

# Introduction and History of wheat

## Lecture No. 1

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# Outlines

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- Introduction of Wheat
- Objective
- History of Wheat
- Assignment/exercise
- Learning Outcomes
- Research scope
- References

# Introduction

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- Wheat is a staple crop for a significant proportion of the world's population.
- Wheat grains are grounded into flour (atta) and consumed in the form of chapatee/Bread (80-85%).
- Wheat is rich in carbohydrates, protein and essential vitamins and minerals such as vitamins B and E, calcium and iron, as well as fibre.
- It is world's most widely cultured crop occupying 22% cultivated areas.
- It is the major crop of USA, Canada and Asia, it is C3 crop not well adapted to tropical and subtropical condition.

# Introduction

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- As many as 25 species recognised in the world, only 3 species namely, *T.aestivum/vulgare* (Bread wheat), *T. durum* (Macroni wheat) & *T. dicoccum* (Emmer wheat) commercially grown in India.

## Objective

The generation and characterization of new bread wheat synthetics to mobilize unused progenitor diversity into the primary gene pool.

SELO: 1

Reference No.: R1

# Origin

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- Wheat has evolved from wild grasses.
- The centre of origin is South Asia.
- Large genetic variability is observed in Iran, Isreal, and Bordering countires.

SELO: 1

# History of wheat

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- Cultivation of wheat began to spread beyond the Fertile Crescent after about 8000 BC
- Spread of cultivated wheat started in the Fertile Crescent about 8500 BC, reaching Greece, Cyprus and **India** by 6500 BC, Egypt shortly after 6000 BC.
- The early Egyptians were developers of bread and the use of the oven and developed baking into one of the first large-scale food production industries

# History of wheat production in India

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- The production and productivity of Wheat crop were quite low, when India became independent in 1947.
- The production of Wheat was only 6.46 million tones and productivity was merely 663 kg per hectare during 1950-51, which was not sufficient to feed the Indian population.
- The Country used to import Wheat in large quantities for fulfilling the needs of our people from many countries like USA.
- Several policy decisions and actions were taken by Government of India from time to time to increase production and productivity in the country.

SELO: 2

Reference No.: R1

# History of wheat production in India

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- The Government of India appointed a commission in 1961 to assess the feasibility of increasing the crop productivity under prevailing Indian ecological conditions.
- The Ministry of Agriculture, Govt. of India launched and implemented various Centrally Sponsored/Central Sector Schemes, namely, IADP (Intensive Agriculture District Programme, 1960-61), IAAP (Intensive Agricultural Area Programme, 1964-65), High Yielding Varieties Programme.
- In the year **1965**, the government of India launched the Green Revolution with the help of a geneticist, now known as the father of the Green revolution (India) M.S. Swaminathan.

SELO: 2

Reference No.: R1





***Norman Borlaug*, an agricultural scientist, developed high-yielding wheat varieties, which yielded 3x as much food. He is said to have saved the lives of over a billion people worldwide from starvation, making him one of the most influential men in human history.**

- He was an American agronomist who led initiatives worldwide that contributed to the extensive increases in agricultural production termed the Green Revolution.
- In 1970 Norman E. Borlaug was awarded the Nobel Peace Prize for a lifetime of work to feed a hungry world.
- Founder, The World Food Prize

SELO: 1

Reference No.: R1

## M.S. Swaminathan

- Responsible for green revolution in India
- Developed high yielding varieties of Wheat and Rice
- An Indian geneticist and international administrator
- Renowned for his leading role in India's Green Revolution a program under which high-yield varieties of wheat and rice seedlings were planted in the fields of poor farmers.



Dr. Monkombu Sambasivan Swaminathan received the first World Food Prize in 1987 for spearheading the introduction of high-yielding wheat and rice varieties to India's farmers. Dr. Swaminathan became a scientist at the Indian Agricultural Research Institute in the 1950s. The **Green Revolution in India** was first introduced in Punjab in the late 1960s as part of a development program issued by international donor agencies and the Government of **India**. During the British Raj, **India's** grain economy hinged on a unilateral relation of exploitation.

SELO: 1

Reference No.: R1

## B. P. Pal

- An eminent **Wheat breeder**, developed superior disease resistant N. P. varieties of wheat
- **First Indian Director** of the IARI
- Dr Pal's major contribution to the scientific aspects of the Green Revolution was in the area of wheat genetics and breeding
- He observed that rust disease was largely responsible for low yields of wheat and, therefore, developed a **systematic breeding method** to develop varieties with resistance to rust disease.



1906 - 1989

SELO: 1

Reference No.: R1

# Learning Outcomes

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1. Ability to be a lifelong self learner
2. Ability to understand subject related concepts clearly along with contemporary issues

## Research Scope

New varieties of wheat

# References

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1. <https://www.slideshare.net/RachanaBagudam/wheat-161917538>
2. <https://www.slideshare.net/nishitmehta/wheat>
3. [https://www.slideshare.net/sazibakan2/wheat-84476821?from action=save](https://www.slideshare.net/sazibakan2/wheat-84476821?from_action=save)

