Deviations Summary for SRP National Interpretation Guideline for the United States based on the SRP Standard for Sustainable Rice Cultivation v.2.0.

This document describes changes made in creating an SRP National Interpretation Guideline (NIG) for the United States (US) including a question by question comparison noting deviations to text and scoring as well as the justifications for deviations with references.

- Per the Protocol for Developing National Interpretation Guidelines, SRP Standard 2.0 has been used as the basis for adaptation.
- Per the Protocol for Developing National Interpretation Guidelines, all questions and the scoring system (total number of points) have been maintained; no questions were deleted.
- Per the Protocol for Developing National Interpretation Guidelines, minimum thresholds have been maintained on all questions. In questions where substantial changes to content were required to reflect the U.S. production system, every effort was made to make the critical minimums equivalent and maintain consistency with the question's intent.
- 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.
- This National Interpretation Guideline for the SRP can be used for the top 6 rice producing states in the U.S. (Arkansas, California, Louisiana, Mississippi, Missouri and Texas); these states represent 99% of U.S. rice production; additional states will be added as needed.

The draft NIG for the US questionnaire is included as a companion to this document (4b_SRP-NIG-US Questionnaire_2020.01.31.PDF). Scoring tables are included in that document.

26 (of 41) SRP questions are 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 NIG for the US. These questions are automatically answered for all U.S. rice producers and are listed in the table below.

SRP questions automatically answered for all U.S. producers 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, 20, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41
SRP questions answered by U.S. producers	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

Ultimately, front matter like (or identical to) the front matter in the SRP Standard 2.0 questionnaire can be included with the NIG for the US questionnaire or provided digitally to explain the program. We expect most U.S. rice producers to complete the questionnaire from an

office computer or via phone or tablet with a crop consultant. A description of National Interpretation Guidelines can also be included on the U.S. SRP National Chapter website. We are seeking the Secretariat's guidance on what text from SRP Standard 2.0 (and other documents) should be repeated and the appropriate locations.

1: CROP CALENDAR

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
A written crop calendar is developed in advance for each cropping season. If needed, it is updated to adapt to changing circumstances (e.g., weather, pest pressures). A crop calendar shows the expected dates of field activities, and the actual dates of implementation of those activities. Activities can include (if applicable): 1. Timing of major operations (e.g., land preparation, planting, harvest). 2. Timing of major fertilization (e.g., split plan) and water management activities (e.g., irrigation). 3. Timing of evaluating pest threat and damage levels (i.e., scouting). 4. Timing of labor and/or contracted services (e.g., machines).	a. Crop calendar includes the expected and actual dates for all four activities (if applicable). b. Crop calendar includes the expected and actual dates for activities 1 and 2 (if applicable) only. c. Crop calendar includes the expected and actual dates for activity 1 only. d. There is no crop calendar, or it is otherwise incomplete.	o3 o2 o1* o0	See NIG-US question 1. POINTS: No change. TEXT: Revised to account for widely available and science-based crop calendars from University Extension offices, State Agriculture departments and State Rice Commissions as well as wide usage of growth model programs. These crop calendars are reliable at the regional scale and well known to all farmers in U.S. U.S. Question 1 of the NIG-US addresses ex-post data tracking (actual dates of implementation) only.

2: RECORD KEEPING

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Records are kept for each cropping season. These records shall at least reflect basic data level (easily collected by farmers) and should include data at the intermediate level (which may require collection by external partners). Basic data (if applicable): • seed variety • yield • fertilizer use • pesticide use • number of irrigations • irrigation water quality risk assessment • net income from rice • list of sightings of key pests and indicator Intermediate data (if applicable): • same as above but more specific data • mg CO2 equivalents/ ha • milled grain samples submitted to laboratory for analysis For specific details on basic and intermediate data level measuring units please refer to Annex A or the SRP Performance Indicators.	a. Records are kept of applicable data at the intermediate level. b. Records are kept of applicable data using a mix of basic and intermediate data levels. c. Records are kept of applicable data at the basic data level. d. No records are kept.	o3 o2 o1* o0	See NIG-US question 2. POINTS: No change. TEXT: Revised to specify a minimum number of topics for which data is collected (5, 5 or 6). Text now accounts for data collected by machinery and analyzed with programs such as “MyJohnDeere”. Text revised for Intermediate Level to include sub-field monitoring and yield based monitoring. These would meet the Intermediate criteria of “same as above, but more specific”. All metrics provided in a single list for clarity. GHGs added to the list. Milled grain samples submitted to lab for analysis removed from list as grain inspections are routinely conducted per the USDA FGIS GIPSA guidelines addressed in questions 19-23. The mill will always have these results, but the farmer may or may not have them depending on the mill, even if these analyses are routinely conducted. Water Quality Risk analysis or samples added to the list. Net income from rice removed from list since 100% of U.S. farmers are tracking net income if they file taxes in the U.S. They will be reluctant to provide this information to a second or third party as proof that they track it. The Legal Attestation at the end of the questionnaire asks producers if they filed taxes.

3: TRAINING

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Farmer training, information, and support needs are assessed for all topics in the SRP Standard. 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. Farmer demonstrates that relevant content is applied.	In the last five years: a. Farmer training, information, and support needs assessed; farmer received needed training from an SRP-authorized training provider; and farmer demonstrates that content is applied. b. Farmer training, information, and support needs assessed; farmer received needed training; and farmer demonstrates that content is applied. c. Farmer training, information, and support needs assessed; and farmer received needed training. d. Farmer training, information, and support needs not assessed.	o3 o2 o1* o0	See NIG-US question 3. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Certified Crop Advisors will be the likely contact point for farmers to the SRP program in the U.S. and SRP-Authorized training is not currently available in the U.S. Certified Crop Advisors will not be able to afford travel to Asia to attend training, even if they see a business advantage for themselves in offering SRP expertise. Approximately 90% of U.S. farmers utilize a Certified Crop Advisor at some level. Crop advisors already require training and licensing and can easily receive SRP specific training once available, especially since much of the SRP already overlaps with U.S. regulation and recommended practices from the USDA on which they are trained. Awareness of and access to scientific research and consolidated recommendations on the topics of land preparation, water management, nutrient management, pest management and post-harvest operations by US farmers is extremely high. Example Resources: state University Extension Offices, Certified Crop Advisors, State Agriculture Departments and respective State Rice Handbooks[1], the USA Rice Federation events and resources, Rice Producers Association Events, USDA Field Days and the USDA -NRCS EQIP and CSP Programs[2]

[1] California: http://rice.ucanr.edu/files/288581.pdf
Arkansas: https://www.uaex.edu/publications/MP-192.aspx
Louisiana: https://www.lsuagcenter.com/topics/crops/rice/variety_trials_recommendations/rice-production-handbook
Mississippi: https://extension.msstate.edu/sites/default/files/publications/publications/p2255.pdf
Missouri: http://crops.missouri.edu/rice/
Texas: https://beaumont.tamu.edu/eLibrary/Bulletins/2012_Rice_Production_Guidelines.pdf

