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

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 LGTQIA+ 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

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