## Sustainable Rice Platform (SRP)

# NATIONAL INTERPRETATION GUIDELINE FOR THE U.S.A.

## Based on the SRP Standard for Sustainable Rice Cultivation (Version 2.0)

May 2020

www.sustainablerice.org

## The Sustainable Rice Platform (SRP)

The Sustainable Rice Platform (SRP) is a global multi-stakeholder alliance to promote resource-use efficiency and climate change resilience in rice systems – both on-farm and throughout value chains. The SRP works to improve farmer livelihoods, reduce the freshwater & carbon footprint of rice production, and offer responsibly cultivated rice in the global market.

The SRP provides a proven set of instruments to enable benchmarking and objective comparison of sustainability of any rice system, and to facilitate wide-scale adoption of sustainable best practices:

- *SRP Standard for Sustainable Rice Cultivation* offers a normative framework that can serve as a basis for supporting claims to sustainability performance in rice supply chains.
- *SRP Performance Indicators for Sustainable Rice Cultivation* allow for quantitative measurement of the sustainability impacts of adopting recommended practices.
- *SRP Assurance Scheme* allows rice value chain actors to demonstrate compliance with the SRP Standard.

## The SRP Standard for Sustainable Rice Cultivation

The SRP Standard for Sustainable Rice Cultivation is the world's first voluntary sustainability standard for rice, which offers a normative framework that can serve as a basis for supporting claims to sustainability performance in rice supply chains.

The SRP Standard was developed over several years, guided by the SRP Working Group on Farmer Support, Performance Measurement, and Assurance and with broad stakeholder participation. The first public version of the SRP Standard (Version 1.0) was released for field-testing in October 2015. SRP members conducted pilots using Version 1.0 with farmers in diverse agro-ecological contexts over a period of one to two crop seasons. In 2017-2018, SRP undertook a review process in compliance with the ISEAL Standard-Setting Code of Good Practice, including public consultations, to improve the clarity, consistency and utility of Version 1.0 and to respond to common issues identified during field-testing.

The SRP Standard (Version 2.0) was released in January 2019, and updated to Version 2.1 in January 2020, incorporating additional minor clarifications.

The next review of the SRP Standard (resulting in Version 3.0) is planned for 2022.

# National Interpretation Guidelines for the SRP Standard for Sustainable Rice Cultivation

The *Protocol for Development of SRP National Interpretation Guidelines* outlines a ten-step process to develop SRP National/Regional Interpretation Guidelines for the SRP Standard for Sustainable Rice Cultivation to avoid proliferation of multiple "SRP Standard" in different countries, allow equivalence of claims across countries and protect brand value.

National Interpretation Guidelines must be as consistent as possible with the SRP Standard and at least as stringent. They must maintain the global scoring system and minimum thresholds. They may only provide additional specifications according to the provisions of the relevant national legal and regulatory framework.

# The National Interpretation Guideline for the U.S. based on the SRP Standard for Sustainable Rice Cultivation

## DEVELOPMENT

Preparation of the National Interpretation Guideline for the U.S. was conducted by Winrock International and funded through grants from the U.S. Department of Agriculture and Entergy Foundation. The process was overseen by an 11-member Steering Committee. Work was carried out during November 2015 to October 2019, following ISEAL-compliant and multi-stakeholder processes.

A draft National Interpretation Guideline for the U.S. was submitted by Winrock International to the SRP in October 2019. An SRP Task Force provided first-round review of the documents and requested changes to be made to improve alignment with the SRP Standard Version 2.0 in December 2019. The SRP posted the draft National Interpretation Guideline for the U.S. on the SRP website for a 30-day public consultation during the period 14 February to 15 March 2020. No public comments were received.

The SRP Executive Board endorsed the draft National Interpretation Guideline for the U.S. to be published as the *National Interpretation Guideline for the U.S. based on the SRP Standard for Sustainable Rice Cultivation (Version 2.0)* in April 2020.

## SCOPE

The *National Interpretation Guideline for the U.S. based on the SRP Standard for Sustainable Rice Cultivation (Version 2.0)* is applicable for the following U.S. states where rice is grown: Arkansas (AR), California (CA), Louisiana (LA), Mississippi (MS), Missouri (MO) and Texas (TX). It can be used in conjunction with the SRP Standard within the defined geographic scope as a basis for audit under the SRP Assurance Scheme.

## VALIDITY

The *National Interpretation Guideline for the U.S. based on the SRP Standard for Sustainable Rice Cultivation (Version 2.0)* shall be valid until the next revision of the SRP Standard. Following release of a revised Standard, review of National Interpretation Guidelines shall also be triggered.

## COPYRIGHT



# Acknowledgements

Winrock International wishes to extend its thanks to the following individuals and organizations for their support and contributions to development of the *National Interpretation Guideline for the U.S. based on the SRP Standard for Sustainable Rice Cultivation (Version 2.0):* USDA NRCS, Entergy Foundation, White River Irrigation District, University of Arkansas, Mississippi State University, Arkansas State University, Dr. Merle Anders, Mr. Chad Causey, Dr. Adam Chambers, Ms. Cynthia Edwards, Ms. Mary Grady, Ms. Lydia Holmes, Mr. John Hasbrook, Mr. Mark Isbell, Dr. Scott Manley, Dr. Brian Ottis, Mr. Jody Pagan, Dr. Michele Reba, Mr. Jim Whitaker and Dr. Robert Zeigler.

# Preface

This document shall be used in conjunction with the SRP Standard for Sustainably Produced Rice (v.2.0) and other SRP program documents including the SRP Assurance Scheme, Performance Indicators for Sustainable Rice and SRP Publication Policy.

26 (of 41) SRP Standard (v.2.0) questions are deemed adequately addressed by U.S. federal or state law, or regulatory agency oversight in the U.S and therefore do not appear in the questionnaire instrument of the SRP NIG for the U.S. These questions are automatically answered for all U.S. rice producers based on the law and are listed in the table below. A scoring table is included following the questionnaire. As allowed by the Protocol for Developing National Interpretation Guidelines, several additional requirements are included for U.S. producers ONLY and are clearly marked and tracked separately by U.S. participants and users. These are listed in the table below.

| | |
|---|---|
| SRP questions automatically answered for all U.S. producers (farmers) because they are addressed by U.S. federal or state law, or regulatory agency oversight. | 4, 6, 7, 9, 13, 17, 19, 20, 21, 22, 23, 26, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41 |
| Remaining SRP questions answered by U.S. producers (farmers) in the questionnaire | 1, 2, 3, 5, 8, 10, 11, 12, 14, 15, 16, 18, 24, 25, 27 |
| U.S. ONLY questions. Tracked separately and do not impact SRP score. | 42, 43, 44, 45, 46 |

The Questionnaire section is divided into 6 parts that a U.S. producer would complete:

A. BASIC INFORMATION

B. NRCS ENROLLED FIELDS

C. QUESTIONNAIRE

D. ATTESTATION

E. WATER QUALITY RISK ASSESSMENT

F. SCORING TABLE

The SRP Standard on Sustainable Rice Cultivation (v.2.0) allows for two claims: 1) Sustainably Produced Rice and 2) Working Towards Sustainably Produced Rice. Both claims are based on points summed from questionnaire responses and presented as a percentage of total points. Options noted with * are critical minimums that must be met before either claim can be made, regardless of total score. Please see the SRP Standard on Sustainable Rice Cultivation (2.0) for a description of scoring, critical minimums and claims.