[2] Example: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_034097.pdf

4: HEAVY METALS

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Milled grain shall be safe from heavy metals. Milled grain is safe when there are no detectable levels of heavy metals in the milled grain as set by international authorities on food safety[1], or by national law or regulations (whichever is stricter). Risk of soil contamination from heavy metals such as arsenic, cadmium, chromium, mercury, and lead has been analyzed[2] In the presence of (risk of) soil contamination from heavy metals: 1. A group level soil analysis is conducted in contaminated areas at least every 5 years. 2. Soil remediation techniques are implemented.[3]	a. There is proof (not older than five years) that the milled grain is safe from heavy metals. b. There is documented proof (not older than five years) (by a group soil analysis or a reliable external proof) that the level of heavy metals in the soil of the group or region does not exceed background levels. c. A group risk assessment (not older than five years) does not show risk from heavy metal contamination (see Annex A: Risk Assessment Checklist). d. In case of risk, a group level soil analysis is carried out at least every five years; in case of the presence of soil contamination from heavy metals, soil remediation techniques are implemented. e. None of the above.	o3 o3 o2* o1 o0	All U.S. Producers answer “B”. POINTS: No change. TEXT: No change. As of July 2018, the Codex Committee on Contaminants in Food (CCCF) has developed a Proposed Draft Code of Practice for the Prevention and Reduction of Arsenic Contamination in Rice (Code of Practice). According to the CAC (Codex Alimentarius Commission), all U.S. grown rice is below the minimum level for concern for arsenic in rice addressed by the draft code of Good Practice (i.e. no more than 0.35 mg/kg of inorganic arsenic should be allowed in husked rice (paddy rice from which the husk only has been removed, also known as brown rice).[3, 4] In response to the CODEX, the United States Government Office of Accountability (GAO) released in 2018 a report to the U.S. House of Representatives on federal efforts to manage risk from arsenic in risk.[5] Further, safety of the milled grain in the United States is ensured by the US Food and Drug Administration (USFDA). The USFDA actively monitors the levels of various metals in the food supply and takes a systematic approach to reduce the risks posed by toxic metals especially to vulnerable populations[6].

[3] http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FMeetings%252FCX-735-10%252FReport%252FREP16_CFe.pdf

[4] https://www.researchgate.net/publication/281175002_Codex_Committee_on_Contaminants_in_Foods_2012_Proposed_Draft_Maximum_Levels_for_Arsenic_in_Rice_CXCF1268

[5] https://www.gao.gov/assets/700/690701.pdf

[6] https://www.fda.gov/food/foodborneillnesscontaminants/metals/default.htm

5: SOIL SALINITY

SRP Question Text	SRP Response Options	SRP Points	Comments US National Interpretation Guideline for U.S.
Risk of soil salinity has been analyzed.[7] Soil salinity is monitored, when at acceptable levels (i.e., not in excess of 3 dS/cm for soil or 5 g/L for water), and effectively managed, when the levels are deemed high. In the presence of (risk of) soil salinity, mitigation/adaptation measures include: • Selection of salinity-tolerant varieties. • Monitoring of salinity in field water. • Management of salinity through maintained water pressure in the field. • Management of inflow/outflow in quantity and timing to minimize salinity. • Expert advice and subsequent action.	a. There is documented proof, not older than 3 years (per any method in footnote 12), that: • There is no (risk of) soil salinity within the group or region, or • Soil salinity within the group or region is at an acceptable level (i.e., not in excess of 3 dS/cm for soil or 5 g/L for water). b. There is (risk of) soil salinity, and mitigation/adaptation measures taken are effective (e.g., yield gap as compared to an area not affected by soil salinity narrows). c. There is (risk of) soil salinity, and mitigation/ adaptation measures are taken. d. None of the above.	o3 o2 o1* o0	See NIG-US question 5. POINTS: No change. TEXT: Revised to reflect how problems due to salinity are monitored and addressed in the U.S. (See State Rice Handbooks). Farmers are directed to scout for specific types of damage followed by mitigation action as advised by experts as soon as damage is detected. If groundwater is used, the well was tested when drilled but there is generally no reason to test again unless signs of salinity damage are present or other concerns on well water quality arise. Annual water testing and tissue sampling were added as proactive measures in the absence of signs of damage or saline intrusion.

[7] Methods to analyze risk of soil contamination by heavy metals include:
- A group soil or field water analysis, conducted by qualified laboratories, shows a maximum salinity level of 3 dS/cm for soil or 5 g/L for water.
- A group risk assessment shows no risks soil salinity *(see Annex B: Risk Assessment Checklist)*.
- Records of public authorities that show a maximum salinity level of 3 dS/cm for soil or 5 g/L for water.

6: Land Conversion and Biodiversity

SRP Question Text	SRP Response Options	SRP Points	Comments National Interpretation Guideline for U.S.
Rice farming after 2009 has not been causing conversion within a (proposed) protected area, Key Biodiversity Areas™, Ramsar Sites (wetland), primary forest, secondary forest (native), or other natural ecosystems and land types such as prairie. At the field level, farmer maintains and/or enhances applicable site-specific biodiversity elements: • In-field habitat / refuge • Field margins • Non-cropped area • Plant species which host beneficial natural enemies • Trees (replanted if harvested) Farming practices maintain and/or enhance ecosystem services.	a. There has been no conversion of described areas after 2009, and farming practices maintain and/or enhance site-specific biodiversity and ecosystem services. b. There has been no conversion of described areas after 2009, and farming practices maintain and/or enhance site-specific biodiversity. c. There has been no conversion of described areas after 2009. d. There has been conversion of described areas after 2009.	o3 o2 o1* o0	All U.S. Producers answer “C” as a minimum. Option to answer “B”. See NIG-US question 6e. POINTS: Option A is removed. TEXT: Option A removed. ADDITIONAL INFORMATION: Option A was removed because identifying specific actions that enhance site specific biodiversity and ecosystem services was not possible. Many practices recommended by the USDA and crop advisors likely achieve this but there was no way to substantiate the enhancement of biodiversity without tying to a specific activity for which evidence could be provided. U.S. Producers can only score a maximum of 2/3 on question 6. U.S. federal law is equivalent to “C”. U.S. lands within a protected area, Ramsar Sites, Primary and Secondary Forest or Prairie are and have been protected by the following laws since before 2009: • 1986 Emergency Wetlands Resources Act • Forest Reserves Act of 1891 • 1964 Wilderness Act • National Environmental Policy Act 1969 • National Forest Management Act 1976 These areas have not been converted for agriculture since 2009 in the United States.

7: Invasive Species

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
No invasive species (e.g., water hyacinth, golden apple snail) have been introduced intentionally by the farmer or group since 2009. In the presence of invasive species, effective management measures are taken against invasive species, while protecting native species.	a. No invasive species are introduced intentionally by the farmer or group since 2009. b. In the presence of invasive species, invasive species are effectively managed. c. invasive species are introduced intentionally by the farmer or group.	o3* o1 o0	All U.S. Producers answer "A". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: U.S. federal and state level monitoring equivalent to "A". Invasive species are monitored by the USDA Invasive Species database[8]. Certified Crop Advisors (CCAs) and pest management services report presence and spread of invasive species (Cooperative Agricultural Pest Survey (CAPS) Survey[9], or the California Invasive Plants Council)[10] in their area (Report of Suspect Species Sighting), and implement mitigation and monitoring plans.

