Frequently Asked Questions

This FAQ was produced by the IRRI-Japan Collaborative Research Project (IJCRP) on Climate Change Adaptation through Development of a Decision-Support tool to guide Rainfed Rice production (CCADS-RR), funded by the Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan.

WeRise Frequently Asked Questions (FAQs)

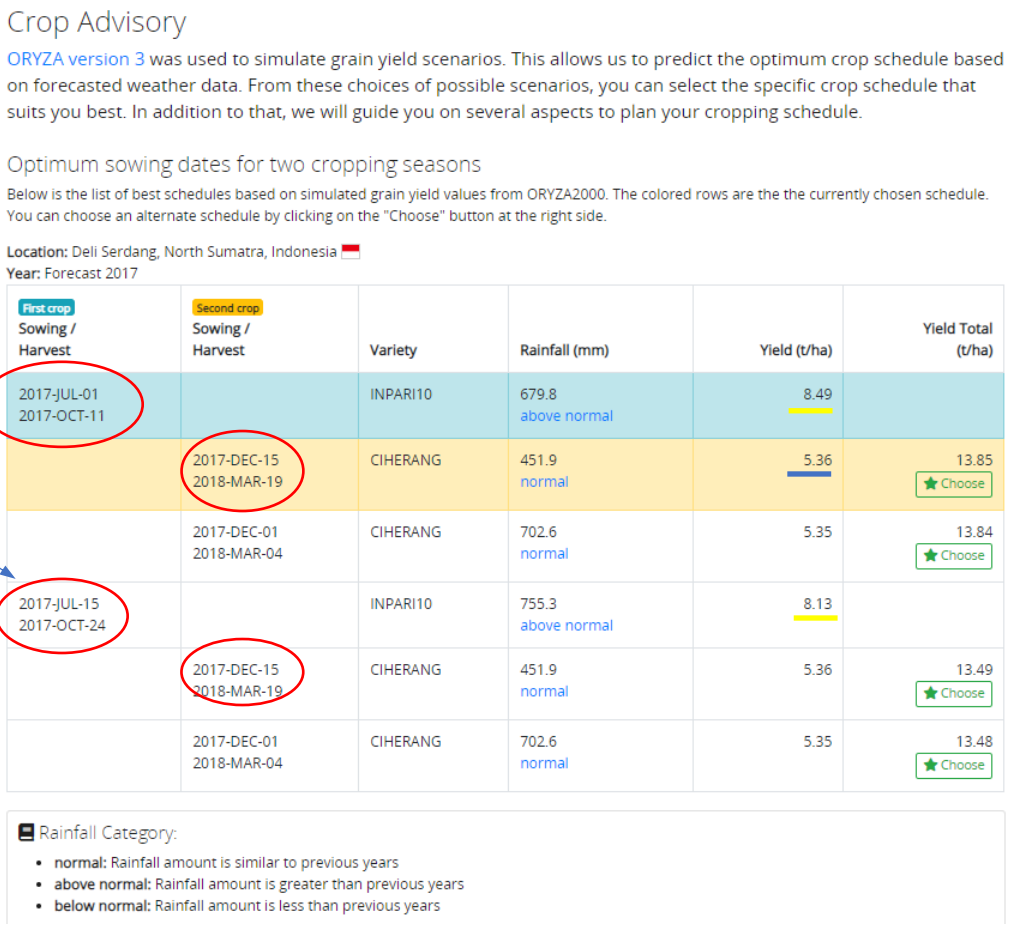
GENERAL

- **What is WeRise?**
  WeRise is short for "Weather-rice-nutrient integrated decision support system." It was developed to improve productivity in rainfed rice areas in Indonesia, Philippines and Madagascar. WeRise is a computer-based decision support tool that provides advisories on the best time to plant and apply fertilizer, and the suitable variety for planting for the upcoming cropping season. The advisories are based on the weather characteristics of the upcoming cropping season, crop growth development, soil characteristics, and farm management practices.

- **How can WeRise help rainfed rice farmers manage their crop production more strategically?**
  WeRise advisories could be generated from the website at least three months before the upcoming cropping season, providing sufficient time for farmers to identify and allocate their resources (i.e., capital for purchase of seeds, fertilizer and other inputs, and labor requirements).

Best times to plant for first crop (1 July) and second crop (15 Dec) with predicted yields of 8.49 t/ha and 5.36 t/ha respectively. Estimated harvest dates are also given (11 Oct and 19 Mar).

Alternative recommended sowing dates (15 July and 15 Dec) with lower predicted yield for



Crop Advisory

ORYZA version 3 was used to simulate grain yield scenarios. This allows us to predict the optimum crop schedule based on forecasted weather data. From these choices of possible scenarios, you can select the specific crop schedule that suits you best. In addition to that, we will guide you on several aspects to plan your cropping schedule.

Optimum sowing dates for two cropping seasons

Below is the list of best schedules based on simulated grain yield values from ORYZA2000. The colored rows are the the currently chosen schedule. You can choose an alternate schedule by clicking on the "Choose" button at the right side.

Location: Deli Serdang, North Sumatra, Indonesia
Year: Forecast 2017

First crop Sowing / Harvest	Second crop Sowing / Harvest	Variety	Rainfall (mm)	Yield (t/ha)	Yield Total (t/ha)
2017-JUL-01 2017-OCT-11		INPARI10	679.8 above normal	8.49	
	2017-DEC-15 2018-MAR-19	CIHERANG	451.9 normal	5.36	13.85 Choose
	2017-DEC-01 2018-MAR-04	CIHERANG	702.6 normal	5.35	13.84 Choose
2017-JUL-15 2017-OCT-24		INPARI10	755.3 above normal	8.13	
	2017-DEC-15 2018-MAR-19	CIHERANG	451.9 normal	5.36	13.49 Choose
	2017-DEC-01 2018-MAR-04	CIHERANG	702.6 normal	5.35	13.48 Choose

Rainfall Category:

- **normal:** Rainfall amount is similar to previous years
- **above normal:** Rainfall amount is greater than previous years
- **below normal:** Rainfall amount is less than previous years

WeRise recommends the optimum fertilizer application schedule.

Calendar

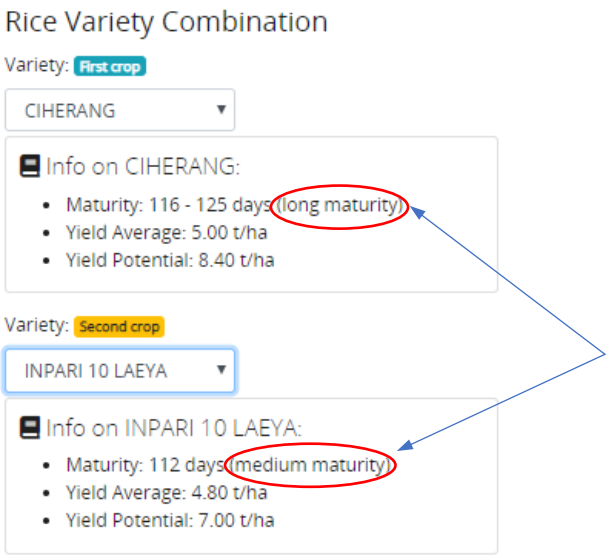
This is the schedule of the entire cropping calendar from sowing to harvest including the fertilizer application to attain the expected grain yield.