## PART A: BASIC INFORMATION

| | | | |
|---|---|---|---|
| **Name** | | | |
| **County** | | **State** | |
| **Date that Producer Received SRP Training** | | | |

| | | | |
|---|---|---|---|
| **Name of Chemical Applicator (Company)** | | | |
| **License Number** | | **License State** | |

| | | |
|---|---|---|
| **Work with a Certified Crop Consultant/Advisor?** | ☐ Yes | ☐ No |
| **Consultant Name** | | |
| **Date of SRP Training Consultant/Advisor** | | |

| | | | |
|---|---|---|---|
| **Participate in USDA NRCS Programs in 2019? (Check all that apply)** | ☐ EQIP | ☐ CSP | ☐ Other |
| **Please list NRCS enrolled fields in Part B** | | | |

| | | |
|---|---|---|
| **2019 Acres in Rice** | | ☐ Continuous rice |
| **2019 Variety(ies)** | | ☐ Rice in soy rotation |
| **2019 Average Yield** | | ☐ Rice in other rotation |

| | | |
|---|---|---|
| **Harvested rice is stored on farm?** | ☐ Yes | ☐ No |
| **Harvested rice is dried on farm?** | ☐ Yes | ☐ No |

| | | | |
|---|---|---|---|
| **Water Source** | ☐ Ground Only | ☐ Surface Only | ☐ Both |
| **Water Deliveries from State, Irrigation District or Other Entity** | ☐ Yes | ☐ No | |

## PART B: NRCS ENROLLED FIELDS

Complete the table below for all NRCS enrolled fields OR attach your own table/list with the information below.

| | FARM NUMBER | TRACK NUMBER | FIELD NUMBER | FIELD SIZE (AC) |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |

# PART C: QUESTIONNAIRE

1

## Record Keeping – Dates (Crop Calendar)

A crop calendar is a written, digital or otherwise recorded plan of the expected dates of field activities AND shows records of actual dates of implementation of those activities. Activities include:

1. Dates of major operations (i.e., land preparation, planting, harvest).
2. Dates of major fertilization (i.e., split plan) and water management activities (i.e., irrigation).
3. Dates of major pest management activities (i.e., scouting, damage and treatment if needed).
4. Dates for labor and/or contracted services (i.e., if not captured in 1-3).

*Expected* dates of field activities are readily available to ALL U.S. producers via use of growth model programs such as DD50, recommendations from the state agriculture office (State Rice Handbooks), University extension, a crop consultant or based on in field weather station temperature data in conjunction with a growth model.

Please respond based on your EX-POST record keeping.

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 3 | Records of the actual dates when the activity occurred are recorded for ALL listed topics. |
| ☐ | **B** | 2 | Records of the actual dates when the activity occurred are recorded for activity 1 and 2, only. |
| ☐ | **C** | 1* | Records of the actual dates when the activity occurred are recorded for activity 1 only. |
| ☐ | **D** | 0 | None of the above. |

### APPLICABLE NRCS CONSERVATION PROGRAMS

☐ None

## 2 Record Keeping

Records are kept annually (written or digital) on as many topics as possible in the list below. Record keeping at higher levels of sophistication (INTERMEDIATE LEVEL) is encouraged. Topics include:

1. Seed variety (name/vendor/quantity)
2. Yield
3. Pesticide use (product /quantity/application method ground or air)
4. Fertilizer use (product/ /quantity/application method ground or air)
5. Measured or calculated water use (quantity per acre, per bushel, per field or average for irrigation type and region)
6. Machinery operations on farm (equipment type, purpose, fuel use)
7. Results of IPM scouting
8. A water quality risk assessment has been completed (see PART E)
9. GHG emission measurements mg CO2e flux/ha/yr.

Data Collection Techniques and Levels

**INTERMEDIATE**

Data collection system is considered INTERMEDIATE if any of the following is true:

- Data is collected, analyzed and maintained by digital means (e.g. use of equipment software such as MyJohnDeere, use of spreadsheet or accounting software such as Excel or QuickBooks)
- Applicable metrics above are tracked on a per yield basis
- Applicable metrics above are tracked on a field or sub-field level

**BASIC**

Data collection system is considered BASIC if:

- Farmer keeps handwritten maps or notebooks (field or aggregated level)

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 3 | Records are kept of at least 6 topics at the intermediate level. |
| ☐ | **B** | 2 | Records are kept of at least 5 topics using a mix of basic and intermediate techniques. |
| ☐ | **C** | 1* | Records are kept of at least 5 applicable topics using basic techniques |
| ☐ | **D** | 0 | None of the above. |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ None

| 3 | Training | |
|---|---|---|
| | Farmer training, information, and support needs are assessed for all topics in the SRP Standard.<br><br>Farmer receives needed training, information, and support. SRP-authorized training providers are the preferred external partners or professional sources for training on SRP. SRP also recognizes information exchange with other farmers or within farmer organizations.<br><br>Farmer demonstrates that relevant content is applied. | |
| ↓ CHECK ONE | | |
| ☐ | **A** 3 | In the last 5 years, producer training, information, and support needs have been assessed; the producer received needed training from an SRP-authorized training provider; and demonstrates that content is applied. |
| ☐ | **B** 2 | In the last 5 years, producer training, information, and support needs have been assessed; the producer received needed training; and demonstrates that content is applied. |
| ☐ | **C** 1* | In the last 5 years, producer training, information, and support needs have been assessed; and producer received needed training. |
| ☐ | **D** 0 | In the last 5 years, producer training, information, and support needs have not been assessed. |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ None

| 5 | | | **Salinity**<br>Salinity problems are regularly scouted for and effectively and quickly managed at first detection according to expert advice (crop advisor, University Extension guidance, State Rice Handbooks).<br><br>Examples of mitigation/adaptation measures for salinity include:<br>• Selection of salinity-tolerant varieties if needed.<br>• Monitoring of salinity in well water.<br>• Scouting for early signs of damage in plants and scouting for signs of accumulation in fields<br>• Management of inflow/outflow in quantity and timing to minimize salinity (flushing and flood time).<br>• Tissue sampling |
|---|---|---|---|
| ↓ CHECK ONE | | | |
| ☐ | **A** | 3 | Producer does/did one of the following:<br>• Tested the well (any time, any frequency)<br>• At least annually tests irrigation water for salts<br>• At least annually conducts a tissue analysis for salt in the plant |
| ☐ | **B** | 2 | Producer regularly scouts for damage and follows expert advice on salinity detection and management.<br><br>IF/WHEN a problem is detected, producer follows expert advice for mitigation options. |
| ☐ | **C** | 1* | Farmer completes risk assessment (Part E) and implements mitigation measures when needed (i.e. history of salinity problems on farm or in region). |
| ☐ | **D** | 0 | None of the above. |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ None

# 8 Leveling

Land is leveled and managed in a manner that minimizes erosion.
Two scenarios are present in the U.S., Flat Land or Sloping (includes straight and contour levees).

↓ CHECK ONE

| | | | |
|---|---|---|---|
| **FLAT LAND** | | | |
| ☐ | **A** | 5 | Land has been leveled to (zero grade) and is maintained at zero grade. |
| ☐ | **B** | 3 | Land has been leveled to zero grade but is not maintained as such. |
| ☐ | **C** | 2* | Land has been leveled. |
| ☐ | **D** | 0 | Land has not been leveled. |
| **SLOPING LAND (Straight-precision grade Levees and Contour Levees)** | | | |
| ☐ | **E** | 4 | Land has been precision leveled (straight levees, single directional grade) |
| ☐ | **F** | 3 | Some leveling has taken place and contour levees are used |
| ☐ | **G** | 2* | No leveling has taken place and contour levees are used or other erosion controls measures |
| ☐ | **H** | 0 | None of the above |

## APPLICABLE NRCS CONSERVATION PROGRAMS:

- ☐ 462 Precision Land Forming
- ☐ 464 Irrigation Land Leveling
- ☐ 460 Land Clearing

# 10 Water Management

All U.S. rice production meets the definition of the SRP irrigation system category for "Irrigated, Not Flood Prone". Measures are in place to enhance water-use efficiency in this system category.