[8] https://www.invasivespeciesinfo.gov/
[9] http://caps.ceris.purdue.edu/
[10] https://www.cal-ipc.org/

8: LEVELING

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Instructions: Identify the system that applies to the majority of land under cultivation. Respond for that system: • Flat land or terraces • Sloping land without terraces • Dry land Rice cultivated on flat land or on terraces: • If laser leveling is used, the land or terraces are leveled up to 1/1000 within-plot slope. • If laser leveling is not used, visual observation confirms that the field does not have high and low spots when filled with water and crop stand is uniform in height (i.e., no undulating). Rice cultivated on sloping land without terraces: • Physical soil conservation practices are used (e.g., contour farming, installation of erosion barriers) Cultural soil conservation practices are used (e.g., non-invasive cover cropping, mulching)	For flat land or terraces: a. Land has been leveled up to 1/1000 within-plot slope. b. Land has been leveled. c. Land has not been leveled. OR For sloping land without terraces: d. Both physical and cultural soil conservation practices are used. e. Only physical soil conservation practices are used. f. No soil conservation practices are used. OR For dry land: g. No leveling is required.	 o3 o2* o0 o3 o2* o0 o3	See NIG-US question 8. POINTS: Two additional points are available with option A Flat Land (5 points) for well-maintained zero grade and one additional point for option A, Sloping Land for precision leveled, directional grade. These points are counted separately for U.S. producers only and do not impact the SRP score. All other options are equivalent to options at left. These represent the best achievable options in each scenario, and at a minimum 1/1000. This points allocation also represents the higher financial investment on the part of the farmer to zero grade, and/or precision level single directional and maintain TEXT: Deleted references to dry-land farming. There is no dry-land rice farming in the U.S. Two systems are present: Flat Land or Sloping Land. Options revised to include common terminology and land forming practices in the U.S. ADDITIONAL INFORMATION: Sloping land can be managed with straight or contour levees. Two options for sloping land that is not precision leveled are available reflecting the added benefit of modest leveling together with contour levees, even if not precision. U.S. Producers will be most familiar with the term “precision leveled” to indicate laser leveling that is within 1/1000 of slope but is not zero-grade.

9: PURE QUALITY SEEDS

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Pure quality seeds are free of weeds seeds, pests, and diseases.[11] Certified seeds must comply with applicable national law/regulation or the regulation of the destination market. Seeds with quality control (not certified) must meet criteria including varietal purity, weed seed-free, germination testing, safe storage, fungal control, and others. Self-saved seeds with quality control must meet criteria including safe storage, roguing (removal of all off-types or mixtures of plants) in the field before harvest, and others. The practice of self-saving seeds should not exceed three crop cycles.	a. Farmer buys certified seed that is suitable for local conditions and meets criteria for certified seeds. b. Farmer buys seed with quality control that is suitable for local conditions and meets criteria for seeds with quality control. c. Farmer uses self-saved seeds that meet criteria for self-saved seeds with quality control for a maximum of three crop cycles. d. Farmer uses: • Uncertified seeds, • Seeds without quality control, • Self-saved seeds without quality control, or • Self-saved seeds for more than three crop cycles.	o3 o3 o2* o0	All U.S. Producers answer “A”. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: U.S. seed certification body equivalent to “A”. In the U.S. seeds are certified by members of the Association of Official Seed Certifying Agencies (AOSCA). This organization maintains seed purity standards at levels established by the industry for national and international trade. Due to the widespread adoption of hybrid varieties in the U.S. and the limited number of suppliers of hybrid seed (all known suppliers certify) the market and availability of non-certified seed is extremely low in the U.S. Each rice growing state has a seed certifying board.[12]

[11] Due to variation depending on local conditions, SRP recommends that criteria for certified seeds, seed with quality control, and self-saved seeds with quality control is further specified in SRP National Interpretation Guidelines.

[12] Arkansas: Arkansas State Plant Board https://www.agriculture.arkansas.gov/arkansas-state-plant-board
California: California Crop Improvement Association http://ccia.ucdavis.edu/
Louisiana: Louisiana Department of Agriculture and Forestry http://www.ldaf.state.la.us/
Mississippi: Mississippi Crop Improvement Association https://www.mcia.msstate.edu/
Missouri: Missouri Crop Improvement Association https://moseed.org/
Texas: Texas Department of Agriculture http://www.texasagriculture.gov/RegulatoryPrograms/SeedQuality.aspx

10: WATER MANAGEMENT

Instructions: Identify the local production system that applies to the majority of land under cultivation. Respond only for the corresponding requirement for that system:

- Rainfed production system (10.1)
- Irrigated production system— flood-prone (10.2)
- Irrigated production system— not flood-prone (10.3)

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
10.1 Rainfed production system Measures are in place to enhance water-use efficiency including: 1. Timely and appropriate crop establishment according to local climate. 2. Direct seeding or effective puddling, and strong bunds 3. Use of varieties suitable for local climate (e.g., short or medium-duration varieties). 4. Provision of on-site rainwater harvesting and storage for supplementary irrigation.	a. Farmer implements all four measures. b. Farmer implements measures 1, 2, and 3 only. c. Farmer implements measures 1 and 2 only. d. None of the above.	o3 o2 o1* o0	See NIG-US question 10. POINTS: Deleted 10.1. TEXT: Deleted 10.1 ADDITIONAL INFORMATION: All U.S. rice production meets the definition of SRP System Category “Irrigated – Not Flood Prone”.
10.2 Irrigated production system— flood-prone Measures are in place to enhance water-use efficiency including: 1. Timely crop establishment to avoid submergence of the crop during expected floods. 2. At least one dry-down event (i.e., mid-season drainage of 7 days drained period/aeration), if possible. 3. Leveling with provision for minor drainage conditions. 4. Use of flood-tolerant varieties.	a. Farmer implements measure 1 and any two additional measures. b. Farmer implements measure 1 and any one additional measure listed. c. Farmer implements measure 1 only. d. None of the above.	o3 o2 o1* o0	See NIG-US question 10. POINTS: Deleted 10.2. TEXT: Deleted 10.2. ADDITIONAL INFORMATION: All U.S. rice production meets the definition of SRP System Category “Irrigated – Not Flood Prone”.
10.3 Irrigated production system—not flood-prone	a. Farmer implements all six measures.	o3	See NIG-US question 10. POINTS: Combinations mapped to the options at left. See Table 10. One