Sowing Date	Harvest Date	Fertilizer Schedule		
		Basal	Top Dress 1	Top Dress 2
First crop » **Variety:** INPARI 10 LAEYA • **Yield:** 8.49 t/ha				
2017-JUL-01	2017-OCT-11	JUL-19 to JUL-27	AUG-06 to AUG-14	AUG-23 to AUG-31
Second crop » **Variety:** CIHERANG • **Yield:** 5.36 t/ha				
2017-DEC-15	2018-MAR-19	JAN-02 to JAN-10	JAN-20 to JAN-28	FEB-06 to FEB-14

In this sample advisory, for the first crop, WeRise predicts water availability from Aug 23 to 31. The farmer may apply Top Dress 2 during this period. Without this prior knowledge, farmers have a tendency to apply more than the required amount of fertilizer during the first or second application as they take advantage of available water. Unfortunately, this results to losses as rice crops only need certain type of nutrients at the right amount depending on its growth stage.

WeRise provides advisories on the suitable variety/varietal combinations for planting.

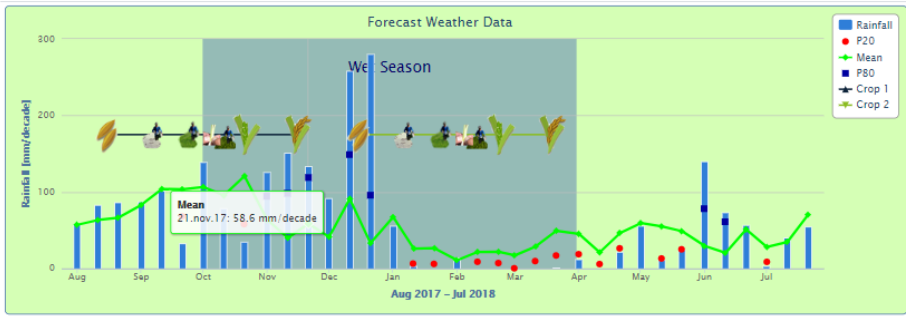
WeRise enables efficient water- and nutrient-use. Farmers may be able to plant more than one rice crop by choosing a combination of varieties with different maturity duration (e.g., long-short, medium-long, etc.).



In this sample advisory, two varieties with long and medium maturity were chosen for the first crop and second crop, respectively. Information on average yield and potential yield are also provided. Potential yield assumes there is no water deficit.

WeRise provides forecast weather data including possibility of extreme weather events.

WeRise is able to identify extremely high and low weather data implying possibility of drought and flooding occurrences. Prior knowledge of these possibilities helps farmers manage risks, anticipate them, and plan accordingly.



The red circle signifies dates where expected rainfall is less than what was observed in previous years. The blue square signifies dates where expected rainfall is greater than what was observed in previous years.

- **Weather extremes and variabilities seem to have become the new normal. How accurate are WeRise predictions amidst climate change?**
  WeRise enables data-driven decision support through its science-based weather and crop advisories. It was developed using data (historical and observed), models, and an understanding of crop management practices. It integrates localized seasonal climate prediction and real-time weather data with a crop growth model. The seasonal weather predictions are based on the statistical downscaling of SINTEX-F ocean-atmosphere coupled general circulation model (GCM) developed by Japan's Agency for Marine-Earth Science and Technology (JAMSTEC). Yield predictions are based on recommended sowing and fertilizer application timings using the ORYZA crop growth model, which simulates the growth and development of rice as well as water under different conditions. Statistical downscaling, calibration, and validation are done to improve the accuracy of the predictions. For more information on these models, please visit these links: ORYZA and SINTEX-F.

- **Who can use WeRise?**
  Anyone can use WeRise. But, the extension workers are the primary target users. Through WeRise, extension workers can deliver timely science-based weather and crop advisories to rainfed rice farmers. Researchers, development managers, and policy makers can also use WeRise in developing evidence-based R&D plans and policies. Farmers can also use WeRise directly. Please contact werisehelpline@irri.org for any specific questions on the use of WeRise that are not included in this document.

- **Do I need to pay for WeRise advisories?**
  No. WeRise advisories can be generated for FREE. WeRise is an international public good which was developed under the CGIAR Research Program on RICE through the IRRI-Japan Collaborative Research Project with funding from the Ministry of Agriculture, Forestry and Fisheries of Japan and the Japan International Research Center for Agricultural Sciences.

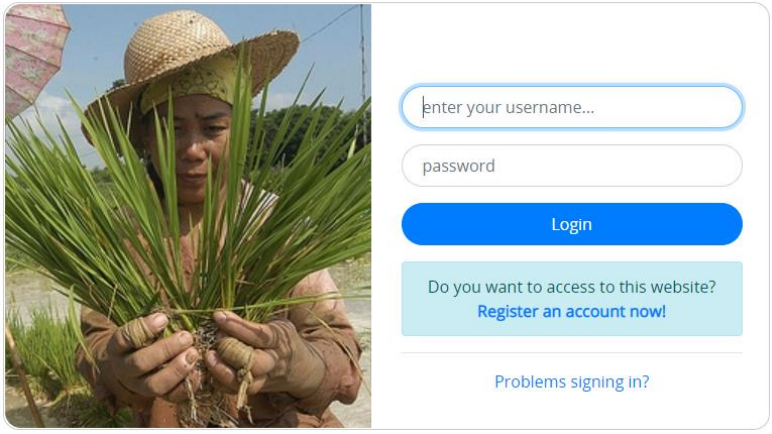
- **Can I use the WeRise advisories for publications like scientific paper, technical reports, and similar materials?**
  The terms and conditions on the use of WeRise may be found in this link. In case a user would like to use the WeRise advisories in publications, a letter of request must first be sent to werisehelpline@irri.org indicating location, period covered, and type of advisories. Users must acknowledge the IRRI-Japan Collaborative Research Project as the source of data.

ACCESS

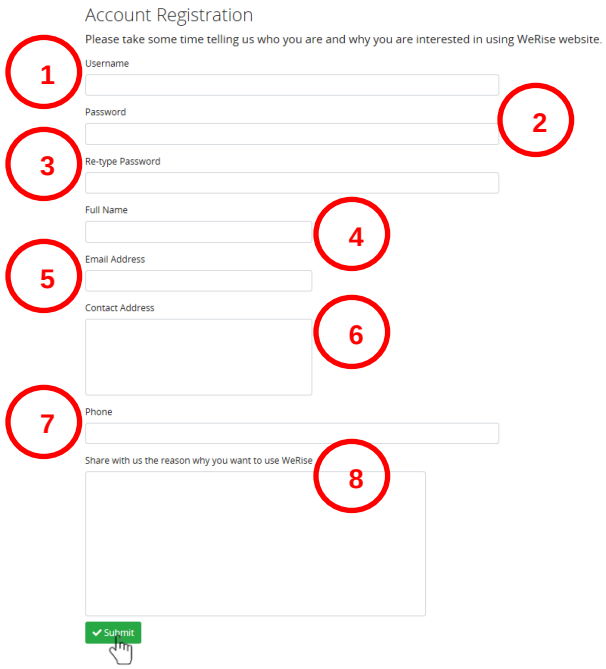
- **Do I need internet to access WeRise?**
  Yes.