** See scoring key for mapping of combinations to SRP points (Section F)

| LEVELING AND PLASTIC PIPE<br>choose 1 in this column ☐ | | | | DRY DOWNS<br>Choose the number of dry downs within the leveling choice | | | |
|---|---|---|---|---|---|---|---|
| ☐ | **A** | 4 | Rice fields are leveled (no levees); no plastic pipe | ☐ | **A** | 2 | Multiple dry down events |
| | | | | ☐ | **B** | 1* | One dry down event (*) |
| | | | | ☐ | **C** | 0 | None |
| ☐ | **B** | 3 | Rice fields have straight levees; and plastic pipe | ☐ | **A** | 2 | Multiple dry down events |
| | | | | ☐ | **B** | 1* | One dry down event (*) |
| | | | | ☐ | **C** | 0 | None |
| ☐ | **C** | 2 | Rice fields have straight levees and no plastic pipe | ☐ | **A** | 2 | Multiple dry down events |
| | | | | ☐ | **B** | 1* | One dry down event(*) |
| | | | | ☐ | **C** | 0 | None |
| ☐ | **D** | 1* | Rice fields have contour levees; and plastic pipe (*) | | | | |
| ☐ | **E** | 0 | Rice fields have contour levees and no plastic pipe | | | | |

## APPLICABLE NRCS CONSERVATION PROGRAMS:

- ☐ 462 Precision Land Forming
- ☐ 464 Irrigation Land Leveling
- ☐ 449 Irrigation Water Management (AWD enhancement option)
- ☐ 118 Irrigation Water Management Plan
- ☐ 430 Irrigation Water Conveyance Pipeline
- ☐ 443 Irrigation System, Surface and Subsurface (surge valves in row rice)
- ☐ 533 Pumping Plant
- ☐ 587 Structure for Water Control (flow meters)

| 11 | | | Irrigation System - Capacity and Maintenance<br>The farm irrigation system has sufficient pipes, canals, sluices and dikes to ensure proper irrigation and drainage for all fields. The farm irrigation system is regularly inspected and maintained by a private company, and NRCS project or the landowner. |
|---|---|---|---|
| ↓ CHECK ONE | | | |
| ☐ | **A** | 3* | Producer receives water deliveries from the state, irrigation district or other entity; Producer is not in control of community irrigation infrastructure; the system provides adequate delivery and drainage of water to each field; Producer reports any malfunction or degraded service immediately. |
| ☐ | **B** | 3* | Producer has control of his own well and/or associated irrigation system on farm; the system provides adequate delivery and drainage of water to each field; the system is inspected regularly, and conditions well maintained by a private company and/or NRCS project. |
| ☐ | **C** | 3* | Producer has control of his own well and/or associated irrigation system on farm; the system provides adequate delivery and drainage of water to each field; producer (or land owner) is responsible for all maintenance and regular inspections. |
| ☐ | **D** | 0 | None of the above |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

- ☐ 320 Irrigation Canal or Lateral
- ☐ 326 Clearing and Snagging
- ☐ 410 Grade Stabilization
- ☐ 412 Grassed Waterways
- ☐ 430 Irrigation Pipeline
- ☐ 580 Streambank and Shoreline Protection
- ☐ 582 Open Channel
- ☐ 584 Channel Bed Stabilization
- ☐ 587 Structure for Water Control
- ☐ 607 Surface Drain Field Ditch
- ☐ 608 Surface Drain Main or Lateral

| 12 | | | | **Inbound Water Quality (Answer 12.1 or 12.2)**<br>Inbound water is obtained from clean sources that are free of metals, salts, biological and industrial contamination |
|---|---|---|---|---|
| 12.1<br><br>Well<br>☐ | ☐ | **A** | 3 | Have tested (producer or hired third party) for salinity and heavy metals (within last 3 years, see Resources in PART E) |
| | ☐ | **B** | 2 | Federal, state or local requirements for inbound testing apply in my region or to my farm due to concerns for well water quality in my region (producer tests or government entity routinely tests) |
| | ☐ | **C** | 1* | Have completed a risk assessment within last 5 years (see Part E) and implemented control measures if risk is present |
| | ☐ | **D** | 0 | None of the above |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ State dependent

| 12 | | | | **Inbound Water Quality (Answer 12.1 or 12.2)**<br>Inbound water is obtained from clean sources that are free of metals, salts, biological and industrial contamination |
|---|---|---|---|---|
| 12.2 Surface ☐<br>Name:<br>_____ | ☐ | **A** | 3 | Have tested (producer or hired third party) for ALL of the following (within last 5 years):<br>• Heavy metals<br>• Pesticide or herbicide residues<br>• Phosphorous and nitrogen<br>• Turbidity |
| | ☐ | **B** | 2 | Federal, state or local requirements for inbound testing apply in my region or to my farm due to concerns for surface water quality in my region (producer tests or government entity routinely tests) |
| | ☐ | **C** | 1* | Have completed a risk assessment within last 5 years (see Part E) and implemented control measures if risk is present |
| | ☐ | **D** | 0 | None of the above |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ None

# 14

## Drainage

Agrochemical runoff can negatively impact biodiversity or surroundings waterways. Intentional surface (sideways) drainage after surface application of agrochemicals is sufficiently delayed via water holding to avoid contamination from agrochemical runoff.

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 3 | There is no use of agrochemicals |
| CALIFORNIA | | | |
| ☐ | **B** | 3 | Farm complies with the Irrigated Lands Regulatory Program (ILRP). Producer also follows all water holding requirements on agrochemical labels (if different than ILRP). |
| AR, LA, MO, MS or TX | | | |
| ☐ | **C** | 3 | Water is managed on all rice fields to allow for AT LEAST 1-2 inches of free board in case of rain from initial flood until draining for harvest. Management ensures that water remains on the field. |
| ☐ | **D** | 2* | Freeboard is not always maintained but delayed drainage is ensured at least 4 days for fertilizers and 14 days for pesticides or according to agrochemical labels (if different). |
| ☐ | **E** | 1 | Drainage is delayed after surface application of agrochemicals, but for fewer days than required or recommended due to unexpected conditions and need to protect crops (e.g. heavy rains). |
| ☐ | **F** | 0 | None of the above |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

- ☐ 554 Drainage Water Management

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## Nutrient Management

Efficient and site-specific nutrient management is applied and documented.

Measures for efficient nutrient management include:

- Timing of fertilizer (inorganic and/or organic; N, P, and/or K) application is according to plant needs, and according to label or University, NRCS or County recommendations and using grid sampling and variable rate applications
- Amount of fertilizer (inorganic and/or organic; N, P, and/or K) applied is based on knowledge of soil fertility and expected yield, and according to University recommendations.
- Natural systems of soil fertility enhancement (e.g., crop rotation, intercropping, and/or non-invasive cover cropping) are used.