Measures are in place to enhance water-use efficiency including:[13] 1. One dry tillage before flooding if soil is cracked. 2. Leveling and strong bunds. 3. Dry seeding, or transplanting following land soak, effective puddling, and tillage within a 1-week period. 4. Alternate wetting and drying. 5. Use of short or medium-duration varieties with similar yield potential as long duration varieties. 6. Termination of irrigation at least 10-15 days before harvesting.	b. Farmer implements measures 2, 3, and 6 only. c. Farmer implements measures 2 and 4 only. d. None of the above.	o2 o1* o0	additional point is allowed for U.S. Producers using the combination: a) "leveled without levees" as this implies precision or zero-grade which will achieve greater water savings relative to the best option in the SRP Standard 2.0 question and b) "leveled with plastic pipe" as this allows for precision water allocation to specific sections of the field and will achieve greater water savings relative to the best option in the SRP Standard 2.0 question and c) "multiple dry down events" as this number of events is not specified in criteria for AWD (at left) but multiple events will achieve greater water savings relative to the best option in the SRP Standard 2.0 question. These points are counted separately for U.S. producers only and do not impact the SRP score. TEXT: Revised to reflect the main levers of control for efficient water management in the U.S. production system.: leveling, use of plastic pipe for precision water delivery and dry down events. The question is organized by varying combinations of these options. ADDITIONAL INFORMATION: All U.S. rice production meets the definition of SRP System Category "Irrigated – Not Flood Prone". Measure 1 in list at left will always be true in the U.S. context; there is no tillage after flooding and some producers practice no-till. Measure 3 in list at left will always be true in the U.S. context as dry seeding is predominantly used in the U.S. with some water seeding in California; there is no transplanting and where water seeding is done, effective puddling is ensured because of leveling. Measure 5 in list at left will always be true in the U.S. context; no long-duration varieties are grown[14]. Measure 6 in list at left will always be true in the U.S. context. All harvesting is mechanical and soil surface needs to be dry for harvesting equipment to access the fields, thus irrigation is always ceased at least 2 weeks prior to allow for vehicle access. Options 2 and 4 (leveling and AWD) are

[13] In severe water-scare areas additional technologies (e.g., aerobic rice varieties, drip irrigation) may be necessary to maintain sustainable cultivation.

[14] https://swat.tamu.edu/media/90113/crops-typicalplanting-harvestingdates-by-states.pdf

			the main levers remaining for water efficiency control.

11: Irrigation System at Community Level

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
The irrigation system under command of the farmer or group (supplied by surface and/or ground water) complies with the following criteria: 1. The command area has sufficient internal canals for supply and drainage. 2. There are no leakages in dikes. 3. Sluices (if any) are functioning well. 4. There is stakeholder involvement in decision making on the irrigation system.	a. Farmer produces under rainfed conditions (no irrigation). b. All four if the listed criteria are met. c. Any three of the listed criteria are met. d. Any two of the listed criteria are met. e. None if the above.	on/a o3 o2* o1 o0	See NIG-US question 11. POINTS: Options A (0), C (2) and D (1) deleted. No change to B and E. TEXT: There is no rainfed production in the U.S. This option has been deleted. Text has been rewritten to reflect the level of control farmers have over water delivery systems in different parts of the United States. ADDITIONAL INFORMATION: Many U.S. farmers receive water from government or private company managed irrigation systems that may cover very large areas. In all instances, farmers must regularly inspect and/or report degradation in service to the service provider.

12: INBOUND WATER QUALITY

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Inbound water is obtained from clean sources that are free of biological, saline, and heavy metal contamination.[15,16] In the presence of (risks of) contaminated water, remediation techniques include, for example, installation of a filtration system or selection of alternative varieties if available.	a. Farmer produces under rainfed conditions (no irrigation). b. There is documented proof, not older than 3 years (per any method in footnote 15), that the inbound water is obtained from clean sources. c. Same as b, but the documented proof is older than 3 years. d. In case of (risks of) contaminated water, mitigation measures are taken to reduce the potential impact of contaminated water. e. None of the above.	on/a o3 o2 o1* o0	See NIG-US question 12. POINTS: Option A (0/NA) deleted. TEXT: Separated into PART 12.1 for well water and PART 12.2 for surface water to reflect the different control entities and drivers for testing (e.g. drilling of a well or watershed level water quality concerns). Option A (3) requires the farmer to test within 3 years and is equivalent to SRP Option B (3). Option C (1) requires farmer to complete a risk assessment (see PART E) and is equivalent to Option D (1). The intent of this question was for the testing and monitoring of INBOUND water. OUTBOUND water quality can also be monitored and improved. See NIG-US 12e. ADDITIONAL INFORMATION: There is no rainfed production in the U.S. This option has bene deleted. Industrial and biological contamination in well water is extremely rare and wells are generally tested for salinity and metals at time of drilling and can be routinely tested for intrusion afterwards. Question 12.1 only references the relevant pollutants. Water quality is monitored and regulated at state level (ground water) and federal and state (surface water via the 303D lists). Regulatory entities will test within the watershed and then regulate sources in the watershed based on the status of the surface water bodies in that watershed. The U.S. labels water bodies as “Impaired” for specific pollutants and uses. Surface water is generally safe, and

[15] Methods to analyze inbound water quality include:
- A group water sample analysis, conducted by qualified laboratories, shows no contamination beyond official national or regional levels.
- A group water quality risk assessment shows no risks of water contamination (see Annex B: Risk Assessment Checklist).

[16] Point of measurement of inbound water quality:
- If no drained water merges with the irrigation canal, water quality should be tested at the main irrigation canal.
- If drained water merges with the irrigation canal, water quality should be tested at the inlet used by the farmer or group (i.e., after the point of merging).

			not mixed with effluent given these regulations and the water delivery systems. U.S. states monitor water quality differently. Text has been revised to reflect the presence of different regulatory and monitoring frameworks. For example, the state of California tests for 36 different contaminants in irrigation waters delivered to farmers. California farmers are also required to monitor irrigation water discharged from farms[17],[18]. Text has been revised to reflect the level of control that farmers have but encourages regular farm level testing for inbound and outbound water. The Resources section in PART E lists laboratories in each state that conduct testing.

[17] https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ca/water/?cid=stelprdb1248443

[18] https://prod.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=stelprdb1248580&ext=pdf

13: GROUNDWATER EXTRACTION

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Groundwater extraction is legal and sustainable. Sustainable groundwater extraction avoids depletion of water resources beyond the watershed recharge capacity and balances the competition for its use.	a. Farmer produces under rainfed conditions (no irrigation). b. Groundwater extraction complies with sustainable water extraction licensing policies. c. Within the past 3 years, professional advice on sustainable groundwater use is sought and followed. d. There is active participation in watershed management and community groundwater water infrastructure projects. e. None of the above.	on/a o3 o2* o1 o0	All U.S. Producers answer "B". POINTS: Option A (N/A) is deleted. TEXT: No change. ADDITIONAL INFORMATION: State water plans equivalent to "B". State water plans[19] designed to achieve long term sustainability of the resource are available in all rice growing states and underscore local extraction law and regulations. U.S. Producers are subject to regulations and policies within the context of these state-level plans.