- **How do I log in to WeRise?**
  To log in, open a web browser and enter werise.irri.org. Click "**weather advisory**" or "**crop advisory**" from the menu or their corresponding icons that can be found in the landing page.

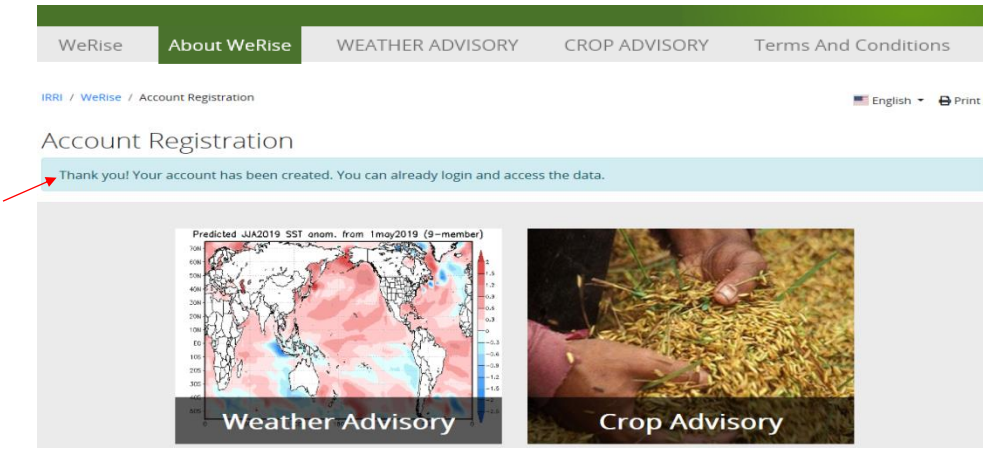
You will be directed to a log in screen that asks for your username and password. If you do not have an account yet, register a FREE account.



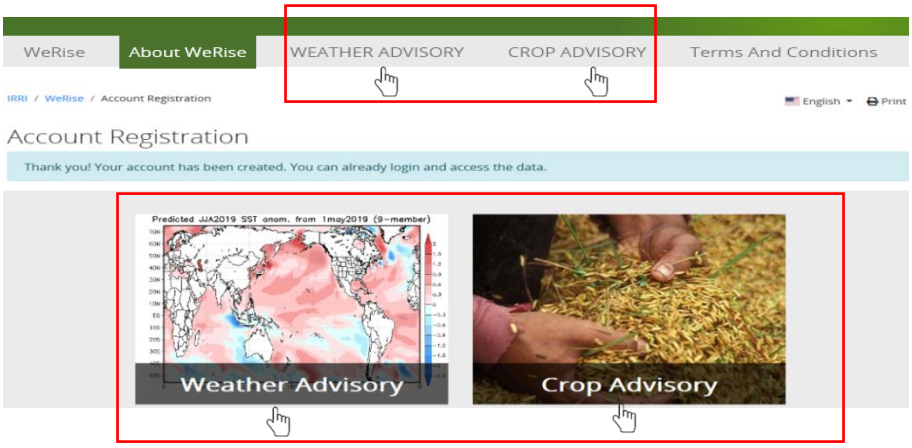
Register an account by filling out the form below.

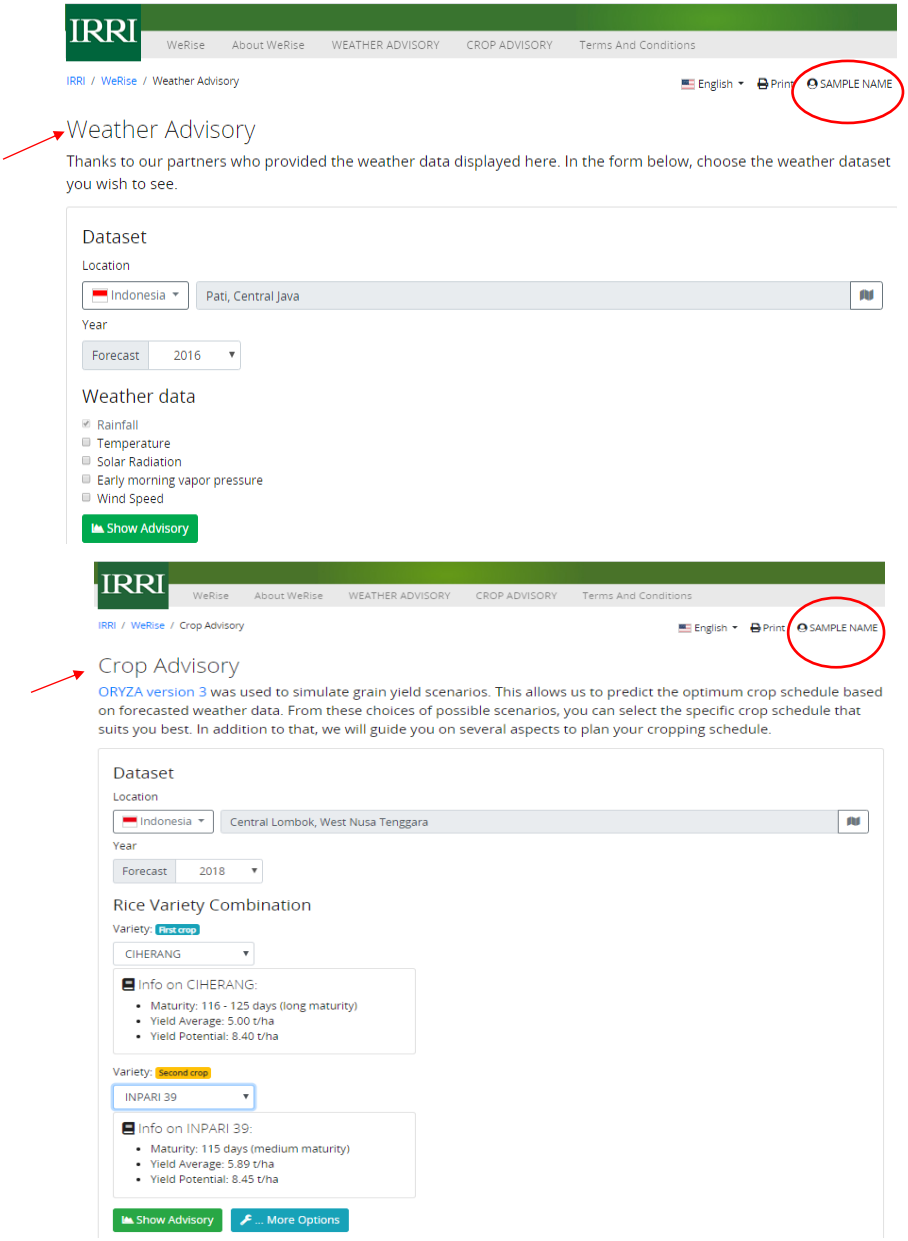


If registration is successful (you have entered all the required information), you will see the message below:



