

Prelim Bits 20-06-2023 | UPSC Daily Current Affairs

Direct Seeding Vs Transplanting

Paddy

- **Origin** - South India.
- **Scientific name** - *Oryza sativa*.
- **Top producing country** - China.
- 2nd largest rice producing country - India.
- **Top producing state in India** - West Bengal.
- Paddy (rice with husk) is a highly water-intensive crop.
- **Temperature** - High temperature above 25-degree Celsius
- **Rainfall** - High humidity with annual rainfall above 100 cm.

Transplanting of Rice

- Transplanting consists of preparing seedlings in nursery and then planting these seedlings in the prepared main field.
- Transplanting ensures a uniform plant stand.
- In transplanting, the flooded fields basically deny oxygen to the weed seeds in the soil, thus acting as a natural herbicide.

Direct Seeding of Rice (DSR)

- Paddy is sown directly in the field without any nursery preparation, puddling or flooding.
- DSR is effective against weeds and saves water compared to transplanting.
- Direct seeding is more cost-effective than transplanting.
- Plants mature faster when grown via direct seeding.
- It is not necessary to disturb root systems when planted via direct seeding.
- **Disadvantages**
 - Higher seed rates
 - Seeds exposed to birds and pests
 - Weed management
 - Higher risk of lodging

DIRECT SEEDING vs TRANSPLANTING

	Direct Seeding	Transplanting
DEFINITION	Direct seeding is a planting method that involves the sowing of seeds directly in the field or garden	Transplanting is a planting method that involves the planting of seedlings or whole plants in the field or garden
SEED GERMINATION	In the same place (germinate in place)	Occurs inside the greenhouse
MATURING OF PLANTS	Faster	Slower
RISK DUE TO EXTERNAL PRESSURES	High	Low
THE "HARDENING OFF" PROCESS	No need	Needed
WEED MANAGEMENT	Difficult	Easy
THINNING OF SEEDLINGS	Required	Not required
AMOUNT OF SEEDS REQUIRED	High	Low
AMOUNT OF SEEDS REQUIRED	Does not occur	Done in transplanting when uprooting the seedlings
EXAMPLES OF VEGETABLES	Beans, beets, carrots, melons, peas, radishes, spinach, squashes, turnips, zucchini, and melons	Celery, eggplant, collards, kale, broccoli, kohlrabi, leeks, onion, peppers, scallions, and tomato
COST	Less expensive	Expensive compared to direct seeding

Reference

[The Indian Express | Paddy and the price of water](#)

ICMR's Recent Report on Diabetes

ICMR's recent study says that India has 101 million people living with diabetes

- **Published by** - The Madras Diabetes Research Foundation and Indian Council of Medical Research (ICMR).
- **Findings** - More than a quarter of the population was either *diabetic* or in *pre-diabetic* stage.
- 11.4% of India's population or 101 million people are living with diabetes.

- **Hypertension** - Around 35.5% of the population or 315 million people are living with the hypertension or high blood pressure.
- **Obesity** - The study found that 28.6% of the population would be considered to be obese as per the BMI measure, 39.5% of the population had abdominal obesity.
- BMI (body mass index) - Generally used as a measure for obesity.
- **Hypercholesterolemia** - 24% of the population were living with hypercholesterolemia (a condition where the bad cholesterol or LDL levels are high).

Diabetes & its Types

- Diabetes is a condition that happens when your blood sugar (glucose) is too high.
- It develops when your pancreas doesn't make enough insulin or any at all, or when your body isn't responding to the effects of insulin properly.
- Diabetes affects people of *all* ages.
- **Type 1 diabetes** - It is an autoimmune disease in which the immune system attacks and destroys insulin-producing cells in pancreas.
- It's usually diagnosed in children and young adults, but it can develop at any age.
- It is non-curable.
- **Type 2 diabetes** - With this type the body doesn't make enough insulin and body's cells don't respond normally to the insulin (insulin resistance).
- This is the most common type of diabetes.
- It mainly affects adults, but children can have it as well.
- **Other types**
 - Gestational diabetes
 - Type 3c diabetes
 - Latent autoimmune diabetes in adults (LADA)
 - Maturity-onset diabetes of the young (MODY)
 - Neonatal diabetes
 - Brittle diabetes

Reference

[The Indian Express | India has 101 million people living with diabetes](#)

Intersex-Inclusive Progress Pride Flag

The new variation of Intersex-Inclusive Progress Pride Flag, a representation of the LGBTQIA+ community is increasingly being accepted by many organizations in India.

