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Director General of Agriculture

Through: Director/NRMC

**Agro-met Advisory: September to November (SON) during
2021/22 Maha season**

The Department of Meteorology has forecasted that there is a higher chance of receiving **Near Normal** rainfall over most parts of the island during the month of **September**. The same forecast further reveals that given the prevailing ocean-atmospheric conditions in the Pacific and Indian Oceans, it is more likely to experience **Below Normal rainfall** in almost all Agro-ecological regions of the country during the Second Inter Monsoon (SIM) season (i.e., **October & November**) of the **2021/22 Maha season**. This forecast has been mainly based on the prevailing negative IOD phase of the Indian Ocean and weak La Nina type ocean-atmospheric circulation in the central eastern Pacific Ocean, both of which are likely to persist till the end of November and December of this this year, respectively. These two ocean-atmospheric conditions generally result in below normal rainfall during the Second Inter Monsoon (SIM) rainy season that is the first half of the 2021/22 Maha season.

In the light of recent policy changes surfaced over the agriculture sector of the country, leading to use of organic fertilizer replacing inorganic fertilizer in food crop sector to the most extent possible, and complete banning on use of weedicides, following recommendations are made for strict adherence in order to minimize the impacts of potential drought-like weather conditions to be prevailed during the first two months of the approaching 2021/22 Maha season:

Rice

General conditions

- Keep machinery and tools clean;
- Maintain bunds & irrigation canals free from weeds;
- Use clean seed paddy only;
- Maintain a well leveled seed bed across the entire Liyadda so that a uniform standing water level can be maintained there in, throughout the cropping cycle suppressing the weed emergence during critical periods for the crop;
- Adaption of strict water issuing schedules in both major and minor irrigation schemes by taking prevailing rainfall in each week in to consideration while the season is being progressed is mandatory;
- Adaption of Integrated Pest Management (IPM) techniques throughout the season is a must;
- Application of basal fertilizers according to the interim fertilizer recommendation for rice;

Irrigated rice systems

Dry and Intermediate zones

- Use of incipient rains for land preparation with **Near Normal** rains likely to be experienced after mid-September as evening, short duration, thunder showers (Ak - wehi);
- Use the Disc plough (4-wheel tractor) or Mould-board plough (2-wheel tractor) for the first land preparation, thereby weed seeds will incorporate in to deep soil layers and so that their germination will be restricted and vegetative parts of the weeds go down and get decayed.
- Maintain a considerable level of standing water in every Liyadda (covering 2/3rd of the each ploughed soil clods, - “ Heekata”) after completing the first ploughing until the start of the second ploughing (14 days from the first ploughing);
- Complete the 2nd land preparation after 14 days from the completion 1st land preparation process and standing water will be maintained in each Liyadda even after the second ploughing for another 1-week period until 3rd ploughing starts where puddling & levelling are being done;
- The 2nd and 3rd ploughing can be done by a tine tiller or a rotovator
- Adding organic matter (straw, green leaves, cow dung etc.) is of paramount importance, to be accomplished before 2nd ploughing;

- Bunds preparation and field leveling should be done properly to minimize the irrigation water losses and maintain a uniform water level across the entire Liyadda, respectively;
- The partially burnt rice husk can be added and incorporated during the 2nd ploughing while the new organic based basal fertilizer application will be added during the 3rd land preparation;
- Manual transplanting, machine transplanting and row seeding with a drum seeder is highly advisable so that mechanical weeding can be accomplished manually or with power weeder as the season in progress;
- If seedling transplanting (Parachute method) is planned (a highly recommended practice to be adapted due to water limiting situation of the first two months of this Maha season), manual weeding should be planned in advance;
- After 5-day of crop establishment, maintain a standing water depth of 2-3 cm in all Liyaddas in direct sown and transplanted fields for 21 days to suppress the weed germination and growth. However, in fields where Parachute method adapted, maintain a 2-3 cm water depth from the day one of establishment for 21 days;
- Choose 3½ months varieties either for transplanting or direct sowing, while 4-month varieties should not be considered during this Maha season unless otherwise irrigation tank in a given paddy tract is almost at the Full Supply Level (FSL);
- In any case, field establishment of the paddy crop should be made before November 25th.