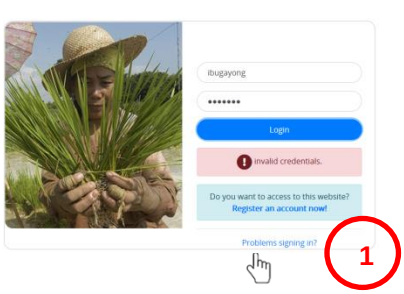
When you click the Weather Advisory and Crop Advisory from the menu or their corresponding icon, you will be able to access the Weather and Crop advisory pages. Your username will also appear in the upper right portion of the page.

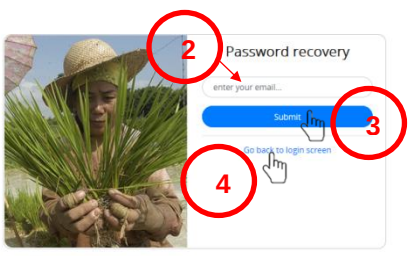


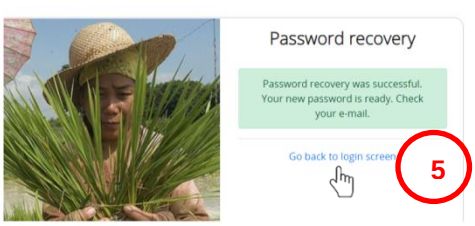


- **Do I need to pay to register a WeRise account?**
  No. Registration is FREE.

- **I cannot log in to my account, what is wrong?**
  If you are unable to log in, you will see an error message: "**invalid credentials** "which means you have entered the wrong username and/or wrong/expired password. In this case, proceed for password recovery.







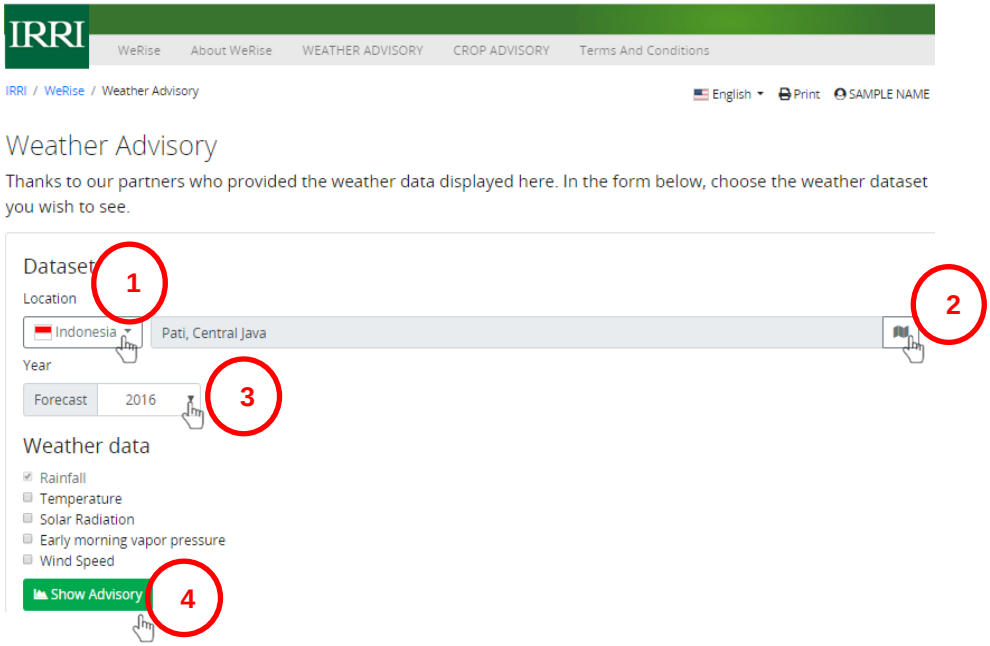
- **Can WeRise be downloaded as an app from Google play store?**
  The current version of WeRise is accessible via web.

- **I do not have a computer or mobile phone to access WeRise. I also do not have internet access. How can I get WeRise advisories/predictions?**
  Please contact your extension workers or agriculture and extension office or email i.bugayong@irri.org for assistance and additional information.

- **How do I log out of WeRise?**
  You do not need to log out. Just close the page.

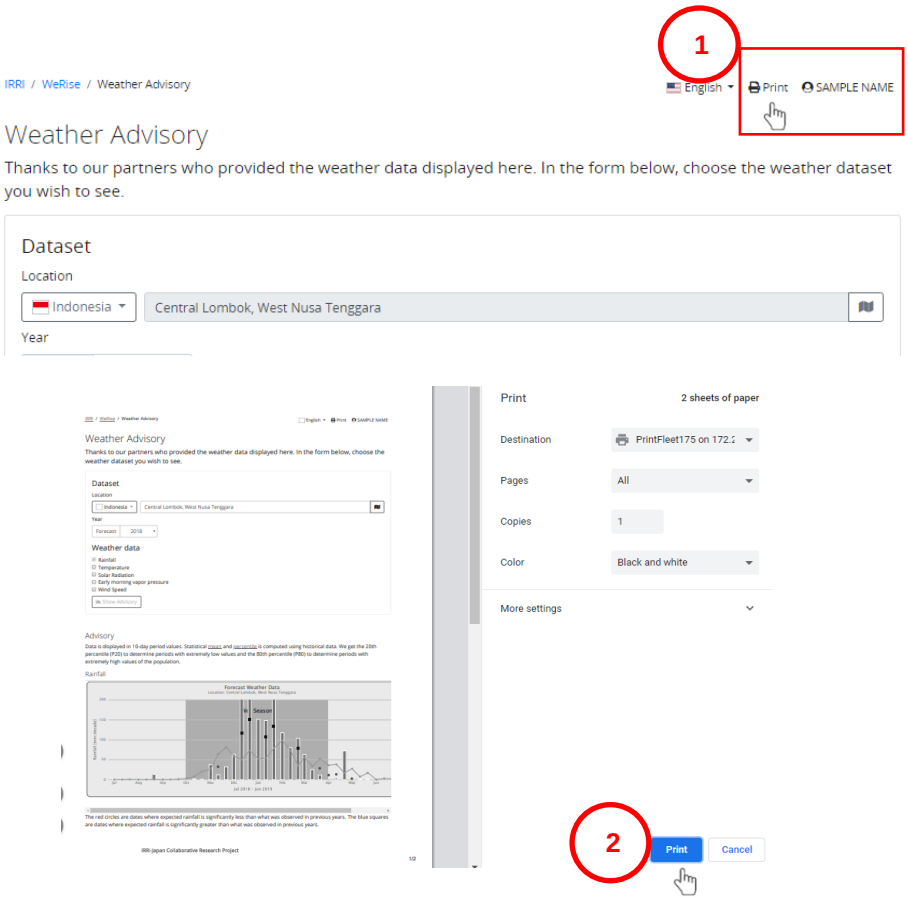
ADVISORIES

- **How do I generate weather advisories?**
  Click the Weather Advisory tab from the menu or click its icon on the landing page > Select the location and forecast year under "Data Set." > Choose the weather data you want to generate under "Weather Data." > Click "Show Advisory." See link to sample outputs.