- **LGBTQIA+** - Lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual, and the + holds space for the expanding and new understanding of different parts of the very diverse gender and sexual identities.

Pride flag

- It represents the pride associated with LGBTQIA+ social movements and allies as a symbol of resistance and acceptance.

- In 2021, Intersex Equality Rights (UK) decided to adapt the Pride Progress flag design to incorporate the intersex flag, creating the Intersex-Inclusive Pride flag.
- The recent flag is created by Valentino Vecchietti of Intersex Equality Rights UK in 2021.
- This is a new version of the previous Progress Pride Flag created in 2018 by Daniel Quasar.
- Various color representation and its meanings
 - Red= Life
 - Orange= Healing
 - Yellow= New Ideas
 - Green= Prosperity
 - Blue= Serenity
 - Violet= Spirit
 - Chevron Part
 - Black and brown= people of colour
 - White, blue and pink= transpeople
 - Yellow with purple circle= Intersex people.

India's case

- In India, section 377 in *Navtej Singh Johar vs Union of India* case (gay sex) was decriminalised in 2018.
- India's 2011 Census was the first census in its history to incorporate the number of 'trans' population of the country.
- According to the 2011 Census, the number of persons who do not identify as 'male' or 'female' but as 'other' stands at 4,87,803 (0.04% of the total population).

Yogyakarta Principles recognise that all human beings are born free and equal in dignity and rights and can fulfil that precious birthright.

Reference

[The Indian Express | The new Pride flag](#)

Prevalence of Anaemia in India

The 6th round National Family Health Survey (NFHS), is scheduled to begin on July 1.

Anaemia

- Anaemia is linked to insufficient healthy red cells (haemoglobin) that carry oxygen in the body.
- Reasons - Iron deficiency, deficiencies in folate, Vitamin B12, Vitamin A, chronic conditions such as diabetes or inherited genetic disorders.
- There are 5 documented types of anaemia:

- Aplastic anaemia,
- Iron deficiency anaemia,
- Sickle cell anaemia,
- Thalassemia,
- Vitamin deficiency anaemia.

Anaemia in India

- An estimate shows 1.3% of the GDP for children and 4% of the GDP for children and adults combined are lost due to anaemia-related illnesses in India.
- NFHS-5 showed at least 67% of children having anaemia as compared to 58.6% in the last survey conducted in 2015-16.
- World Bank data shows one in two Indian women is anaemic, 20% higher than the world average.
- India has recognised anaemia as a *public health challenge*.
- Schemes related to Anaemia
 - [Anaemia Mukt Bharat \(AMB\) strategy](#),
 - [Integrated Child Development Services \(ICDS\)](#),
 - National Nutritional Anaemia Prophylaxis Programme (NNAPP) and Pradhan Mantri Surakshit Matritva Abhiyan

WHO standard on Haemoglobin diagnostic cut-off for

- Men - 14 gm/deciliter,
- Women 12 gm/decilitre
- Boys and girls - Between 11 and 12 gm/deciliter.

Reference

[The Hindu | Can the new Diet and Biomarker Survey trace the roots of India's anaemia problem](#)

Curiosity Rover

NASA's Curiosity rover sends a beautiful postcard image from Mars.

- **Launch Year** - 2012.
- It is a part of *Mars Science Laboratory (MSL) mission* of *NASA*.
- It is the largest and most capable rover ever sent to Mars.
- **Aim** - To climb onto the layered deposit in the center of the Gale Crater to assess its possible origins.
- Gale crater, located just south of the Martian equator was formed by the impact of a large meteorite sometime between 3.5 and 3.8 billion years ago.
- **Findings** - Curiosity's scientific tools found chemical and mineral evidence of past habitable environments on Mars.
- It continues to explore the rock record from a time when Mars could have been home

to microbial life.

687 Earth days = One Mars year

Mars Missions	Countries
Mangalyaan	India
Perseverance	U.S.
Hope	UAE
Tianwen-1	China
Mars 2 and Mars 3	Russia
Insights	U.S.

Reference

[The Indian Express | NASA's Curiosity rover sends a beautiful postcard](#)

