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RICE

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ORIGIN

Scientific name – *Oryza sativa*

Family – Poaceae

Vernacular name - Dhan

- Rice is originated in China, dating back to 2600 BC.
- In India rice was first discovered in Lothal (Gujrat).
- It is cultivated in almost all Asian countries including India, Burma, China, Indonesia and Thailand.
- It is extensively grown as food crop, occupying 43.77 mha.



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Morphological Characteristics

- Rice is an annual herb with jointed stem called as 'culm' which is about 50-150 cm high.
- The internodes are short, in basal region and they are long and hollow in upward region.
- The 'culms' are fully or partially covered with leaf sheath.



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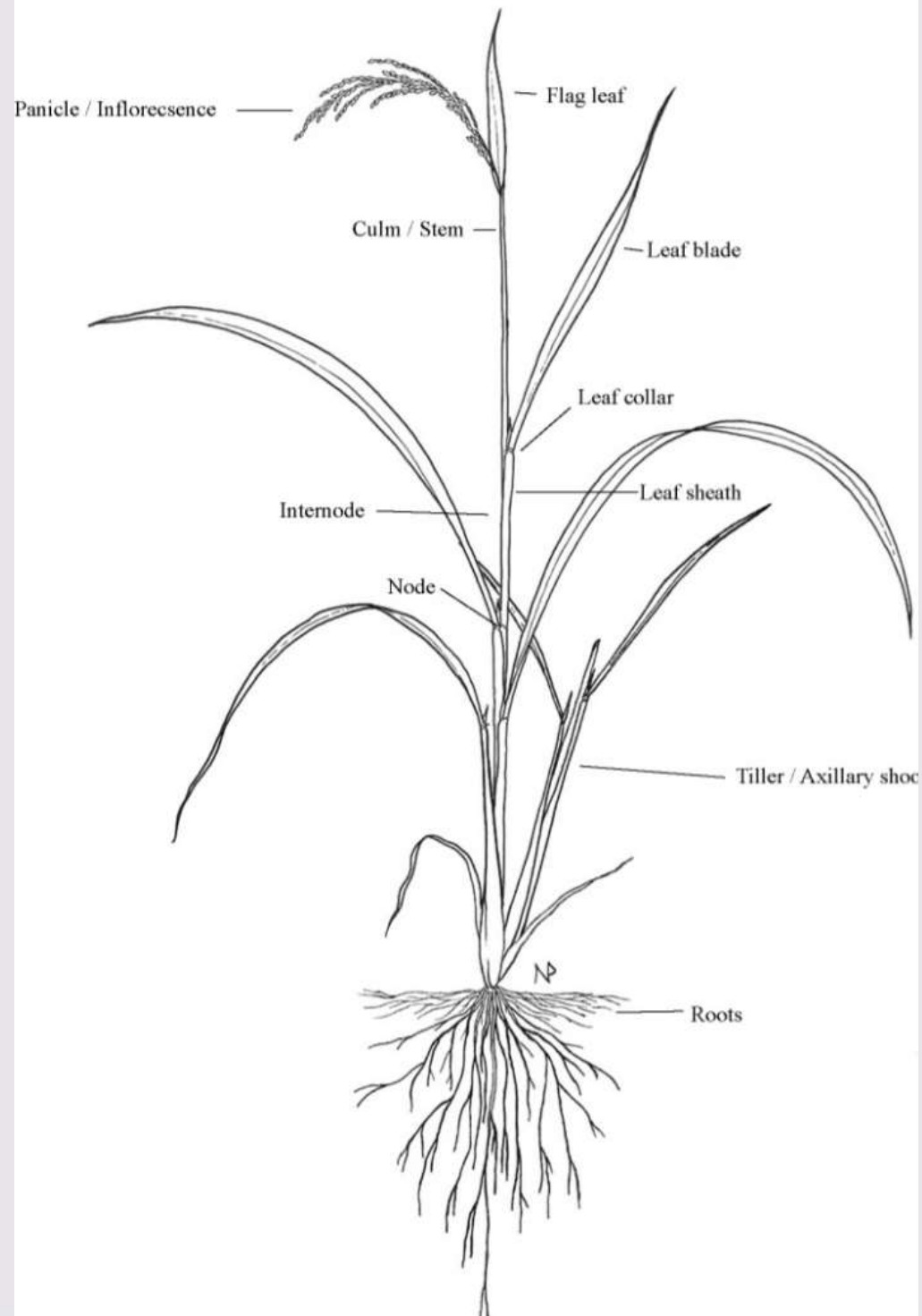
- Leaves are broad and alternate in position, which are present singly at each node.
- At the leaf base, a ligule is present which is sickle shaped.
- The flowers are arranged in terminal panicles.



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Oryza sativa Plant Cultivar Nipponbare





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- The inflorescence is panicle of spikelets.
- Each spikelet consists of series of 1-7 florets, usually invested by a pair of gloomes.
- Stigma is feathery.
- Flower is hermaphrodite, and basically repollinated.