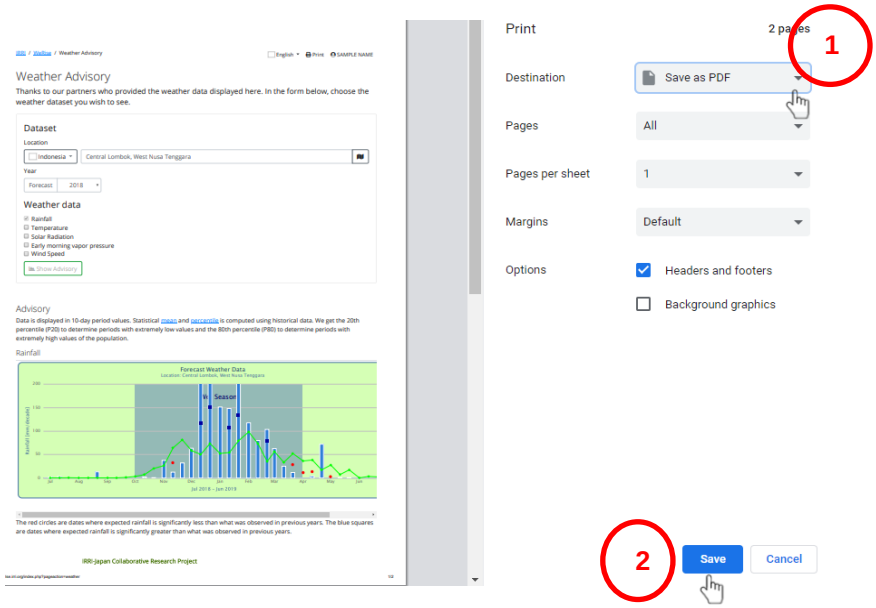


The default parameter is rainfall. You may also generate advisories for temperature, solar radiation, early morning vapor pressure, and wind speed.

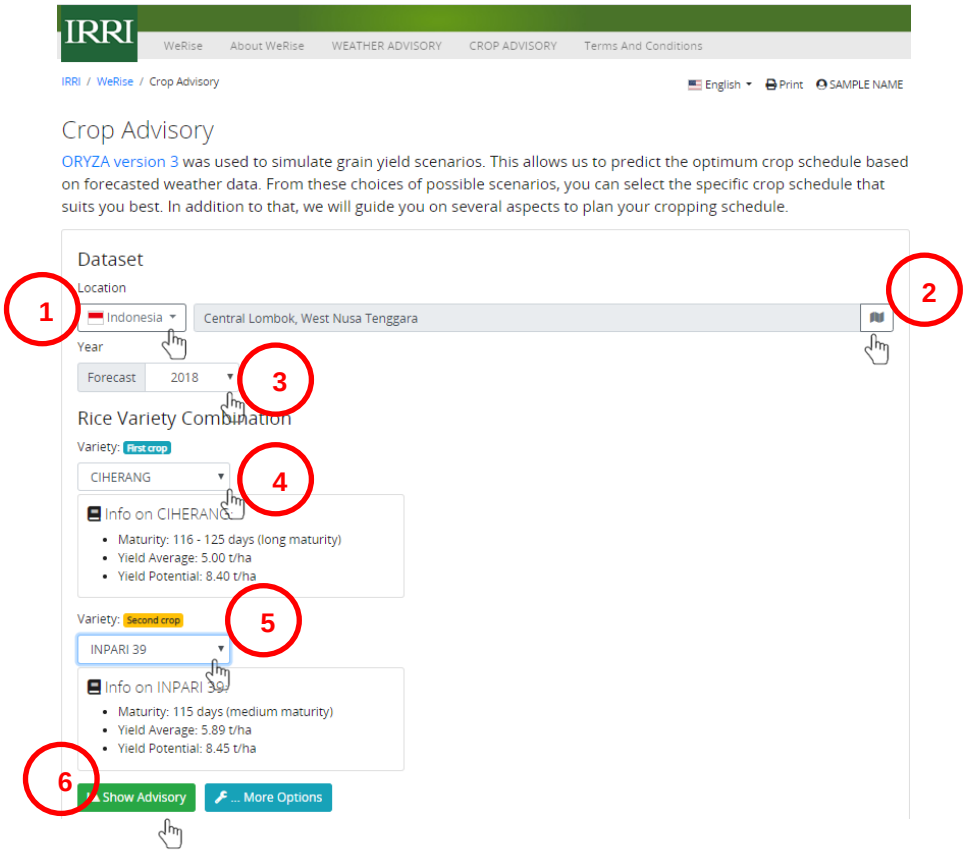
- **How do I print the weather advisories?**
  Click the print icon beside your username and print.



You may also save the file for printing later.