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 6 | Producer uses all three measures listed for efficient nutrient management. |
| ☐ | **B** | 4* | Producer uses any two measures listed for efficient nutrient management. |
| ☐ | **C** | 2 | Producer uses any one measure listed for efficient nutrient management. |
| ☐ | **D** | 0 | None of the above. |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ 590 Nutrient Management

| 16 | | | Organic Fertilizer Choice |
|---|---|---|---|
| ↓ CHECK ONE | | | Organic material (e.g., animal manure, green manure, mulch, rice straw) is used as fertilizer where synthetic fertilizer would otherwise be used ONLY IF:<br>1. It can be applied in composted or de-composted state in non-flooded fields OR there is sufficient time for its decomposition prior to flooding;<br>2. It is available locally and in sufficient quantity; AND<br>3. It is a comparable or economical choice relative to other options |
| ☐ | **A** | 3 | Producer uses organic material as fertilizer and ALL three conditions are met. |
| ☐ | **B** | 2* | Producer does not use organic material as fertilizer because one or more of the listed conditions cannot be met. |
| ☐ | **C** | 0 | None of the above. |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ 590 Nutrient Management

18

## Integrated Pest Management (IPM)

Principles of IPM include:

- Evaluating pest threat and damage levels regularly (scouting).
- Evaluating all available pest control options deemed appropriate by the University extension.
- Using action thresholds recommended by U.S. Land Grant University Cooperative extension experts.
- Using the crop protection method recommended by the University extension.

Recommended IPM methods in the United States are based on the latest research and relevant pests in the region; have been developed according to regulations that ensure human and food safety; are generally considered economically viable under current market conditions and minimize environmental impact and/or comply with environmental regulations.

IPM combines non-chemical control methods and rational pesticide use. This includes biodiversity-based integrated pest management as part of crop protection activities. In the United States, IPM is generally understood to mean that chemicals are ONLY applied once a threshold has been reached and when applied, they are applied by a licensed professional that follows regulations in the amount of chemical applied and the frequency of application. Scientific research underscores the crop and state specific recommendations provided by the University extensions in each state or by the USDA NRCS for IPM contracts. Producers typically work with a licensed pest management specialist and chemical applicator who will rigidly follow the recommendations for the state.

| RECOMMENDED NON-CHEMICAL OPTIONS | WEEDS | INSECTS | DISEASE | OTHER (BIRDS, RATS, INVERTEBRATES): |
|---|---|---|---|---|
| | • Good land preparation<br>• Proper flooding<br>• Mechanical weeding<br>• Biological control | • Synchronized planting<br>• Tolerant/Resistant varieties<br>• Promotion of natural predators (habitat diversity)<br>• Crop rotation or extended fallow<br>• No over-application of nitrogen<br>• Biological control agents (non-lethal chemicals) | • Synchronized planting<br>• Tolerant/ Resistant varieties<br>• Removal of host plants<br>• Moisture management<br>• Planting at appropriate density<br>• No over-application of nitrogen<br>• Biological control agents (non-lethal chemicals) | • Synchronized planting<br>• Physical control (i.e. destruction of egg masses)<br>• Promotion of predators<br>• Crop rotation or extended fallow<br>• Trapping, hunting<br>• Coordinated community management plan<br>• Scare/deterrent devices<br>• Biological control agents (non-lethal chemicals) |

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 18 | Producer has a USDA NRCS IPM contract |
| ☐ | **B** | 18 | Producer (and/or crop consultant) does ALL of the following:<br>• Follows University extension recommendations for pest management in region<br>• Regularly scouts for all relevant pests in region |

| | | | |
|---|---|---|---|
| | | | • Applies chemicals ONLY after thresholds as determined by University extension have been reached<br>• Uses a licensed chemical applicator<br><br>List any non-chemical pest control measures employed (optional):<br>_____ |
| ☐ | **C** | 11* | Producer (and/or crop consultant) does ALL of the following:<br>• Regularly scouts for all relevant pests in region<br>• Uses at least two non-chemical pest control strategies<br>• Uses a licensed chemical applicator<br><br>List any non-chemical pest control measures employed (optional):<br>_____ |
| ☐ | **D** | 0 | None of the above |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ 595 Integrated Pest Management

| 24 | | | **Rice Stubble**<br>Rice stubble is not burned and is managed in a sustainable way to mitigate greenhouse gas emissions, minimize environmental impacts, and retain or improve soil quality.[1,2] |
|---|---|---|---|
| ↓ CHECK ONE | | | |
| ☐ | **A** | 3 | Stubble is not burned, and not plowed under, with time (at least 3 weeks) to allow aerobic decomposition before wetting. |
| ☐ | **B** | 2 | Stubble is not burned, and is plowed under while the soil is dry, with time (at least 3 weeks) to allow aerobic decomposition before wetting. |
| ☐ | **C** | 1* | Stubble is not burned, and is plowed under while the soil is flooded, without time (at least 3 weeks) to allow for aerobic decomposition. |
| ☐ | **D** | 0 | Stubble is burned |

## APPLICABLE NRCS CONSERVATION PROGRAMS:

- ☐ 329 Residue Management, No-Till, Strip-Till (TILL)
- ☐ 646 Shallow Water Development and Management (HABITAT)
- ☐ 338 Prescribed Burning (BURN)
- ☐ 344 Residue Management, Seasonal (TILL)
- ☐ 345 Residue Management Mulch Till (TILL)

[1] As stated in the SRP Standard v.2.0. research has identified the minimum tillage system with stubble left on the field after grazing by livestock as a sustainable practice of treating rice stubble. SRP National Interpretation Guidelines may identify methods that are at an equivalent level of sustainability even if grazing by livestock or minimum tillage is not practiced.

[2] In the U.S. production system, livestock or crawfish grazing as a rotation is limited. No-tillage and minimum tillage are strongly incentivized by the USDA due to declining soil quality and are widely practiced. In areas where minimum tillage and no tillage are practiced together with winter flooding of rice fields for waterfowl (a practice also strongly incentivized by the USDA due to near total loss of waterfowl habitat in the U.S.), methane emissions will be significant in the absence of burning. In large (1000+ ha) mechanized operations, significant amounts of fuel are combusted to adequately plow stubble. There is a trade-off among the environmental benefits of air quality, GHG emissions, soil quality and habitat.

| 25 | | | Rice Straw |
|---|---|---|---|
| ↓ CHECK ONE | | | Rice straw managed in a sustainable way to mitigate greenhouse gas emissions, minimize environmental impacts, and retain or improve soil quality.[3,4]<br><br>Rice straw is:<br>1. Not burned.<br>2. Allowed sufficient time (at least 2 weeks) for aerobic decomposition if rice straw is left on the field or plowed under.<br>3. Collected, used a livestock feed or composted, and returned to the field. |
| ☐ | **A** | 3 | Producer meets criteria 1 and 3. |
| ☐ | **B** | 2 | Producer meets criteria 1 and 2 only |
| ☐ | **C** | 1* | Producer meets criteria 1 only |
| ☐ | **D** | 0 | Producer burns rice straw |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

- ☐ 329 Residue Management, No-Till, Strip-Till (TILL)
- ☐ 646 Shallow Water Development and Management (HABITAT)
- ☐ 338 Prescribed Burning (BURN)
- ☐ 344 Residue Management, Seasonal (TILL)
- ☐ 345 Residue Management Mulch Till (TILL)

[3] As stated in the SRP Standard v.2.0. research has identified the minimum tillage system with stubble left on the field after grazing by livestock as a sustainable practice of treating rice stubble. SRP National Interpretation Guidelines may identify methods that are at an equivalent level of sustainability even if grazing by livestock or minimum tillage is not practiced.