[19] General for Mississippi Alluvial Aquifer: http://nsglc.olemiss.edu/projects/ag-food-law/files/aquifer-comparison-report.pdf
Arkansas: https://arwaterplan.arkansas.gov/
California: https://water.ca.gov/Programs/California-Water-Plan
Louisiana: http://www.dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=455&pnid=0&nid=173, http://www.dnr.louisiana.gov/index.cfm/page/92
Mississippi: https://www.mdeq.ms.gov/water/water-availability-and-use/
Missouri: https://dnr.mo.gov/mowaterplan/
Texas: https://www.twdb.texas.gov/waterplanning/swp/2017/

14: DRAINAGE

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Intentional surface (sideways) drainage after surface application of agrochemicals is sufficiently delayed to avoid contamination from agrochemical runoff, or according to the product label. Agrochemical runoff can negatively impact biodiversity or surroundings and waterways	a. Farmer produces under rainfed conditions (no irrigation). b. There is no intentional surface (sideways) drainage, due to having good practices in place. c. There is surface (sideways) drainage, but no use of agrochemicals. d. Surface (sideways) drainage is delayed after surface application of agrochemicals by at least 4 days for fertilizers and 14 days for pesticides, or according to the product label. e. Surface (sideways) drainage is delayed after surface application of agrochemicals, but for fewer days due to unexpected need to protect crops. f. None of the above.	on/a o3 o3 o2* o1 o0	See NIG-US question 14. POINTS: Option A (N/A) deleted. TEXT: There is no rainfed production in the U.S. This option has bene deleted. New option A added: “There is no use of agrochemicals”. Drainage time is regulated in California and this difference is reflected in new option B, specific to producers in California. Text revised to use terminology typically used by regulators in the U.S. ADDITIONAL INFORMATION: This issue is addressed in the U.S. through regulations and recommendations for “water-holding” and “free-board” capacity at certain times that are coincident with chemical application. These rules vary by state. U.S. producers will be familiar with the term “free board” and the height of 1-2 inches which ensures no drainage even when rain falls.

15: NUTRIENT MANAGEMENT (INORGANIC AND/OR ORGANIC)

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Efficient and site-specific nutrient management is applied and documented.[20] Measures for efficient nutrient management include: 1. Timing of fertilizer (inorganic and/or organic; N, P, and/or K) application is according to plant needs[21], locally adapted recommendations, and product label instructions (if available). 2. Amount of fertilizer (inorganic and/or organic; N, P, and/or K) applied is based on knowledge of soil fertility and expected yield, locally adapted recommendations, and product label instructions (if available). 3. Natural systems of soil fertility enhancement (e.g., crop rotation, intercropping, and/or non-invasive cover cropping) are used.	a. Farmer complies with all elements listed in the requirement. b. Farmer complies with any two elements listed. c. Farmer complies with any one element listed. d. Farmer is non-compliant with any of the elements listed.	o6 o4* o2 o0	See NIG-US question 15. POINTS: No change. TEXT: Revised to reference the typical sources of information for best practices or plant needs such as University recommendations, label, or sampling.

[20] Due to variation depending on local conditions, SRP recommends that measures for site-specific nutrient management are further specified in SRP National Interpretation Guidelines.

[21] Examples of fertilizer application according to plant needs include: applying N up to 30% of the total amount when plants have 3-5 leaves and using leaf color charts or SPAD meters to identify timing of the next application; or splitting N application between basal, active tillering, and panicle initiation after sowing, and applying P and K during basal stage; or using controlled-release fertilizers.

16: ORGANIC FERTILIZER CHOICE

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Organic material (e.g., animal manure, green manure, mulch, rice straw) is used as fertilizer if the conditions are favorable. Favorable conditions include: 1. It can be applied in non-flooded fields in composted or decomposted state. 2. There is sufficient time for its decomposition prior to flooding. 3. It is available locally and in sufficient quantity.	a. Farmer uses organic material as fertilizer if all three conditions are present. b. Farmer uses organic material as fertilizer if conditions 1 and 2 are present, but not condition 3. c. Farmer does not use organic material as fertilizer because one or more of the listed conditions cannot be met. d. Farmer does not use organic material as fertilizer even though all conditions are present. e. Farmer incorporates organic material into flooded soils.	o3 o2 o2* o1 o0	See NIG-US question 16. POINTS: Option B (2) removed. Option D (1) removed. TEXT: Revised slightly for clarity but intent of option A, C and E are equivalent. ADDITIONAL INFORMATION: U.S. Farmers found this question difficult to understand in testing as they viewed the favorable conditions as de facto if a farmer was using organic fertilizer. Fewer options were provided in the NIG-US to reflect the likely scenarios present i.e. farmers will use organic fertilizer if favorable criteria are present and will not otherwise. As written in the NIG-US, the question encourages the farmer to at a minimum assess the conditions and further encourages good decision making given those conditions. Although many U.S. rice farmers would prefer to use organic fertilizer, they do not have local access to enough quantity of organic fertilizer since large animal operations are not often co-located with large rice farms, introducing transportation costs and GHG emissions.

17: INORGANIC FERTILIZER CHOICE

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Inorganic fertilizers can be used only if they are registered and come from a non-counterfeit source.	a. There is no use of inorganic fertilizers. b. Farmer uses inorganic fertilizers that are registered and come from a non-counterfeit source. c. Farmer uses inorganic fertilizers that are not registered and/or come from a counterfeit source.	o3 o3* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: U.S. regulated market equivalent to "B". Fertilizers and amending materials are regulated at the state level rather than by the federal government in the U.S. Each rice growing state has laws requiring registration, labeling and enforcement for fertilizers sold in the state. The fertilizer market is not only heavily regulated but also very consolidated and competitive in the U.S. The major market players monitor the U.S. market closely and through informal means restrict access to other products, such that the ability to purchase counterfeit fertilizers is extremely low in the U.S. The risk that farmers use counterfeit fertilizer is considered extremely low for the following reasons: 1) There are legal consequences for use of non-registered chemicals due to impacts to neighboring properties 2) The impact to yield for counterfeit chemicals is high and considered not worth the risk to farmers – USDA and market survey data shows annual fertilizer expenses are commensurate with market price for registered chemicals 3) If farmers hold a current chemical applicator's license or hire a third party that holds a current chemical applicator's license, it's impossible that the purchaser would not be aware of laws requiring registration of inorganic fertilizer chemicals, and extremely unlikely that chemicals will NOT be purchased from a large retailer. License holder risks loss of license which would prevent future business in the sector anywhere in the U.S.

18: PEST MANAGEMENT

Introduction on integrated pest management (IPM)

Principles of IPM include:
- Evaluating pest threat and damage levels regularly (scouting).
- Using action thresholds recommended by local government extension experts.
- Evaluating all available pest control methods.
- Selecting a pest control method that maximizes human safety, minimizes environmental impact, is economically justifiable, and prevents food safety risks for all crops.

IPM combines preventative and curative pest control methods. Preventative pest control methods help to manage conditions to avoid pest build-up and can include: resistant varieties, crop rotation, intercropping, sanitation, ecological engineering, and others. Curative pest control methods help to treat pest build-up that has occurred and can include: mechanical control (e.g., hand weeding), biological control (e.g., biological control agents), and chemical control (e.g., synthetic pesticides).

