

Is there a crisis in rice?

Writer - Harish Damodaran (Editor)

The article is related to
General Studies-Paper-III
(Indian Economy)

Indian Express

18 July, 2022

While overall crop coverage has risen since last year, that of rice is down. Deficient rainfall in Uttar Pradesh and Bihar is among the reasons. But adequate stocks and cultivation over a wider area suggest there should be no cause for worry.

The southwest monsoon's revival this month has resulted in the total area sown under kharif crops not only recovering, but even surpassing last year's coverage for the same period from June to mid-July. However, paddy (rice) acreage, at 128.50 lakh hectares (lh) as of July 15, was 17.4% down from last year's 155.53 lh.

Should that be cause for worry?

On the face of it, not much, as government godowns had over 47.2 million tonnes (mt) of rice on July 1. These were nearly three-and-a-half times the minimum level of stocks, to meet both "operational" (public distribution system) and "strategic reserve" (exigency) requirements for the quarter. Rice stocks are still close to their peaks scaled last year.

That comfort doesn't extend, though, to wheat – where public stocks have plunged from all-time highs to 14-year lows within the space of a year (see table). Inflation-haunted policymakers would dread the wheat story getting repeated in rice. In wheat, it was a single bad crop — the one sired by the March-April 2022 heat wave — that did all the damage and brought down stocks to just above the minimum buffer.

In rice, the stakes are higher: It is India's largest agricultural crop (accounting for over 40% of the total foodgrain output), with the country also being the world's biggest exporter (a record 21.21 mt valued at \$9.66 billion got shipped out during the fiscal ended March 2022). Unlike with wheat, the options for import in rice — due to any production shortfall — are limited, when India's own share in the global trade of the cereal is more than 40%.

Government grain stocks on July 1
(IN LAKH TONNES)

	RICE**	WHEAT	TOTAL
2008	112.49	249.12	361.61
2009	196.16	329.22	525.38
2010	242.66	335.84	578.5
2011	268.57	371.49	640.06
2012	307.08	498.08	805.16
2013	315.08	423.97	739.05
2014	276.6	398.01	674.61
2015	216.71	386.8	603.51
2016	246.69	301.81	548.5
2017	264.68	322.75	587.43
2018	275.57	418.01	693.58
2019	354.63	458.31	812.94
2020	394.31	549.91	944.22
2021	491.1	603.56	1094.66
2022	472.18	285.1	757.28
BUFFER	135.4	275.8	411.2
NORM*			

*Operational stock plus strategic reserve;
**Includes rice equivalent of un-milled paddy.

Why has acreage fallen?

Farmers first sow paddy seeds in nurseries, where they are raised into young plants. These seedlings are then uprooted and replanted 25-35 days later in the main field that is usually 10 times the size of the nursery seed bed. Nursery sowing generally happens before the monsoon rains. Farmers wait for their arrival to undertake transplantation, which requires the field to be “puddled” or tilled in standing water. For the first three weeks or so after transplanting, the water depth has to be maintained at 4-5 cm, in order to control weed growth in the early stage of the crop.

All this isn't possible without the monsoon, which has overall been good this time. The country has received 353.7 mm of rainfall during June 1 to July 17, 12.7% more than the “normal” historical average for this period.

Yet, a vast paddy-growing belt, from Uttar Pradesh to West Bengal, has had very little rains. Cumulative rainfall has been 55.5% below the long period average in West UP, and 70%, 45.8%, 48.9% and 45.1% respectively for East UP, Bihar, Jharkhand and Gangetic West Bengal.

Deficient rainfall has meant that farmers in UP had transplanted only 26.98 lh under paddy until July 15, as against 35.29 lh during the same time last season. Farmers in Bihar (from 8.77 lh to 6.06 lh), West Bengal (4.68 lh to 3.94 lh) and Jharkhand (2.93 lh to 1.02 lh) too have reported lower acreages. So have those in Odisha, Chhattisgarh and eastern Madhya Pradesh, although that gap should reduce with the monsoon turning the corner in these parts.

How serious is the situation?

In UP — where the western and eastern subdivisions have so far recorded a mere 90 mm and 79.6 mm of rainfall, respectively — it certainly seems so.

Ajay Kumar Singh, a farmer from Emiliya village in Chandauli district of eastern UP bordering Bihar, said paddy nursery sowing in his area is normally done from June 1 to June 10 and transplanting from July 1 to July 10. This time, there was some rain towards June-end, but hardly any thereafter. “The seedlings should leave the nurseries in 25-35 days, beyond which they will age and not have enough time to grow in the main field. But when there's no water, how will farmers transplant?” he said.

Bal Mukund Lohia, from Magardaha village in Ghorawal tehsil of neighbouring Sonbhadra district, echoed the same: “Forget transplanting, most farmers with limited irrigation facilities have seen even their nurseries drying up”.

According to Dr A K Singh, director of the New Delhi-based Indian Agricultural Research Institute, farmers may well end up raising nurseries afresh. “But they will now have to plant shorter duration varieties of about 125 days (seed-to-grain maturity), instead of 155 days. That would translate into 1-2 tonnes less yield per hectare,” he said.

Interestingly, in eastern UP, farmers with access to basic irrigation also practise the ‘Sanda’ double-transplanting method of paddy cultivation under conditions of delayed rainfall. In this case, the seedlings are uprooted after 25 days in the nursery and replanted in a puddled field that is only about twice the former's area.

The plants after establishment begin tillering and are, thus, rejuvenated for the next 10-15 days. When the rains come, they are again uprooted and replanted in the main field 10 times the size of the original nursery.

Paddy yields from Sanda are said to be better than from the regular one-step transplanting. The reason for it is that the Sanda plants have already tillered and their establishment in the main field would be near 100% with little mortality. “Yields are 15-20% more, but that is offset by higher costs because of transplanting labour having to be paid twice. Sanda makes sense only in today’s delayed monsoon situation,” Lohia said.

So, is there a crisis ahead in rice?

Not for now. To start with, the India Meteorological Department has forecast that the current monsoon trough, which is active and south of its normal position, is “very likely to shift gradually northwards from tonight (Sunday)”. That should, hopefully, provide much-needed relief to farmers in the Gangetic plains within the next few days.

Secondly, paddy cultivation takes place across a wider geography, unlike wheat that is grown only in a few states north of the Vindhyas. Also, rice is both a kharif (monsoon) and rabi (winter-spring) season crop. So, the losses in one area or season can potentially be recouped from the other. In wheat, everyone — from farmers and traders to policymakers — was caught off-guard by the sudden surge in temperatures after mid-March that cut grain yields by a fifth or more. Rice is less likely to throw up huge negative surprises. And with the present stocks, it should be manageable.

Committed To Excellence

Expected Question (Prelims Exams)

Q. Consider the following statements -

1. A record 21.21 million tonnes worth \$9.66 billion has been exported for the financial year March 2022.
2. Rice is the largest agricultural crop in India, accounting for more than 40% of the total food grain production.

Which of the above statements is/are correct?

- (a) 2 only
- (b) 1 only
- (c) Both 1 and 2
- (d) Neither 1, nor 2

Ans. (c)

Expected Question (Mains Exams)

Q. While explaining the reasons for the shortage of rice this year, discuss what comprehensive strategy the government should adopt to deal with this challenge? (250 Words)

Committed To Excellence

Note: - The question of the main examination given for practice is designed keeping in mind the upcoming UPSC main examination. Therefore, to get an answer to this question, you can take the help of this source as well as other sources related to this topic.