[4] In the U.S. production system, livestock or crawfish grazing as a rotation is limited. No-tillage and minimum tillage are strongly incentivized by the USDA due to declining soil quality and are widely practiced. In areas where minimum tillage and no tillage are practiced together with winter flooding of rice fields for waterfowl (a practice also strongly incentivized by the USDA due to near total loss of waterfowl habitat in the U.S.), methane emissions will be significant in the absence of burning. In large (1000+ ha) mechanized operations, significant amounts of fuel are combusted to adequately plow stubble. There is a trade-off among the environmental benefits of air quality, GHG emissions, soil quality and habitat.

## 27 Tools and Equipment

Tools and equipment for farm operations and postharvest processes are inspected and maintained and calibrated as per manufacturer recommendations.

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 2 | Farm equipment is inspected every year prior to use and maintained and calibrated as required by the manufacturer. |
| ☐ | **B*** | 1 | Farm equipment is not inspected, calibrated and maintained as required by the manufacturer but is inspected (not annually) and maintained as issues arise. |
| ☐ | **C** | 0 | No calibration and maintenance within the past 2 years. |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ None

| | | | |
|---|---|---|---|
| 6e | **Biodiversity Elements**<br>Producer maintains and protects the following elements for habitat and/or biodiversity:<br>• any in-field habitat or refuge<br>• field margins<br>• non-cropped area<br>• beneficial species on farm such as trees | ☐ **Yes (+1)** | ☐ **No** |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ 327 Conservation Cover

| 26e | **Annual Safety Instruction Training**<br>Producer provides **annual** safety training/instructions to workers including household members working in the rice operation (includes office related work) | ☐ **Yes (+1)** | ☐ **No** |
|---|---|---|---|

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ None

| 32e | **Re-entry time Signage**<br>Producer places warning signs in field or at field edge indicating the re-entry time following pesticide use (48 hours or product label) | ☐ **Yes (+1)** | ☐ **No** |
|---|---|---|---|

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ None

| US ONLY 12e | | | **Outbound Water Quality**<br>Outbound water quality is monitored. |
|---|---|---|---|
| ☐ | **A** | 4 | Have tested (producer or hired third party) for ALL of the following within last 3 years:<br>• Heavy metals<br>• Pesticide or herbicide residues<br>• Phosphorous and nitrogen<br>• Turbidity |
| ☐ | **B** | 3 | Have tested (producer or hired third party) for at least TWO of the following within last 3 years:<br>• Heavy metals<br>• Pesticide or herbicide residues<br>• Phosphorous and nitrogen<br>• Turbidity |
| ☐ | **C** | 2 | Have completed a risk assessment within last 3 years (see Part E): |
| ☐ | **D** | 1 | Federal, state or local requirements for outbound testing apply in my region or to my farm due to concerns for water quality in my region (producer tests or government entity routinely tests)<br>AND/OR<br>Federal, state or local requirements for reducing loads of area source pollutants apply in my region or to my farm due to concerns for water quality in my region. |
| ☐ | **E** | 0 | I am not aware of requirements to monitor water leaving my farm OR to reduce loads of specified area source pollutants due to concerns for water quality in my region. |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ 412 Grassed Waterways

US ONLY 42

## Wildlife Habitat

Producers have preserved, restored or enhanced Wildlife Habitat (i.e. Grassland, Wetland, Bottomland Hardwood Forest, or Upland Forest) on their property.

This does NOT include flooding for waterfowl (see Q 24/25). This does NOT require removing land from production. These can be degraded lands or other areas on property that were never suitable for cultivation but can be conserved through easement, improved per NRCS or other programs or restored to better foster wildlife.

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 2 | > 5% of total planted acreage has been restored, preserved or enhanced. |
| ☐ | **B** | 1 | < 5% (but > 0%), of total planted acreage has been restored, preserved or enhanced |
| ☐ | **C** | 0 | No habitat restoration, preservation or enhancement |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

- ☐ 390 Riparian Herbaceous Cover
- ☐ 395 Stream Habitat Improvement and Management
- ☐ 575 Animal Trails and Walkways
- ☐ 644 Wetland Wildlife Habitat Management
- ☐ 645 Upland Wildlife Habitat Management
- ☐ 657 Wetland Restoration
- ☐ 659 Wetland Enhancement
- ☐ 646 Shallow Water Management

US ONLY 43

## Waterfowl

Rice fields are flooded for waterfowl and water birds during winter months (zero grade, precision level or contour levees). Water control structures are closed, and/or interior levees are pulled shut to capture rainfall.

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 2 | > 50% of rice fields are managed to capture rainfall for winter waterfowl. |
| ☐ | **B** | 1 | 1% - 49% of rice fields are managed to capture rainfall for winter waterfowl. |
| ☐ | **C** | 0 | None of the above. |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

- ☐ 646 Shallow Water Development and Management
- ☐ 554 Drainage Water Management

US ONLY 44

## Buffer Zones and Filter Strips

Producers have implemented conservation measures to enhance wildlife habitat, reduce soil erosion and increase water quality.

- Established or extended riparian buffer or filter strips including grass turn rows
- Established diverse native vegetation and controlling invasive species in stream side cover

↓ CHECK ONE

| | | | |
|---|---|---|---|
| ☐ | **A** | 1 | Establish one of the listed elements |
| ☐ | **B** | 0 | Establish none of the listed elements |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

- ☐ 386 Field Border
- ☐ 332 Contour Buffer
- ☐ 601 Vegetative Barrier
- ☐ 327 Conservation Cover

US ONLY
45

↓ CHECK ONE

## Other Water Efficiency Technologies

Water Efficiency technologies (in addition to those addressed in questions 8 and 10, are used. These include:

- Water recycling (tailwater recovery)
- Water level indicator devices
- Metering of pump at beginning and end of season
- Continuous flow metering
- Automated pump shutoff and water delivery
- Plastic pipe on non-zero grade fields
- Soil moisture sensors
- Other: _____

| | | | |
|---|---|---|---|
| ☐ | **A** | 4 | Producer uses at least four of the water efficiency measures listed<br>Please list: _____ |
| ☐ | **B** | 3 | Producer uses at least three water efficiency measure listed<br>Please list: _____ |
| ☐ | **C** | 2 | Producer uses at least two water efficiency measures listed<br>Please list: _____ |
| ☐ | **D** | 1 | Producer uses at least one of the water efficiency measures listed<br>Please list: _____ |
| ☐ | **E** | 0 | None of the above |

### APPLICABLE NRCS CONSERVATION PROGRAMS:

- ☐ 449 Irrigation Water Management
- ☐ 436 Irrigation Reservoir
- ☐ 447 Irrigation Tailwater Recovery

US ONLY 46

↓ CHECK ONE

## Pumping plant efficiency

Producer has implemented any of the following to conserve fuel or electricity:

- Switch to electric from diesel pumps or equipment
- Switch to natural gas from diesel or equipment
- Fuel or equipment metering
- Fuel or equipment automation
- Other: _____

| | | | |
|---|---|---|---|
| ☐ | **A** | **2** | Producer implemented at least 2 of the above fuel efficiency measures<br>Please list: _____ |
| ☐ | **B** | **1** | Producer implemented at least 1 of the above fuel efficiency measures<br>Please list: _____ |
| ☐ | **C** | **0** | None of the above |

**APPLICABLE NRCS CONSERVATION PROGRAMS:**

☐ 374 Farmstead Energy Improvement

| ☐ Self-Assess | ☐ Report |
| --- | --- |
| I am completing this questionnaire for my own information. I do not wish to share my results, or any information captured on this questionnaire. | I would like to share my results with the following other parties:<br>1. SRP Secretariat and GLOBAL GAP<br>2. _____<br>3. _____<br><br>The parties listed above have disclosed to me how my questionnaire responses will be used and with whom they will be shared. |