The SRP Standard seeks to encourage ongoing preventative pest control actions, and punctual curative pest control actions when preventative methods are not effective on their own. Pesticides are used only if and when action thresholds are exceeded and the severity of the pest is expected to cause significant damage or loss. Actions should be as targeted as possible to avoid unintended impacts. Measured actions can support cost-reduction for farmers.

Requirements 18.1-18.6 list common preventative pest control methods and the conditions for appropriate use of pesticides for six types of pests.

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
18.1 Weed management Preventative weed control methods can include: • Good land preparation • Use of certified seeds • Crop rotation • Flooding (if water is abundant) Farmer follows IPM principles and the following criteria: 1. Preventative weed control methods are used, before considering curative methods. 2. Herbicide is used only if other curative methods (e.g., manual and mechanical weeding) are not effective on their own and severity of the weeds is expected to cause significant damage or loss. 3. Herbicide selection is in line with national	a. No curative weed control methods are required. Curative weed control methods are required and: b. Farmer effectively controls weeds without the use of herbicide. c. Farmer meets all six criteria listed. d. Farmer meets criteria 1, 2, 3, 4, and 5 only. e. Farmer meets criteria 1, 2, and 3 only. f. Farmer does not meet criteria 1, 2, and 3.	o3 o3 o3 o2* o1 o0	See NIG-US question 18. POINTS: Deleted option A (3) and E (1). TEXT: Combined all options into a single set of recommended practices that are consistent with how pest management is approached in the U.S. U.S. Producers make pest management decisions and treatments holistically per guidance and direction from: 1) USDA Guidance 2) State Rice Handbooks (see references) 3) University extension offices. The causes of each and the best management practices to avoid are discussed in detail in each State Rice Handbook. Further, this questions strongly incentivizes working with USDA-NRCS on IPM or at a minimum working with a licensed chemical applicator which is standard. Specific pests mentioned are not those present in the U.S. Points are consistent with the sum of the components in question 18 and the critical minimum is equivalent to 11 points. Farmer decision making and information/recommendations in the U.S.

government recommendations, is registered for use in rice, comes from a non-counterfeit source, and is not on any of the following international lists: ✓ Persistent Organic Pollutants in the Stockholm Convention ✓ 1A or 1B under World Health Organization classification ✓ Annex III of the Rotterdam Convention[22] 4. Herbicide application is targeted to avoid non-application zones. 5. Herbicide application method is according to the product label instructions, follows specified preharvest interval, and does not exceed specified dosage (for worker safety and food safety). 6. Herbicide selection and use responds to the target weed species, considers timing of the closing of the rice canopy, and considers local information on herbicide-resistant weeds (for efficiency).			production system already almost universally use an IPM approach. Recommended Non-Chemical Options in the U.S. are listed for each pest type and the USDA definition of IPM provided. ADDITIONAL INFORMATION: Deleted option A (3) as this will be extremely rare unless farmer is certified USDA Organic or equivalent. In 2016 1 % of U.S. rice acres were certified USDA Organic. Future versions of the NIG-US will be customized to accommodate USDA Certified Organic requirements. Deleted option E (1) to encourage farmers to at least meet the critical threshold level of scouting, some use of non-chemical methods and use of a licensed chemical applicator when chemicals are used. The text references USDA NRCS Contract [23],[24] for IPM as these are common, immediately recognizable by U.S. Producers and meet all criteria in the SRP Standard 2.0. The USDA NRCS IPM contracts focus on strategies that keep pest populations below economically damaging levels and minimize pest resistance (by avoiding over use of pesticides). These approaches also help prevent unnecessary pest management risks to natural resources and humans. Customized IPM plans are developed with USDA NRCS staff and the farmer. Farmers may still implement all recommended IPM practices without taking advantage of a USDA NRCS contract. Therefore, option B (18) = Option A (18). Added the option for farmers to write in non-chemical methods as a means of information gathering. During piloting, we found that this was an active area of innovation by U.S. farmers.
18.2 Insect management Preventative insect control methods can include: • Balanced nutrient application (e.g., avoid excessive application of nitrogen) • Promotion of beneficial natural enemies (e.g.,	a. No curative insect control methods are required. Curative insect control methods are required and: b. Farmer effectively controls insects	o3 o3	See 18.1

[22] Products on this list may be safe to use under controlled circumstances and justification must be provided for use.

[23] https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/

[24] https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1255178.pdf

insects, spiders) and increasing habitat diversity around rice fields • Synchronized planting • Use of resistant/tolerant varieties • Promotion of other predators (e.g., birds, bats, frogs) • Crop rotation or extended fallow period Farmer follows IPM principles and the following criteria: 1. Preventative insect control methods are used, before considering curative methods. 2. Insecticide is used only if other curative methods (e.g., insect pheromones, biological control agents) are not effective on their own, if action thresholds are exceeded, and if the presence of a specific insect is expected to cause significant damage or loss. 3. Broad spectrum insecticides are not used during the tillering phase (unless in accordance with IPM recommendations by local government extension experts). 4. Insecticide selection is in line with national government recommendations, is registered for use in rice, comes from a non-counterfeit source, and is not on any of the following international lists: ✓ Persistent Organic Pollutants in the Stockholm Convention	without the use of insecticide. c. Farmer meets all seven criteria listed. d. Farmer meets criteria 1, 2, 3, 4, 5 and 6. e. Farmer meets criteria 1, 2, 3 and 4. f. Farmer does not meet criteria 1, 2, 3 and 4.	o3 o2* o1 o0	

✓ 1A or 1B under World Health Organization classification ✓ Annex III of the Rotterdam Convention[25] 5. Insecticide application is targeted to avoid non-application zones. 6. Insecticide application method is according to the product label instructions, follows specified preharvest interval, and does not exceed specified dosage (for worker safety and food safety). 7. Insecticide selection and use responds to the target insect species, considers optimum timing for the target species, and considers local information on insecticide-resistant insects (for efficiency).			
18.3 Disease management Preventative disease control methods can include (effective for fungal, bacterial, and viral diseases): • Balanced nutrient application (e.g., avoid excessive application of nitrogen) • Planting at optimum densities • Use of resistant varieties • Synchronized planting • Removal of host plants (e.g., weeds on bunds, rice stubble, volunteer rice) • Keeping the environment between soil and plant canopy either dry or moist (depending on the disease)	a. No curative disease control methods are required. Curative disease control methods are required and: b. Farmer effectively controls diseases without the use of fungicide. c. Farmer meets all six criteria listed. d. Farmer meets criteria 1, 2, 3, 4, and 5. e. Farmer meets criteria 1, 2, and 3. f. Farmer does not meet criteria 1, 2, and 3.	o3 o3 o3 o2* o1 o0	See 18.1

[25] Products on this list may be safe to use under controlled circumstances and justification must be provided for use.