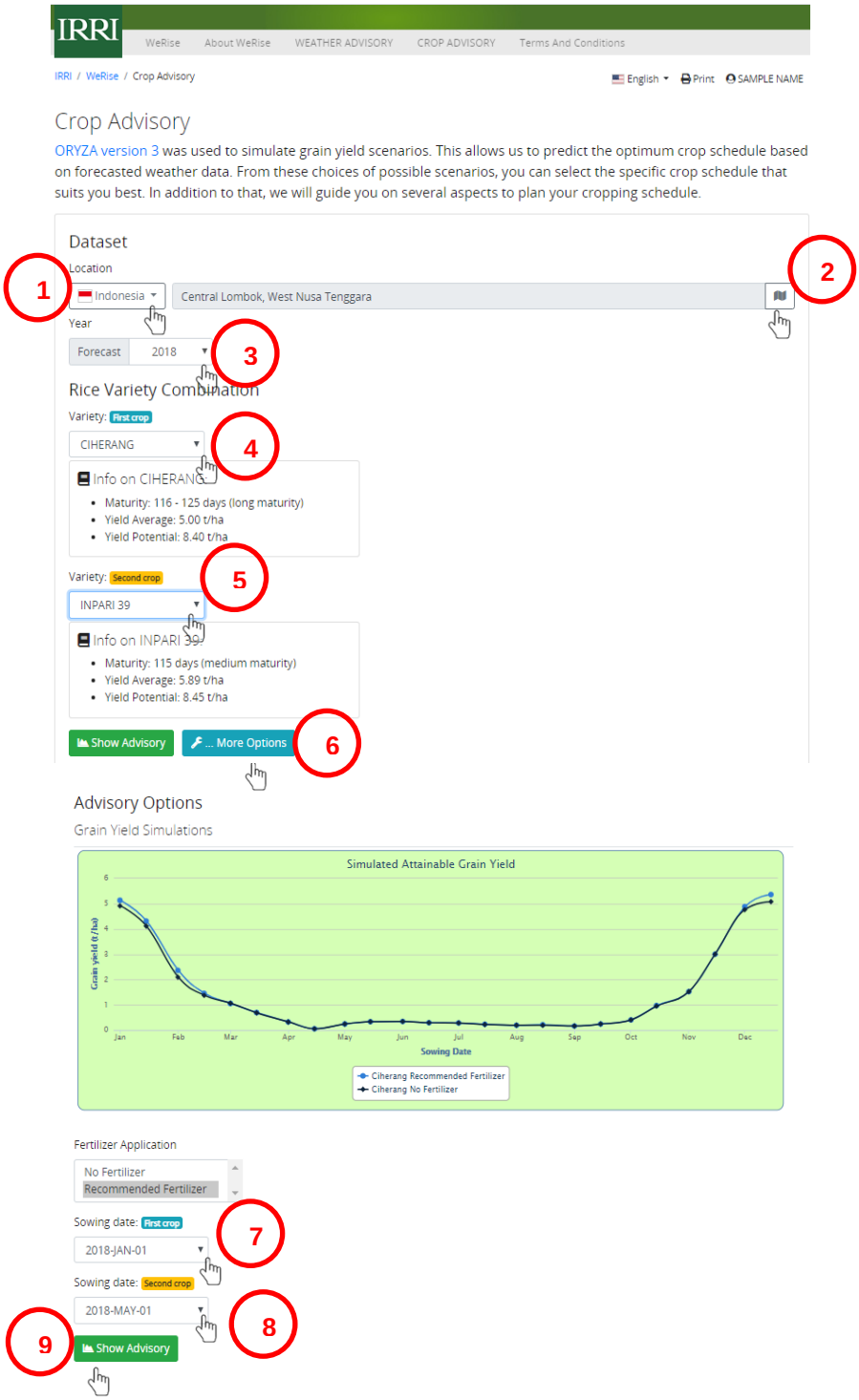


- **How do I generate crop advisories?**
  Click the Crop Advisory tab from the menu or click its icon on the landing page > Select the location and forecast year under "Data Set." > Select the location and forecast year under "Data Set." > Select your preferred variety for the first crop and second crop. > Click "Show Advisory."

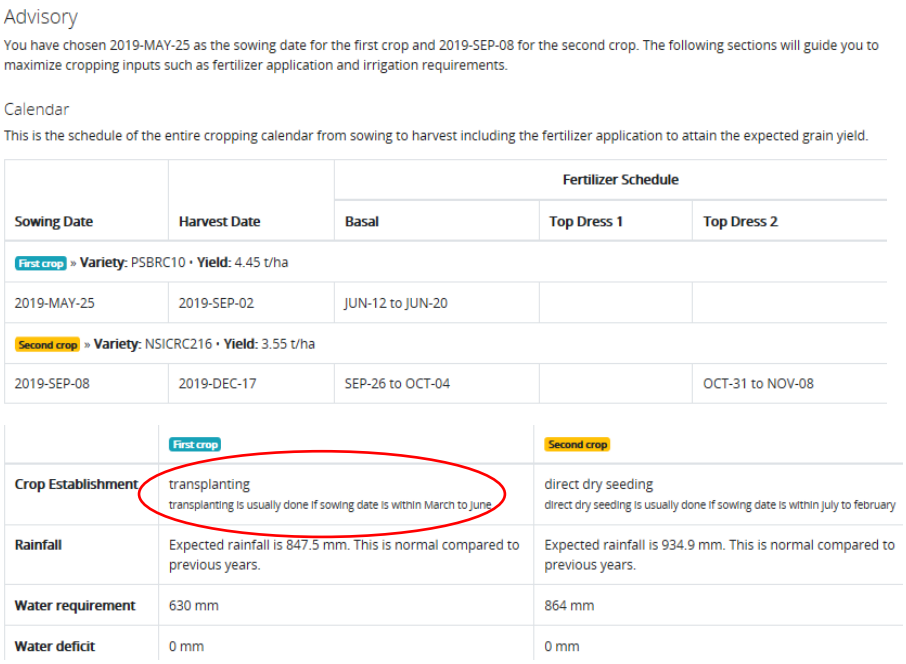


- **How do I print and save the crop advisories?**
  Follow the instructions for printing and saving the weather advisories.

- **I have a sowing date in mind. Can I still generate crop advisories?**
  Yes, click the Crop Advisory tab from the menu or click its icon on the landing page > Select the location and forecast year under "Data Set." > Select the location and forecast year under "Data Set." > Select your preferred variety for the first crop and second crop. > Click "More Options." > Set your sowing dates. > Click "Show Advisory."


IRRI
WeRise
About WeRise
WEATHER ADVISORY
CROP ADVISORY
Terms And Conditions
IRRI / WeRise / Crop Advisory
English
Print
SAMPLE NAME
Crop Advisory
ORYZA version 3 was used to simulate grain yield scenarios. This allows us to predict the optimum crop schedule based on forecasted weather data. From these choices of possible scenarios, you can select the specific crop schedule that suits you best. In addition to that, we will guide you on several aspects to plan your cropping schedule.
Dataset
Location
Indonesia
Central Lombok, West Nusa Tenggara
Year
Forecast
2018
Rice Variety Combination
Variety: First crop
CIHERANG
Info on CIHERANG
Maturity: 116 - 125 days (long maturity)
Yield Average: 5.00 t/ha
Yield Potential: 8.40 t/ha
Variety: Second crop
INPARI 39
Info on INPARI 39
Maturity: 115 days (medium maturity)
Yield Average: 5.89 t/ha
Yield Potential: 8.45 t/ha
Show Advisory
... More Options
1
2
3
4
5
6
Advisory Options
Grain Yield Simulations
Simulated Attainable Grain Yield
Grain yield (t/ha)
Sowing Date
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Ciherang Recommended Fertilizer
Ciherang No Fertilizer
Fertilizer Application
No Fertilizer
Recommended Fertilizer
Sowing date: First crop
2018-JAN-01
Sowing date: Second crop
2018-MAY-01
Show Advisory
7
8
9

- **I generated crop advisories which indicate transplanting as the crop establishment for the first crop. Can I still follow the advisories if I practice direct seeding?**
  Yes, you can still follow the advisories. For transplanted rice, sowing timing means sowing in the seedbed. WeRise recommends sowing dates based on water availability.



Advisory

You have chosen 2019-MAY-25 as the sowing date for the first crop and 2019-SEP-08 for the second crop. The following sections will guide you to maximize cropping inputs such as fertilizer application and irrigation requirements.