## PART D: ATTESTATION

| | | |
|---|---|---|
| ☐ YES | ☐ N/A | I am aware of and fully comply with federal and state laws that apply to agricultural operations, including but not limited to:<br>• Fair Labor Standards Act<br>• Migrant and Seasonal Agricultural Worker Protection Act<br>• Labor Provisions of the H-2A Visa Program<br>• Occupational Safety and Health Act of 1970 including Agriculture (29 CFR 1928), General Industry (29 CFR 1910), and the General Duty Clause.<br>• Field sanitation provisions of the OSHA Act of 1970<br>• All laws enforced via the Equal Employment Opportunity Act (title VII of the Civil Rights Act of 1964; Workforce Investment)<br>• Compulsory School Attendance Laws (state)<br>• Wage (state)<br>• Applicable state and local laws addressing air and water quality<br>• Applicable state and local requirements for permits and licenses |
| ☐ YES | ☐ N/A | I hold legal right to surface or ground water used on my property |
| ☐ YES | ☐ N/A | I am aware of advice and information for best practices in rice production from: University Extension, USDA and State Agriculture agencies. |
| ☐ YES | ☐ N/A | I am a licensed chemical applicator and sometimes apply chemicals on my farm (either in lieu of a third-party licensed applicator or in addition to a third-party licensed applicator). I obey all legal requirements for application and requirements of my license when applying chemicals. I follow all label instructions. |
| ☐ YES | ☐ N/A | (CALIFORNIA ONLY) I am aware of and meet requirements of the Irrigated Lands Regulatory Program (ILRP) |
| ☐ YES | ☐ N/A | I filed taxes and reported farming income to the U.S. government in _____ (enter most recent year of filing) |
| ☐ YES | ☐ N/A | Responses to this questionnaire are true to the best of my knowledge for the year 2020 |

Name: _____

Date: _____

Signature: _____

# PART E: WATER QUALITY RISK ASSESSMENT

The water and soil quality risk checklist shall be used in conjunction with the Standard and is referenced in questions 2, 5, 12 and 12e. This checklist assesses risks to water and soil quality when regular water quality (inbound surface, outbound surface and/or well) testing and/or soil or tissue sampling is not conducted. This checklist can be completed once every 5 years. Recommendations and resources for water and soil testing in each rice growing state are listed in the Resources section of Part E.

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. EPA has also developed national water quality criteria recommendations for pollutants in surface waters. Non-point source pollution (NPS) is the leading remaining cause of water quality problems in the U.S. and agriculture is classified as an NPS. NPS pollution is managed at the state level and each rice growing state has an NPS Management Plan that details monitoring and mitigation strategies that impact individual farms. NPS Management Plans for each rice growing state are listed in the Resources section of Part E.

**DIRECTIONS**

For each question, place a mark in either column A or B.

For any question marked “B”, also place a mark in either C or D.

Count all marks in Column A, B and C.

The farm is considered LOW RISK if:

- All answers are marked A

  OR
- (SUM Column B) – (SUM Column C) = zero

| | SCREENING QUESTION | A<br>If answer NO, proceed to next question ⬇<br>NO | B<br>If answer YES, answer question at right ➡<br>YES | ACTION TAKEN IF RISK PRESENT | C<br>YES | D<br>NO |
|---|---|---|---|---|---|---|
| 1 | To your knowledge, has any portion of the fields where rice is grown been used for the following within the last 50 years?<br>• Sewage sludge application<br>• Industrial waste disposal<br>• Artisanal or industrial mining<br>• Mine drainage<br>• Battery recycling | | | IF YES, have you taken the following recommended actions:<br>• Learn about the history and type of waste applied<br>• Contacted your states office of environmental quality to request soil testing or guidance on soil testing, OR<br>• Had the soil tested for cadmium, mercury, arsenic, lead and persistent organic pollutants?<br>• Routinely tested (every 5 years) even after no contamination has been found. | | |
| 2 | Are any fields where rice is grown adjacent (within 100 ft) to a major highway or expressway? | | | IF YES, have you taken the following recommended actions:<br>• Contacted your states office of environmental quality to request soil testing or guidance on soil testing, OR<br>• Had the soil tested for cadmium, mercury, arsenic, lead and persistent organic pollutants?<br>• Routinely tested (every 5 years) even after no contamination has been found. | | |
| 3 | Are any fields where rice is grown downwind of a coal fired power plant (within 3 miles)? | | | IF YES, have you taken the following recommended actions:<br>• Contacted your states office of environmental quality to request soil testing or guidance on soil testing, OR<br>• Had the soil tested for cadmium, mercury, arsenic, | | |

| | SCREENING QUESTION | A<br>If answer NO, proceed to next question ⬇<br>NO | B<br>If answer YES, answer question at right ➡<br>YES | ACTION TAKEN IF RISK PRESENT | C<br>YES | D<br>NO |
|---|---|---|---|---|---|---|
| | | | | lead and persistent organic pollutants?<br>• Routinely tested (every 5 years) even after no contamination has been found. | | |
| 4 | Are any fields where rice is grown located downstream from an active or former (to your knowledge) waste water treatment plant, livestock, poultry or fisheries operation (within 25 miles)? | | | IF YES, have you taken the following recommended actions:<br>• Contacted your states office of environmental quality to request testing of irrigation water or guidance on irrigation water testing OR<br>• Had the irrigation water tested for biological contaminants?<br>• Routinely tested (every 5 years) even after no contamination has been found. | | |
| 5 | To your knowledge, have any of the following products been used on your land within the last 50 years?<br>• Cadmium containing fungicides (cadmium carbonate, cadmium chloride, cadmium succinate, cadmium sebacate, etc.)<br>• Mercury containing fungicides (e.g. phenyl mercuric acetate, calomel chloride, mercury chloride, etc.)<br>• Arsenic-containing pesticides (e.g. arsenic acid, arsenic trioxide, arsonate, arsenite, aresonic acid, etc.) | | | IF YES, have you taken the following recommended actions:<br>• Learn about the history and type of products applied<br>• Contacted your states office of environmental quality to request soil testing or guidance on soil testing, OR<br>• Had the soil tested for cadmium, mercury, arsenic, lead and persistent organic pollutants?<br>• Routinely tested (every 5 years) even after no contamination has been found. | | |

| | SCREENING QUESTION | A<br>If answer NO, proceed to next question ↓<br>NO | B<br>If answer YES, answer question at right →<br>YES | ACTION TAKEN IF RISK PRESENT | C<br>YES | D<br>NO |
|---|---|---|---|---|---|---|
| | • Phosphate fertilizer from a high cadmium source | | | | | |
| 6 | Is your irrigation water obtained from a water body listed on the 303D list? | | | If YES, have you contacted your state office of environmental quality, crop advisor, conservation district or NRCS office to understand any testing being conducted by your state, testing requirements by property owner or other requirements or recommendations in accordance with the state non-point source pollution management plan. | | |
| 7 | To your knowledge, have there been any reports in your watershed (or water system) of surface irrigation water testing positive for industrial, biological (including pathogens and bacteria) or metal contamination including high levels of nitrates or pesticides? | | | IF YES, have you taken the following recommended actions:<br>• Learned about the time, location and nature of these reports<br>• Contacted your states office of environmental quality to request soil or irrigation water testing or guidance on soil and irrigation water testing, OR<br>• Had the soil or irrigation water tested for industrial, biological or metal contamination?<br>• Routinely tested (every 5 years) even after no contamination has been found. | | |
| 8 | To your knowledge, has your well or wells in your community ever tested positive for industrial, biological (including pathogens and bacteria) or metal contamination including high levels of nitrates or pesticides? | | | IF YES, have you taken the following recommended actions:<br>• Learned about the time, location and nature of these reports<br>• Contacted your states office of environmental quality to request soil or irrigation water | | |