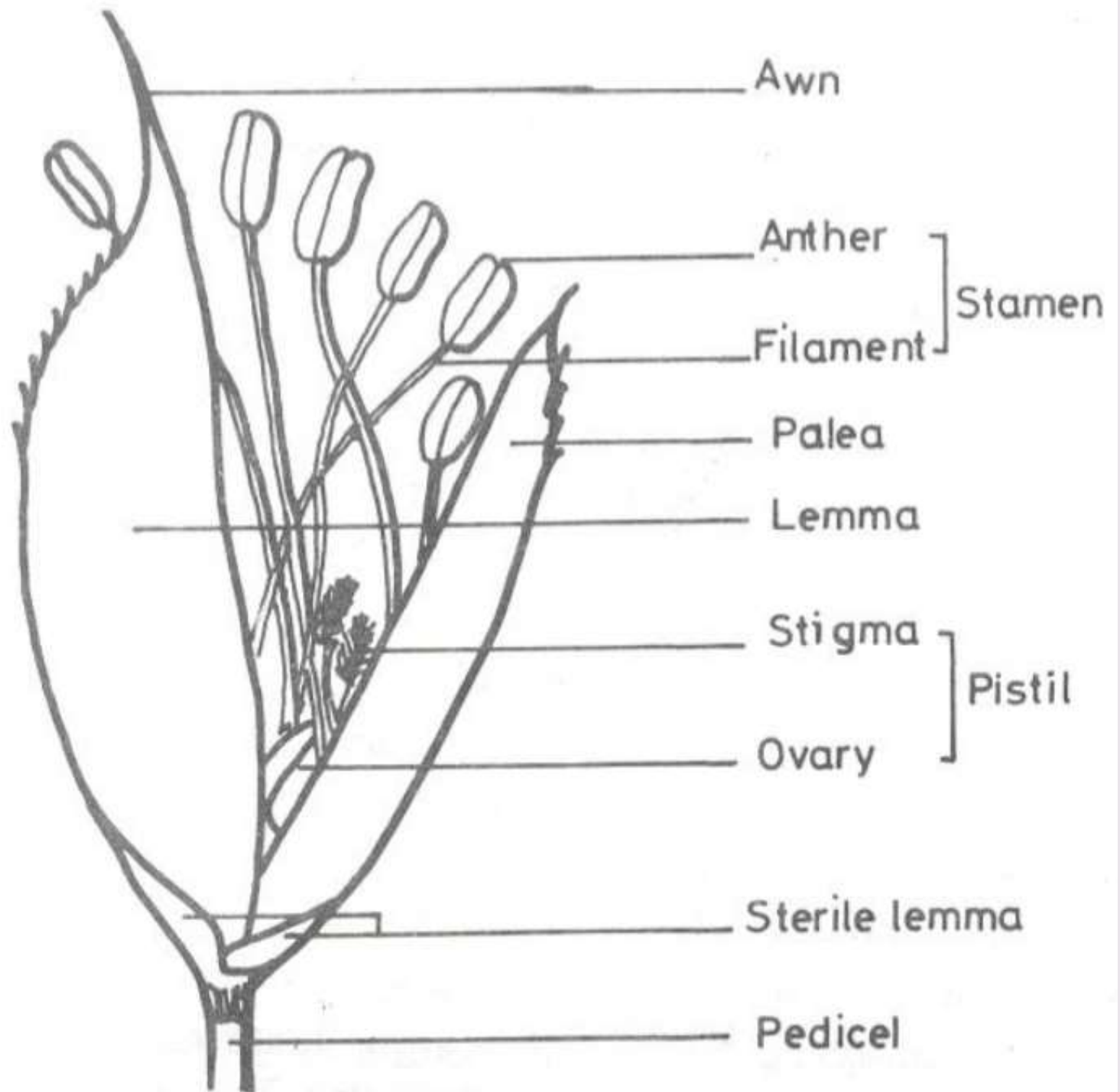
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- Each floret is enclosed by lemma and pelia (fertile) as they contain reproductive organs.
- The fruit is called caryopsis.
- The food we take is endosperm.



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Cultivation

- The main rice growing season in the country is the 'Kharif'. It is known as winter rice as per the harvesting time.
- The sowing time of winter (kharif) rice is June-July and it is harvested in November-December.
- Summer rice is called as Rabi rice.



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- The sowing time of summer rice is November to February and harvesting time is March to June.
- The area under summer rice is only 9% and early maturing varieties are mostly grown in this season.
- Rice can be grown under any kind of soil and climatic conditions including alkaline and acidic soil.



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Economic Importance

- Rice is an important staple food crop for more than 60 per cent of the world people.
- Ready to eat products eg. popped and puffed rice, instant or rice flakes, canned rice and fermented products are produced
- Rice straw is used as cattle feed, used for thatching roof and in cottage industry for preparation of hats, mats, ropes, sound absorbing , straw board and used as litter material.



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- Rice husk is used as animal feed, for paper making and as fuel source.
- Rice bran is used in cattle and poultry feed, defatted bran, which is rich in protein, can be used in the preparation of biscuits and as cattle feed.
- Rice bran oil is used in soap industry. Refined oil can be used as a cooling medium like cotton seed oil /corn oil. Rice bran wax, a byproduct of rice bran oil is used in industries.



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Thank You