Calendar

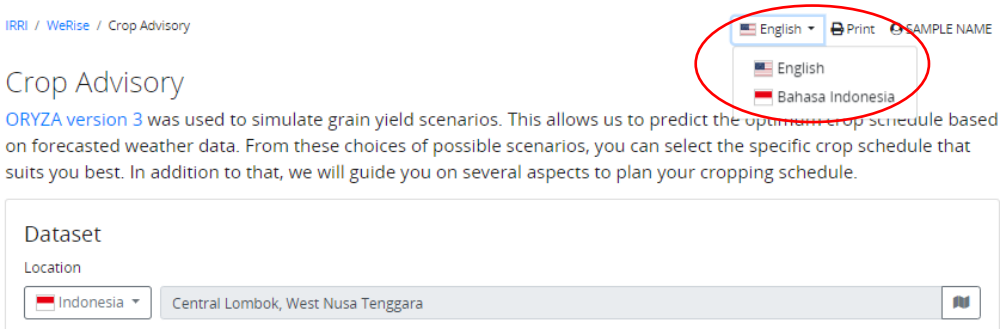
This is the schedule of the entire cropping calendar from sowing to harvest including the fertilizer application to attain the expected grain yield.

Sowing Date	Harvest Date	Fertilizer Schedule		
		Basal	Top Dress 1	Top Dress 2
First crop » **Variety:** PSBRC10 • **Yield:** 4.45 t/ha				
2019-MAY-25	2019-SEP-02	JUN-12 to JUN-20		
Second crop » **Variety:** NSICRC216 • **Yield:** 3.55 t/ha				
2019-SEP-08	2019-DEC-17	SEP-26 to OCT-04		OCT-31 to NOV-08

	First crop	Second crop
Crop Establishment	transplanting transplanting is usually done if sowing date is within March to June	direct dry seeding direct dry seeding is usually done if sowing date is within July to february
Rainfall	Expected rainfall is 847.5 mm. This is normal compared to previous years.	Expected rainfall is 934.9 mm. This is normal compared to previous years.
Water requirement	630 mm	864 mm
Water deficit	0 mm	0 mm

- **I generated the advisories 3 months before the cropping season. Can I generate it again one month before the cropping season or during the cropping season? How often do the predictions or crop advisories change in a given year?**
  WeRise is updated twice a year, the advisories you generated three months, one month before and during the cropping season will be the same.

- **Can I change the language?**
  Yes, you can change the language by clicking the language icon beside the print icon.



- **I cannot find our district (location) in the WeRise database, can I use the advisories for the available district?**
  No. WeRise predictions are localized.

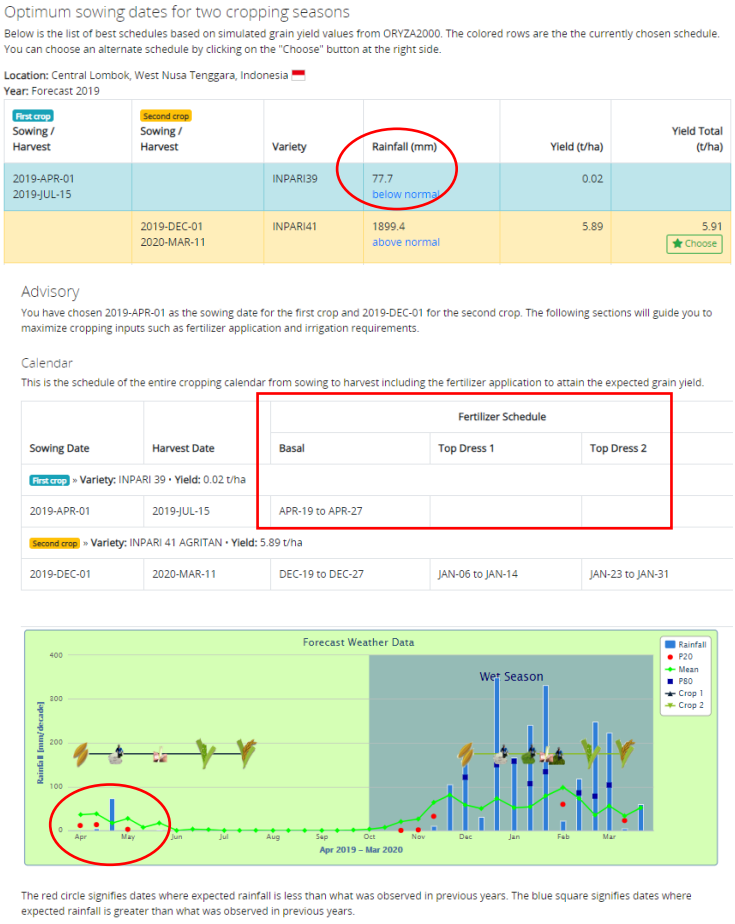
- **I cannot find the varieties I prefer to plant in WeRise. Can I use a substitute variety (i.e., maturity days near the variety I prefer)?**
  You cannot use a substitute variety by considering only the maturity days. Varieties have other traits that affect their yield and crop growth which were considered in WeRise development. Please contact i.bugayong@irri.org to suggest additional varieties.

- **Can WeRise be used in irrigated areas?**
  Yes, to some extent. Farmers in irrigated areas can choose from the different varieties and follow the recommended sowing time, thus save on irrigation water.
  Please also check this tool specific for irrigated areas: RCM

- **Can WeRise provide predictions for pest and disease occurrence or advisories?**
  No. There are other tools for pest and disease management and crop management to complement WeRise. Please check these links: Rice Knowledge Bank and Rice Doctor.

- **Does WeRise recommend the amount and type of fertilizer I should apply in my field?**
  No. WeRise only suggests the schedule of fertilizer application based on water availability and crop growth.

- **For the advisory I generated, the recommended WeRise fertilizer schedule is only once for the entire cropping season. Why is this so?**
  WeRise fertilizer schedule advisories are based on water availability. In the sample advisory below, the amount of rainfall for the first crop is predicted to be below normal with water deficit of 612 mm and periods of possible drought. The predicted yield is also low (0.02 t/ha). In this case, the farmer may decide not to plant rice or plant an alternative crop or allocate his resources (financial) to other income-generating activities. For those with supplementary irrigation, guidelines are also provided.



Optimum sowing dates for two cropping seasons

Below is the list of best schedules based on simulated grain yield values from ORYZA2000. The colored rows are the the currently chosen schedule. You can choose an alternate schedule by clicking on the "Choose" button at the right side.