| | SCREENING QUESTION | A<br>If answer NO, proceed to next question ↓<br>NO | B<br>If answer YES, answer question at right →<br>YES | ACTION TAKEN IF RISK PRESENT | C<br>YES | D<br>NO |
|---|---|---|---|---|---|---|
| | | | | testing or guidance on soil and irrigation water testing, OR<br>• Had the soil or irrigation water tested for industrial, biological or metal contamination?<br>Routinely tested (every 5 years) even after no contamination has been found. | | |
| 9 | To your knowledge, has irrigation water on your property ever tested outside acceptable limits for any industrial, biological (including pathogens and bacteria) or metal contamination including high levels of nitrates or pesticides? | | | IF YES, have you taken the following recommended actions:<br>• Learned about the time, location and nature of these results<br>• Contacted your states office of environmental quality to request soil or irrigation water testing or guidance on soil and irrigation water testing, OR<br>• Had the soil or irrigation water tested for industrial, biological or metal contamination?<br>• Routinely tested (every 5 years) even after no contamination has been found. | | |
| 10 | Do you notice erosion or sediment on your property from:<br>• Irrigation<br>• Stormwater<br>• Pasture or Range | | | IF YES, have you taken the following recommended actions:<br>• Contacted NRCS for recommended practices? | | |
| 11 | Do you notice streambank erosion or murky water in on-farm or adjacent ditches or streams? | | | IF YES, have you taken the following recommended actions: | | |

| | SCREENING QUESTION | A<br>If answer NO, proceed to next question ⬇<br>NO | B<br>If answer YES, answer question at right ➡<br>YES | ACTION TAKEN IF RISK PRESENT | C<br>YES | D<br>NO |
|---|---|---|---|---|---|---|
| | Do you notice sides of streams or ditches are eroding? | | | • Contacted NRCS for recommended practices? | | |
| | Water in ditches or streams or other water bodies is muddy or looks like chocolate milk? | | | | | |
| | Water in ditches or streams may be clear, but silt has settled on the bottom? | | | | | |
| 12 | Is there a noticeable greenish color in your ditches/streams/ponds? | | | IF YES, have you taken the following recommended actions:<br>• Contacted NRCS for recommended practices? | | |
| | Do you notice algae, plants or mosses in your waterways? | | | | | |
| 13 | Have you noticed signs of high nitrates in irrigation water? | | | IF YES, have you taken the following recommended actions:<br>• Contacted NRCS for recommended practices? | | |
| 14 | Do you notice fish kills or erratic behavior of aquatic species in nearby streams? | | | IF YES, have you taken the following recommended actions:<br>• Contacted NRCS for recommended practices? | | |
| 15 | Have you noticed or heard of water temperature increases in streams in your watershed? | | | IF YES, have you taken the following recommended actions:<br>• Contacted NRCS for recommended practices? | | |
| 16 | Has your irrigation source ever had high salinity levels? | | | IF YES, have you taken the following recommended actions: | | |

| | SCREENING QUESTION | A<br>If answer NO, proceed to next question ⬇<br>NO | B<br>If answer YES, answer question at right ➡<br>YES | ACTION TAKEN IF RISK PRESENT | C<br>YES | D<br>NO |
|---|---|---|---|---|---|---|
| | | | | • Seek expert advice from crop advisor, NRCS or University Extension on mitigation options<br>• Follow government mandates and recommendations for your area<br>• Regularly test soil and irrigation water, especially towards end of year<br>• Regularly scout for salt related damage | | |
| 17 | Have you ever noticed any damage from salt or indications of high salinity in irrigation water? | | | IF YES, have you taken the following recommended actions:<br>• Seek expert advice from crop advisor, NRCS or University Extension on mitigation options<br>• Follow government mandates and recommendations for your area<br>• Regularly test soil and irrigation water, especially towards end of year<br>• Regularly scout for salt related damage | | |
| 18 | Is your land located within 3 km of a body of salt water? | | | IF YES, have you taken the following recommended actions:<br>• Follow government mandates and recommendations for your area<br>• Regularly test soil and irrigation water, especially towards end of year<br>• Regularly scout for salt related damage | | |
| 19 | Has your land received direct salt water intrusion within the past 5 years? | | | IF YES, have you taken the following recommended actions: | | |

| | SCREENING QUESTION | A<br>If answer NO, proceed to next question ⬇<br>NO | B<br>If answer YES, answer question at right ➡<br>YES | ACTION TAKEN IF RISK PRESENT | C<br>YES | D<br>NO |
|---|---|---|---|---|---|---|
| | (e.g., flood, hurricane waves, tsunami, etc.) | | | • Seek expert advice from crop advisor, NRCS or University Extension on mitigation options<br>• Follow government mandates and recommendations for your area<br>• Regularly test soil and irrigation water, especially towards end of year<br>• Regularly scout for salt related damage | | |
| 20 | Does your land experience tide-related changes in water table? | | | IF YES, have you taken the following recommended actions:<br>• Seek expert advice from crop advisor, NRCS or University Extension on mitigation options<br>• Follow government mandates and recommendations for your area<br>• Regularly test soil and irrigation water, especially towards end of year<br>• Regularly scout for salt related damage | | |
| 21 | Does your water table depth change by more than 10 cm between seasons? | | | IF YES, have you taken the following recommended actions:<br>• Seek expert advice from crop advisor, NRCS or University Extension on mitigation options<br>• Follow government mandates and recommendations for your area<br>• Regularly test soil and irrigation water, especially towards end of year<br>• Regularly scout for salt related damage | | |

| SCREENING QUESTION | | A | B | ACTION TAKEN IF RISK PRESENT | C | D |
|---|---|---|---|---|---|---|
| | | If answer NO, proceed to next question ⬇ | If answer YES, answer question at right ➡ | | | |
| | | NO | YES | | YES | NO |
| 22 | Have there been any government or community warnings in your area about soil or water salinization? | | | IF YES, have you taken the following recommended actions:<br>• Seek expert advice from crop advisor, NRCS or University Extension on mitigation options<br>• Follow government mandates and recommendations for your area<br>• Regularly test soil and irrigation water, especially towards end of year<br>• Regularly scout for salt related damage | | |
| 23 | Does your irrigation source get depleted towards the end of the dry season? | | | IF YES, have you taken the following recommended actions:<br>• Seek expert advice from crop advisor, NRCS or University Extension on mitigation options<br>• Follow government mandates and recommendations for your area<br>• Regularly test soil and irrigation water, especially towards end of year<br>• Regularly scout for salt related damage | | |
| | SUM | | | | | |
| | | | | B - C | | |