Ranfed Rice systems

- Land preparation need to start before seasonal rains start as dry land preparation, with disc plough or other plough to a depth of 25 to 30 cm. Then 2nd ploughing and other practices need to proceed as similar to land preparation and other practices under irrigated system;
- Row seeding is preferred as it can facilitate mechanical weeding by a rotary weeder and, otherwise plan for manual weeding in advance;
- Use only 3-month varieties and seedling establishment may be done during First Week of November 25th, once the North East Monsoon starts

Other Field Crops under Rainfed Conditions – General recommendations

- Keep machinery and tools clean;
- Use quality seeds and seedlings with high seedling vigor free of weed seeds;

- Advantage of crop insurance scheme should be sought for OFCs that are not automatically covered under the organic fertilizer subsidy scheme;
- Establishment of soil conservation bunds, ploughing across the land slope and contour seeding are highly recommended to conserve soil and moisture in the uplands;
- Apply basal fertilizers according to the new interim fertilizer recommendation;
- Mulching should be encouraged to the maximum extent possible to suppress the weed growth while conserving the soil moisture;
- Staggered cultivation should be avoided to the maximum extent possible.
- Adaption of Integrated Pest Management (IPM) techniques throughout the season is a must;

Maize

- Land preparation should start with **Near Normal** rains likely to be experienced after mid-September as evening, short duration thunder showers (Ak -wehi);
- Deep ploughing is highly advisable at the first land preparation with a Disc or Mould-board plough followed by secondary land preparation with moderate tilth using a Tine tiller or a Rotavator;
- Every effort should be made to complete planting before October 15th as late planting may likely to result in severe Fall Army Worm (FAW) infestation in December;
- Row-seeding is highly advisable to facilitate mechanical weeding with a rotary weeder at times as the season is in progress;
- Inter-cropping of Green-gram between rows is highly advisable to suppress the weed growth with an additional farm income;

Chilli

- Land preparation should start with **Near Normal** rains likely to be experienced after mid-September as evening, short duration thunder showers (Ak -wehi);
- Deep ploughing is highly advisable at the first land preparation with a Disc (4-wheel tractor) or Mould-board (2-wheel tractor) plough followed by secondary land preparation with a moderate tilth using a Tine tiller or a Rotavator;
- Seedling transplanting to be completed before 15th October;
- Provisions for supplementary irrigation should be sought during the first and last lapse of the crop growth cycle. Use of micro irrigation such as Sprinkler irrigation is highly recommended to increase the water productivity;
- Row-planting should be adapted to facilitate mechanical weeding with a Rotary weeder

Pulses (Green gram, Cowpea, Black gram, Soybean, Horse gram)

- **Green gram** - Planting should be done after the first week of December (Northern and North central areas) and first week of October (Southern and Uva areas);
- **Black gram and cowpea** - Planting should be done in mid-November.
- Apply basal fertilizers according to the new fertilizer recommendation;
- IPM practices should be adopted, extensively;
- **Soybean** – Cultivation can be delayed up to early November so that early stages of the crop can manage with the available residual soil moisture and mulching practices and may proceed with the North East Monsoon rains from late November which, is likely to be Near normal;
- **Horse gram** – Seeds should be sown in the 1st week of October in the Dry Zone.

Oil Seed Crops (Groundnut, Sesame)

- **Groundnut** – Should be planted by October 15th. Meanwhile, as the flowering will take place 3 – 4 weeks after planting, which is a highly sensitive time for soil moisture stress, supplementary irrigation facilities should be made available by mid-November, if the soil is not moist as required due to possible **Below Normal** rainfall receipt during November as per the Seasonal Climate Forecast;
- **Sesame** – Seeds should be sown by September 15th with **likely Near Normal** rains in order to obtain a successful harvest.

Vegetable cultivation (Up country vegetables)

As the rainfall during September is going to be Near Normal in a situation where the Up and Mid country Wet zone areas of the country have experienced fairly Wet weather conditions during last several weeks in August, establishment of exotic vegetable crops in the Central highlands, especially in the Western slopes will not be a problem while making use of the available residual soil moisture. Meanwhile, **Below Normal** rains that are likely to be experienced during October and November may create a conducive growing environment for those vegetable crops grown in Mid and Up Country Wet zone areas of the country as excessive rains always lead to comparatively high infestation of bacterial and fungal diseases and heavy post-harvest losses.

This Agro-met Advisory has been compiled on the basis on of the Seasonal Climate Forecast (SCF) issued by the Department Meteorology, Colombo, in consultation with the Directors of Rice Research & Development Institute (Batalagoda), Field Crops Research & Development Institute (Maha-illuppallama) and Extension and Training Centre (Peradeniya) of the Department of Agriculture (DoA).

An updated Agro-met Advisory will be issued in early October for the rest of 2021/22 Maha season, in consultation with the Department of Meteorology, Colombo, and Directors of the DoA of relavance.



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Principal Scientist (Agro-climatology)

i.c. Additional Secretaries (Technology + Development) – Ministry of Agriculture

All District Secretaries

Director General of Irrigation,

Commissioner General of Agrarian Development,

Director - Mahaweli Water Management Secretariat,

Chairman – Paddy Marketing Board

All Directors of the DoA

Director (Information) – Please take necessary actions to dissemination this advisory to all DoA officers immediately and simultaneously, translate to both Sinhala & Tamil languages at your earliest possible and disseminate again as appropriate. Please do inform your 1920 Toll Free Telephone line staff about the content of this advisory.