Location: Central Lombok, West Nusa Tenggara, Indonesia
Year: Forecast 2019

First crop Sowing / Harvest	Second crop Sowing / Harvest	Variety	Rainfall (mm)	Yield (t/ha)	Yield Total (t/ha)
2019-APR-01 2019-JUL-15		INPARI39	77.7 below normal	0.02	
	2019-DEC-01 2020-MAR-11	INPARI41	1899.4 above normal	5.89	5.91 Choose

Advisory

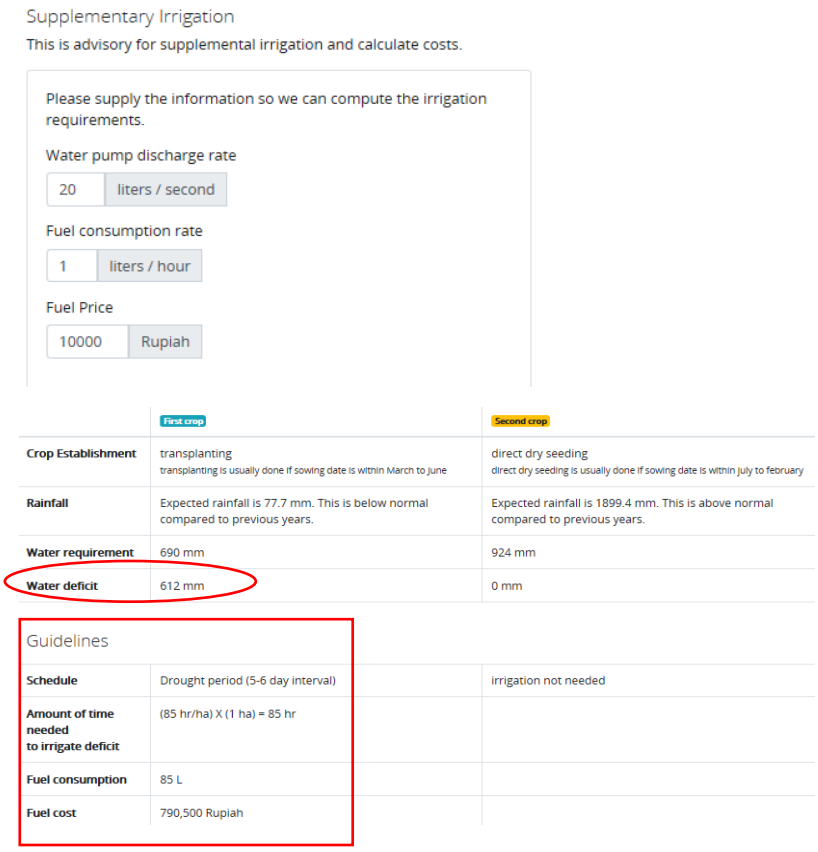
You have chosen 2019-APR-01 as the sowing date for the first crop and 2019-DEC-01 for the second crop. The following sections will guide you to maximize cropping inputs such as fertilizer application and irrigation requirements.

Calendar

This is the schedule of the entire cropping calendar from sowing to harvest including the fertilizer application to attain the expected grain yield.

Sowing Date	Harvest Date	Fertilizer Schedule: Basal	Top Dress 1	Top Dress 2
First crop » **Variety:** INPARI 39 • **Yield:** 0.02 t/ha				
2019-APR-01	2019-JUL-15	APR-19 to APR-27		
Second crop » **Variety:** INPARI 41 AGRITAN • **Yield:** 5.89 t/ha				
2019-DEC-01	2020-MAR-11	DEC-19 to DEC-27	JAN-06 to JAN-14	JAN-23 to JAN-31

The red circle signifies dates where expected rainfall is less than what was observed in previous years. The blue square signifies dates where expected rainfall is greater than what was observed in previous years.



Supplementary Irrigation

This is advisory for supplemental irrigation and calculate costs.

Please supply the information so we can compute the irrigation requirements.

Water pump discharge rate: 20 liters / second

Fuel consumption rate: 1 liters / hour

Fuel Price: 10000 Rupiah

	First crop	Second crop
Crop Establishment	transplanting transplanting is usually done if sowing date is within March to June	direct dry seeding direct dry seeding is usually done if sowing date is within july to february
Rainfall	Expected rainfall is 77.7 mm. This is below normal compared to previous years.	Expected rainfall is 1899.4 mm. This is above normal compared to previous years.
Water requirement	690 mm	924 mm
Water deficit	612 mm	0 mm

Guidelines

Schedule	Drought period (5-6 day interval)	irrigation not needed
Amount of time needed to irrigate deficit	(85 hr/ha) X (1 ha) = 85 hr	
Fuel consumption	85 L	
Fuel cost	790,500 Rupiah	

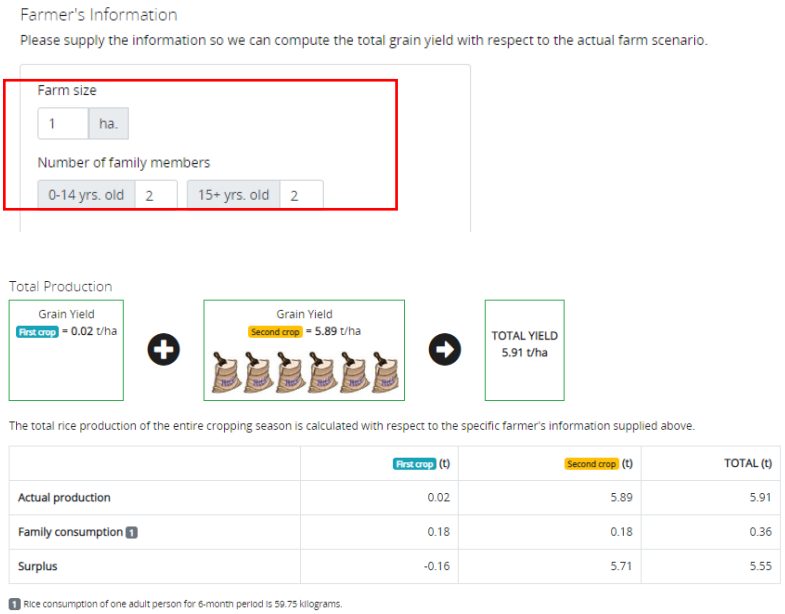
- **Can WeRise be used for other commodities besides rice?**
  No. WeRise was developed using ORYZA, a crop growth model only for rice.

- **Is a second rice crop possible?**
  WeRise enables efficient water- and nutrient-use by determining optimum sowing timing and fertilizer application schedule. It can also help you to decide and plan ahead if it would be better to plant another crop.

- **Can WeRise predict rice yield?**
  Yes. WeRise can predict the yield based on variety, time of sowing, amount of fertilizer applied and rainfall. This prediction can serve as your basis in deciding what variety to plant, when to sow and when to apply fertilizer.

- **There is information on water deficit and irrigation guidelines. Does WeRise provide predicted yield if farmers will irrigate accordingly?**
  No. But you could find the potential and average yield as among the information for the variety you will choose. Potential yield assumes there is no water deficit.

- **How can WeRise compute for the surplus?**
  WeRise can compute for any surplus when you supply information on farm size and number of family members.



TECHNICAL SUPPORT

- **Who can I contact for additional assistance or feedback?**
  Please contact i.bugayong@irri.org

- **Do you conduct training for WeRise?**
  There have been trainings for Agricultural Extension Workers on communicating WeRise advisories and for researchers on operation and maintenance.

OTHERS

- **Our organization would like to partner with the developers. How can we do this?**
  Please contact us at c.florey@irri.org or i.bugayong@irri.org