## WATER AND SOIL TESTING RESOURCES

| | | |
|---|---|---|
| AR | GENERAL GUIDANCE | https://arkansas-water-center.uark.edu/publications/factsheets/FS-2017-03-Irrigation-Analytical-Package-How-to-Collect-Sample-and-Interpret-Results-2.pdf |
| | LABORATORIES | https://www.uaex.edu/farm-ranch/special-programs/aquaculture/diagnostic-services.aspx |
| CA | GENERAL GUIDANCE | https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ca/water/?cid=stelprdb1248443<br>https://prod.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=stelprdb1248580&ext=pdf<br>https://www.waterboards.ca.gov/water_issues/programs/agriculture/ |
| | LABORATORIES | http://cecentralsierra.ucanr.org/files/115331.pdf |
| LA | GENERAL GUIDANCE | https://www.lsu.edu/agriculture/plant/extension/hcpl-publications/1_Pub.3441-AgriculturalWater-BestPracticestoEnsureOn-FarmFoodSafety.pdf |
| | LABORATORIES | https://www.lsuagcenter.com/portals/our_offices/departments/spess/servicelabs/soil_testing_lab |
| MS | GENERAL GUIDANCE | http://extension.msstate.edu/publications/soil-testing-for-the-farmer |
| | LABORATORIES | http://extension.msstate.edu/content/contact-soil-testing |
| MO | GENERAL GUIDANCE | http://soilplantlab.missouri.edu/soil/water.aspx<br>http://soilplantlab.missouri.edu/soil/recommendations.aspx |
| | LABORATORIES | http://soilplantlab.missouri.edu/soil/?_ga=2.2642229.44928609.1556737122-103188437.1556737122 |
| TX | GENERAL GUIDANCE | |
| | LABORATORIES | http://soiltesting.tamu.edu/<br>https://www.noble.org/ag/services/testing/water-testing/ |

## STATE NPS MANAGEMENT PLANS

| | |
|---|---|
| AR | https://static.ark.org/eeuploads/anrc/Pages_from_2018-2023_NPS_Pollution_Management_Plan.compressed_(1).pdf |
| CA | https://www.waterboards.ca.gov/water_issues/programs/nps/docs/plans_policies/sip_2014to2020.pdf |
| LA | https://deq.louisiana.gov/assets/docs/Water/NPS_Management_Plan_1.pdf |
| MS | https://www.mdeq.ms.gov/wp-content/uploads/2017/05/FINAL_NPS_Management_Plan_Update_2014.pdf |
| MO | https://dnr.mo.gov/env/swcp/nps/mgmtplan/docs/missouri-nonpoint-source-management-plan-042215-final.pdf |
| TX | https://www.tceq.texas.gov/assets/public/waterquality/nps/mgmt-plan/2017_NPSManagementProgram.pdf |

## STATE RICE PRODUCTION HANDBOOKS

| | |
|---|---|
| AR | https://www.uaex.edu/publications/pdf/MP192/MP192.pdf |
| CA | http://rice.ucanr.edu/Reports-Publications/Rice_Production_Workshop_Manual/ |
| LA | https://www.lsuagcenter.com/portals/communications/publications/publications_catalog/crops_livestock/rice/rice-production-handbook1 |
| MS | https://extension.msstate.edu/sites/default/files/publications/publications/p2255.pdf |
| MO | http://agebb.missouri.edu/murice/research/99/pg5.php |
| TX | https://beaumont.tamu.edu/eLibrary/Bulletins/2012_Rice_Production_Guidelines.pdf |

## PART F: SCORING TABLE

26 of 41 questions are automatically answered for U.S. producers. Please fill out the darker cells of the Selection and Points columns and sum total points.

| | NAME | SELECTION | POINTS | |
|---|---|---|---|---|
| 1 | Crop Calendar | | | |
| 2 | Record Keeping | | | |
| 3 | Training | | | |
| 4 | Heavy Metals | B | 3 | |
| 5 | Salinity | | | |
| 6 | Land Conversion and Biodiversity | C | 1 | **Option to answer A or B. See 6e in questionnaire. |
| 7 | Invasive Species | A | 3 | |
| 8 | Leveling | | | **Enter maximum of 3 here. > 3 points enter below for US ONLY |
| 9 | Pure Quality Seeds | A | 3 | |
| 10 | Water Management (See Scoring Table) | | | **Enter maximum of 3 here. > 3 points enter below for US ONLY |
| 11 | Irrigation System at Community Level | | | |
| 12 | Inbound Water Quality | | | |
| 13 | Groundwater Extraction | B | 3 | |
| 14 | Drainage | | | |
| 15 | Nutrient Management (Inorganic and/or Organic) | | | |
| 16 | Organic Fertilizer Choice | | | |
| 17 | Inorganic Fertilizer Choice | B | 3 | |
| 18 | Pest Management | | | |
| 19 | Timing of Harvest | A | 3 | |
| 20 | Harvest Equipment | B | 3 | |
| 21 | Drying Time | B | 3 | |
| 22 | Drying Technique | B | 3 | |
| 23 | Rice Storage | B | 3 | |

| | NAME | SELECTION | POINTS | |
|---|---|---|---|---|
| 24 | Rice Stubble | | | |
| 25 | Rice Straw | | | |
| 26 | Safety Instructions and First Aid | B | 1 | **Option to answer A. See 26e in questionnaire |
| 27 | Tools and Equipment | | | |
| 28 | Training of Pesticide Applicators | B | 2 | |
| 29 | Personal Protective Equipment (PPE) | B | 2 | |
| 30 | Washing and Changing | B | 2 | |
| 31 | Applicator Restrictions | B | 2 | |
| 32 | Re-entry Time | C | 1 | **Option to answer A or B. See 32e in questionnaire |
| 33 | Pesticide and Chemical Storage | B | 2 | |
| 34 | Pesticide Disposal | B | 2 | |
| 35 | Child Labor | B | 3 | |
| 36 | Hazardous Work | B | 3 | |
| 37 | Education | B | 3 | |
| 38 | Forced Labor | B | 3 | |
| 39 | Discrimination | B | 3 | |
| 40 | Freedom of Association | B | 3 | |
| 41 | Wages | B | 3 | |
| 6e | Land Conversion and Biodiversity | | | |
| 26e | Safety Instructions and First Aid | | | |
| 32e | Re-entry time Signage | | | |
| | TOTAL | | | |
| | SRP MAX | | 132 | |

| | NAME | SELECTION | POINTS |
|---|---|---|---|
| 42 | US-ONLY Wildlife Habitat | | |
| 43 | US-ONLY Waterfowl | | |
| 44 | US-ONLY Buffer Zones and Filter Strips | | |
| 45 | US-ONLY Other Water Efficiency Technologies | | |
| 8 | 8 US-ONLY (ENTER POINTS > 3) | X | |
| 10 | 10 US-ONLY (ENTER POINTS > 3) | X | |
| 12e | 12e US-ONLY Outbound Water Quality | | |
| | TOTAL | | |

## QUESTION 10: RESPONSE OPTIONS AND POINTS MAPPED TO SRP 2.0

| COMBINATIONS | | | | MAP TO SRP 2.0 | |
|---|---|---|---|---|---|
| LEVELING | | DRYING | | SRP RESULT | US ONLY |
| A | 4 | A | 2 | 3 | 1 |
| A | 4 | B | 1 | 3 | 0 |
| A | 4 | C | 0 | 0 | 0 |
| B | 3 | A | 2 | 3 | 1 |
| B | 3 | B | 1 | 3 | 0 |
| B | 3 | C | 0 | 0 | 0 |
| C | 2 | A | 2 | 3 | 0 |
| C | 2 | B | 1 | 3 | 0 |
| C | 2 | C | 0 | 0 | 0 |
| D | 1 | A | 2 | 2 | 0 |
| D | 1 | B | 1 | 1* | 0 |
| D | 1 | C | 0 | 0 | 0 |
| E | 0 | A | 2 | 2 | 0 |
| E | 0 | B | 1 | 1 | 0 |
| E | 0 | C | 0 | 0 | 0 |