Farmer follows IPM principles and the following criteria: 1. Preventative disease control methods are used, before considering curative methods. 2. Fungicide is used only if other curative methods (e.g., biological control agents) are not effective on their own and severity of the disease is expected to cause significant damage or loss. 3. Fungicide selection is in line with national government recommendations, is registered for use in rice, comes from a non-counterfeit source, and is not on any of the following international lists: ✓ Persistent Organic Pollutants in the Stockholm Convention ✓ 1A or 1B under World Health Organization classification ✓ Annex III of the Rotterdam Convention[26] 4. Fungicide application is targeted to avoid non-application zones. 5. Fungicide application method is according to the product label instructions, follows the specified preharvest interval or is at least 30 days before harvest (if preharvest interval is not available), and does not exceed specified dosage (for worker safety and food safety).			

[26] Products on this list may be safe to use under controlled circumstances and justification must be provided for use.

6. Fungicide responds to the target disease type, considers recent history of fungal disease and predicted weather patterns, and considers local information on fungicide-resistant diseases (for efficiency).			
18.4 Mollusc management Preventative mollusc control methods can include: • Physical control (e.g., destruction of egg masses) • Reduction of water level so that snail attack is inhibited during the most vulnerable phase (i.e. early growth phase) • Promotion of predators (e.g., wild birds, ducks, fish) • Use of sturdier seedlings during transplanting by sowing low-density nursery beds and planting older seedlings • Crop rotation or extended dry fallow period Farmer follows IPM principles and the following criteria: 1. Preventative mollusc control methods are used, before considering curative methods. 2. Molluscicide is used only if other curative methods (e.g., collection) are not effective on their own and severity of the mollusc is expected to cause significant damage or loss. 3. Molluscicide selection is in line with national government recommendations, is	a. No curative mollusc control methods are required. Curative mollusc control methods are required and: b. Farmer effectively controls molluscs without the use of molluscicide. c. Farmer meets all six criteria listed. d. Farmer meets criteria 1, 2, 3, 4, and 5. e. Farmer meets criteria 1, 2, and 3. f. Farmer does not meet criteria 1, 2, and 3.	o3 o3 o3 o2* o1 o0	See 18.1

registered for use in rice, comes from a non-counterfeit source, and is not on any of the following international lists: ✓ Persistent Organic Pollutants in the Stockholm Convention ✓ 1A or 1B under World Health Organization classification ✓ Annex III of the Rotterdam Convention[27] 1. Molluscicide application is targeted to avoid non-application zones. 2. Molluscicide application method is according to the product label instructions, is not used before manual transplanting, follows specified preharvest interval, and does not exceed specified dosage (for worker safety and food safety). 3. Molluscicide responds to target mollusc species and is used only within the first 3 weeks after crop establishment (for efficiency).			
18.5 Rodent Management Preventative rodent control methods can include: • Community rodent management (e.g., rat eradication campaigns, trap crops) • Synchronized planting • Use of narrow bunds (to minimize rodent habitat) • Promotion of predators (e.g., birds of prey, snakes)	a. No curative rodent control methods are required. Curative rodent control methods are required and: b. Farmer effectively controls rodents without the use of rodents. c. Farmer meets all six criteria listed. d. Farmer meets criteria 1, 2, 3, 4, and 5.	o3 o3 o3 o2* o1	See 18.1.

[27] Products on this list may be safe to use under controlled circumstances and justification must be provided for use.

Farmer follows IPM principles and the following criteria: 1. Preventative rodent control methods are used, before considering curative methods. 2. Rodenticide is used only if other curative methods (e.g., trapping, hunting) are not effective on their own, if there is historical evidence of rodent problems, and if severity of the rodent is expected to cause significant damage or loss. 3. Rodenticide selection is in line with national government recommendations, is registered for use in rice, comes from a non-counterfeit source, and is not on any of the following international lists: ✓ Persistent Organic Pollutants in the Stockholm Convention ✓ 1A or 1B under World Health Organization classification ✓ Annex III of the Rotterdam Convention[28] 4. Rodenticide application is targeted to avoid non-application zones. 5. Rodenticide application method is according to the product label instructions, follows specified preharvest interval, and does not exceed specified dosage (for worker safety and food safety).	e. Farmer meets criteria 1, 2, and 3. f. Farmer does not meet criteria 1, 2, and 3.	o0	

[28] Products on this list may be safe to use under controlled circumstances and justification must be provided for use.

6. Rodenticide responds to target rodent species, is used before the reproductive growth phase of the crop to avoid an outbreak during grain filling, and is placed under protective cover (e.g., bamboo tubes, coconut husks) where not easily accessible to birds or exposed to rainfall (for efficiency).			
18.6 Bird Management Non-lethal bird control methods can include: • Synchronized planting • Scare/deterrent devices • Promotion of predators (e.g., birds of prey, shrikes) • Chemical repellents that do not kill birds and without negative side-effects	a. No bird control is required. Bird control is required and: b. Bird pests are managed by non-lethal bird control methods. c. Bird pests are managed by live trapping and all non-pest species are released alive. d. Bird pests are managed through discriminatory shooting (hunting). e. Birds are indiscriminately persecuted by killing, poisoning, and/or hunting.	o3 o3 o2 o1* o0	See 18.1

19: TIME OF HARVEST

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Rice is harvested at the appropriate time to optimize grain quality.[29] General indications of appropriate timing of harvest are: 1. When 80% to 85% of the grains per panicle are straw- or yellow-colored. 2. When moisture content is between 21% and 24%. 3. Between 28 and 35 days after heading in dry season, or between 32 and 38 days after heading in wet season. 4. Between 130 and 136 days after sowing for late, 113 and 125 for medium, and 110 days for early-maturing varieties. 5. Grains in the lower parts of the panicle should be in the "hard-dough" stage (firm but not brittle); grains that stick to your hand are too wet.	a. Farmer follows criteria 1 or 2. b. Farmer follows criteria 3 or 4. c. Farmer follows criteria 5. d. None of the above.	o3 o2* o1 o0	All U.S. Producers answer "A. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: USDA-FGIS GIPSA Standards equivalent to "A", with the understanding that in the U.S. "…. as recommended by USDA FGIS for U.S. varieties" is equivalent to recommended criteria at left. The U.S. Department of Agriculture's (USDA) Grain Inspection, Packers and Stockyards Administration's (GIPSA) Federal Grain Inspection Service (FGIS) establishes quality standards for rice. FGIS provides impartial inspection and weighing services through a network of Federal, State, and private entities. FGIS monitors marketing practices to enforce compliance with the U.S. Grain Standards Act of 1916[30] and the Agricultural Marketing Act of 1946[31]. To get the best price for their product, US farmers adhere to FGIS quality standards, which include general and specific quality factors for rice. For rice to be considered high-quality, safe for human consumption and certified to be traded either nationally or internationally, it is tested using state of the art technology (QSorter Explorer - high-speed vision and near infrared instrument), and graded based on general appearance, moisture content level (between 14 and 15%), storage conditions and insects/toxins/ foreign materials contamination[32]. 80-85% of yellow or straw color in grains per panicle shows rice maturity at the time of harvest. In the U.S. the USDA has created time table for planting and harvesting by state for each crop to ensure high market

[29] Due to variation depending on local conditions, SRP recommends that criteria for appropriate timing of harvest is further specified in SRP National Interpretation Guidelines.

