybrid in the world of red gram is -ICPH-8
602. The most preferable soil structure for agriculture is - Granular & Crumbly
603. Taxonomically organic soils are – Histosols
604. Which soil is most suitable for dry land agriculture - Black soil
605. First man made cereal is – Triticale
606. Dead heart and white ear disease is related to – Rice
607. IBPGR is situated at - Italy , Rome
608. India's share in the fruit production in the world is 10 %
609. What is relay cropping - The second crop sown before harvesting of first crop
610. Measurement of sunlight intensity is expressed in - Lux units(old)/Einstein(new)
611. In water logged arid gas found in abundant – Methane
612. Curing process is related to the crop- Tobacco
613. The book “ nature & Properties of soil “ is written by - N.C. Brady
614. Chemical used for delinting of cottons -  $H_2SO_4$
615. Maximum N loss in rice crop is due to - Denitrification
616. Wind velocity can be measured by – Anemometer
617. Queen of spices is – Cardamom
618. buck wheat is called - Pseudo cereal
619. Very dangerous disease of s.cane is red rot
620. World's staple food is - Rice
621. Fibre of cotton contains – Cellulose
622. Movement from higher concentration to lower concentration is known as - diffusion
623. Gold of America is known as - Soybean
624. Formula of Net Capital ratio is - Total assets /Total liabilities
625. Theory of evolution was given by - Charles Darwin
626. Which Indian Scientist shared world food prize for miracle maize - Dr. Surinder K. Vasal
627. ICAR day is celebrated on 16 July
628. Light red carnation represent to – Admiration
629. ANOVA table stands for analysis of - Variance
630. Formula of harvest index is - Economical yield / Biological yield \* 100
631. RBI was est. in 1935
632. Who discovered vitamin – Funk
633. Regur soil refers to - Black soil
634. Biological active form of glucose is - D-form
635. Lodging preventor is - CCC ( Cycocel)
636. FAO was started in 1948
637. Which design is used when fertility gradient is in two direction – LSD
638. International pest is Schistocerca gregaria
639. Bhodan movement was started in 1951
640. Cooperative movement was started by- F. Nicholus (1904)
641. Flared square symptoms are seen in cotton due to the - Spotted boll worm

642. CAN is a Neutral fertilizer
643. Root promoting hormone is IBA
644. Ooze test is done for detecting Bacteria
645. First product of urea hydrolysis is - Ammonium Carbamate
646. NABARD was set up on the recommendation of - Siva Raman committee ,Narsimhan Committee1982
647. The trade name of BHC is - Grammexone
648. Who discovered mitochondria - C. Benda(1897)
649. Bt cotton was discovered in - 1901 japan by Ishwata
650. the term cytokinin was proposed by - - Letham ( 1963 )
651. Kinetin and zeatin are the - Cytokonins
652. photosynthesis is an - Oxidation - Reduction process
653. Largest importer of cut flower in the world is - Germany
654. Gibberellin was discovered for the first time used by - - Kurosowa
655. Water soluble vitamin is - Vitamin –C
656. Greenhouse effect is also known is -- Global warming
657. VAM act as a - Symbiotic association
658. LEISA stand for - Less external input sustainable agriculture
659. Blue Revaluation in India was started during - Fifth five year plan ( 1970 )
660. who discovered pH concept – Sorenson
661. DRIS concept given by –Beaufils
662. The term ‘remote sensing ’ was first used in – USA
663. Acidity in gram leaves is due to - Malic acid / oxalic acid
664. Photosynthetic rate is highest in c4 plant
665. Lock and Key Model was proposed by - Fisher
666. Anti - Sterility vitamin is - Vitamin E
667. Double seed formation in cotton is due to - Pink bollworm
668. Forest conservation act was made in – 1980
669. Netural parthenocarpy is found in – Banana
670. the term vernalization was coined by - TD Lysenco
671. Chemical relationship is done between two cells by-Plasmodesmata
672. White revolution was accomplished by which scientist - V. Kurien
673. How much time is needed for sterilization in autoclave - 15 minutes
674. In which bacterial reproduction phase , virus is involved – Transduction
675. First plant flower mandi was situated at- BANGLORE
676. Regional Plant resource centre is situated at – Bhubaneswar
677. Cultivation of crops in areas where the annual rainfall is less than 750 mm is called- Dry Farming
678. Central soil salinity research institute is situated at -Karnal ( HR)
679. What is the ideal location of greenhouse- North – South
680. According to ICMR vegetable required per capita per day is - 300 gram
681. Biggest tree of the world is - Baniyan tree
682. Kisan call cente begun in the year 2004
683. Net cultivated area of India is – 143
684. Kisan divas is celebrated on 23 Dec.
685. The share of agriculture in global warming is - Approx. 25 %
686. Environment day is celebrated on - 5 th June



687. Which element is responsible for nodulation in legumes - Phosphorous
688. Fingerprinting is related to which crop – Pineapple
689. yellow vein mosaic virus disease is related to Bhindi
690. Which clay Mineral is dominant in Black soil- Montmorillonite
691. Sprouting in onion is controlled by the hormone of –MH
692. Which chemical/ hormone is used for regular bearing in mango- Paclobutrazol (PP333)
693. High yielding variety of wheat was developed by -Borlaug
694. break down of clods , crusts and plant material by the impact of particles moved by wind in saltation is called as - Abrasion
695. A soil with a pH value less than 7 hence having more hydrogen ions than hydroxyl ions in the soil solution is called as - Acid Soil
696. The movement of ions and water into the plant root because of metabolic processes by the root, frequently against an electrochemical potential gradient is referred to as - Active absorption\
697. The chemical in commercial product that is directly responsible for the herbicidal activity is called its - Active ingredient
698. the transfer of heat energy by means of horizontal mass motions through a medium is termed as - Advection
699. A technique in growing plants where in the plants derive their nutrients and water from a mist of air and aqueous solution that comes in contact with the roots is called - Aeroponics
700. A term proposed by Mc Gillchrist in 1965 , which is a measure of how much a relative yield increase in component a is greater than for component b is known as -Aggressiveness
701. The removal of excess water known as free water or gravitational water from the surface of the farm land as to create favourable soil conditions for plants growth is called as - Agriculture drainage
702. The growing of agricultural crops along with the forest crop is known as - Agri- silviculture
703. A land units defined in terms of major climate and growing period, which is climatically the homogenous response of a crop or a farming system is called as - Agro - climatic zone
704. An alternative renewable fuel ,produced from vegetable oils or animal fats through a refinery process called trans- esterification is called as - Bio - diesel
705. in India , NRC for medicine and aromatic plants is located at - Anand
706. A branch of science , which deals with the study of grasses , their classification , management and utilization is called - Agrostology
707. The area that comprises of all the areas from which water flows out into a common river or water pool is called as-Catchment Area
708. A branch of science, that studies the aspects of climate , which are relevant to the problems of agriculture is called - Agro- climatology
709. A Medium , which resists change or a substance added to resist change in concentration of-r pH activity in a solution as called as - Buffer
710. the crop which is grown as a substitute for the main crop that has failed on account of unfavourable condition is called as - Catch crop
711. the ratio of total cropped area in different seasons to the total land area is known as - Cropping intensity
712. The branch of agriculture which deals with scientific crop production and management is – Agronomy
713. Cultivation of crops in Areas where rainfall is less than 750 MM per annum is known as - dry farming
714. the study of the inter - relationship of living organisms with each other and with their environment in an agricultural system is called as - Agro- ecology
715. The crops that are grown to break the continuity of the agro-ecological situation of the field under

multiple cropping systems are called as - brake crop

- 716.** The competitive interaction between the crop species in intercropping and sequential cropping through the release of chemical substances or toxins is called - allelopathy
- 717.** The chemical substance released by one species may inhibit more strongly plants of the producer species it self is termed as - Auto - inhibition
- 718.** The production technique that combines agriculture and forestry , horticulture or animal husbandry on the same piece of land in the order to fully utilize the natural resources is called as - Agro- forestry
- 719.** the fraction of the total solar radiation incident on a body that is reflatd by it and expressed in % age is called as – Albedo
- 720.** A substance added to a soil for the improvement of its physical and chemical properties is called as – Ameliorant
- 721.** An appropriate combination of farm enterprises i.e. cropping system ,livestock, poultry ,fisheries , forestry and the means available to the farmer to raise them for increasing profitability is called as - farming systems
- 722.** The scientist , who has been called as father of organic farming is - albert Howard
- 723.** the process of use of micro- organism to remove salts from soil is referred as – Bioremediation
- 724.** the organization that is related to export of ' Agricultural processed product ' is - Agri- export zone ‘
- 725.** “ Sugarcane breeding Institute “is located at - Coimbatore
- 726.** The ratio between water deficit to potential evapotranspiration and expressed in %age is termed as - Aridity index
- 727.** A term given by Donald in 1963 , Which is a measure to find out the yield of various crops when grown together as well as separately and indicating the yield per plant of different crops in mixture and their respective pure stand on an units basis is known as Competition Index
- 728.** A biological model which is expected to perform or behave in a predictable manner a defined environment is known as - Ideotype
- 729.** gene responsible for dwarfing characters in rice is - Dee-Gee-Woo-gen