[30] https://www.ams.usda.gov/rules-regulations/us-grain-standards-act

[31] https://www.ams.usda.gov/sites/default/files/media/Agricultural_Marketing_Act_Of_1946%5B1%5D.pdf

[32] https://www.gipsa.usda.gov/fgis/publication/ar/2016-fgis-AR.pdf

			value for all crops and is directly related to time of harvesting[33].

[33] http://usda.mannlib.cornell.edu/usda/current/planting/planting-10-29-2010.pdf

20: HARVEST EQUIPMENT

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Rice is harvested with clean equipment to prevent contamination and mixing of varieties. Machines (if used) are adjusted to optimum settings and operated according to the crop and field conditions resulting in minimum quality and shattering loss.	For manual harvesting: a. Rice is harvested manually For mechanical harvesting: b. Harvest equipment is cleaned before use and machine settings are adjusted. c. Either harvest equipment is cleaned before use, or machine settings are adjusted. d. Harvest equipment is not cleaned before use and machine settings are not adjusted.	o3* o3* o1 o0	All U.S. Producers answer “B”. POINTS: Option A (3) deleted. TEXT: No change. ADDITIONAL INFORMATION: There is no manual rice harvesting in the U.S. USDA-FGIS GIPSA Standards equivalent to “B”. The U.S. Department of Agriculture’s (USDA) Grain Inspection, Packers and Stockyards Administration’s (GIPSA) Federal Grain Inspection Service (FGIS) establishes quality standards for rice. FGIS provides impartial inspection and weighing services through a network of Federal, State, and private entities. GIPSA assigns grain quality according to 6 different grades based on levels of contamination and breakage. U.S. producers will ensure that equipment settings are appropriate for the desired quality level at sale as there are significant financial implications for change in grade level. In the U.S. harvesting is done with modern rice combines with a maximum of 300 horsepower, which have all functions in one machine: cutting, threshing, separating and cleaning of rice. Elevators and augers convey the grain before putting it in the storage tank. The Rice Inspection handbook[34] defines the characteristics that must be inspected for which include color, smell, broken rice and moisture content.

[34] https://www.ams.usda.gov/sites/default/files/media/RiceHB.pdf

21: DRYING TIME

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Rice drying on-farm starts within 24 hours after harvest. The final moisture content is documented and depends on the further use of the rice: • 14-18% moisture content for direct selling, for sale within three days. • 16% or less moisture content for sale within one week. • 14% moisture content or less for storing grains longer than one week. • 12% moisture content or less for storing seeds. Within a batch, the moisture content of a grain is not more than 1% after drying compared with the average moisture content (i.e., moisture gradient). If rice is not dried on-farm (e.g., at farmer's concrete yard), it is transported to a drying (e.g., miller) or processing facility within 12 hours after harvest (so that rice can be milled at 14% moisture content).	a. Farmer transports rice to a drying or processing facility within 12 hours after harvest. b. Farmer starts drying rice on-farm within 24 hours after harvest and reaches 16% or less moisture content and not more than 1% moisture gradient within one week. c. Farmer starts drying rice on-farm within 24 hours after harvest and reaches 14-18% or less moisture content and not more than 1% moisture gradient within three days. d. Farmer starts drying rice on-farm within 24 hours after harvest but cannot document 18% or less moisture content or not 1% or less moisture gradient. e. Farmer does not transport rice to a drying or processing facility within 12 hours after harvest or start drying rice on-farm within 24 hours after harvest.	o3 o3 o2* o1 o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change ADDITIONAL INFORMATION: USDA-FGIS GIPSA Standards equivalent to "B" with the understanding that in the U.S. "…. as recommended by USDA FGIS for U.S. varieties" is equivalent to recommended criteria at left. The U.S. Department of Agriculture's (USDA) Grain Inspection, Packers and Stockyards Administration's (GIPSA) Federal Grain Inspection Service (FGIS) establishes quality standards for rice. FGIS provides impartial inspection and weighing services through a network of Federal, State, and private entities. FGIS monitors marketing practices to enforce compliance with the U.S. Grain Standards Act of 1916[35] and the Agricultural Marketing Act of 1946[36]. To get the best price for their product, US farmers adhere to FGIS quality standards, which include general and specific quality factors for rice. The Rice Inspection handbook[37] defines the characteristics that must be inspected for which include color, smell, broken rice and moisture content. Per the FGIS Rice Handbook, when moisture exceeds 15.0%, determined by an approved device[38], milled rice is considered Sample Grade, which represents the lowest possible grade designation. The Rice Inspection handbook[39] defines the characteristics that must be inspected for which include color, smell, broken rice and moisture content. Dryers (on site and third party) must routinely produce rice that meets this

[35] https://www.ams.usda.gov/rules-regulations/us-grain-standards-act
[36] https://www.ams.usda.gov/sites/default/files/media/Agricultural_Marketing_Act_Of_1946%5B1%5D.pdf
[37] https://www.ams.usda.gov/sites/default/files/media/RiceHB.pdf
[38] https://www.ams.usda.gov/sites/default/files/media/MoistureHB.pdf
[39] https://www.ams.usda.gov/sites/default/files/media/RiceHB.pdf

			standard and can pass inspection. The Food and Agriculture Organization (FAO) sets moisture content for rice at 15 per cent m/m as a quality factor. If drying occurs on farm, moisture content will be recorded in the combine computer and if at mill will be on the bill of lading. GIPSA and the Food and Drug Administration (FDA) have an agreement to assure the most effective possible system for identifying rice and other food products which exceed FDA action levels of aflatoxin contamination[40]. There are currently eight air-oven moisture reference methods used to determine moisture in the major U.S. grains and these methods are recognized internationally to encourage worldwide confidence. These reference methods vary per grain type, moisture, and commodity and are maintained at GIPSA in the Technology and Science Division's Laboratory. For milled rice, the moisture restriction in the US is ≤ 16%, and for rough rice it is ≤ 13%.[41]

[40] https://www.gipsa.usda.gov/fgis/aflatoxin.aspx

[41] https://www.nist.gov/sites/default/files/documents/2017/03/14/c-011.pdf

22: DRYING TECHNIQUE

SRP Question Text	SRP Response Options	SRP Points	Comments US National Interpretation Guideline for U.S.
Rice is dried by using sustainable drying techniques. For sun drying: 1. Layer thickness is 2-4 cm. 2. Rice is turned every 30 minutes. 3. Rice is protected from rain. 4. Rice is protected from mycotoxins, animals, and people (e.g., on nets, mats, or canvas). For mechanical drying: 5. Use of quality dryers certified to produce optimum grain quality (no discoloration, smell, and minimized amount of broken rice). 6. Set dryer at a maximum temperature of 43°C for flat-bed batch dryers and 55°C for re-circulating batch dryers.	a. Farmer does not do the drying himself/herself. b. Farmer uses mechanical drying and follows criteria 5 and 6. c. Farmer uses sun drying and follows criteria 1, 2, 3, and 4. d. Farmer uses sun drying and follows criteria 3 and 4. e. None of the above.	on/a o3 o2* o1 o0	All U.S. Producers answer “B”. POINTS: No change. TEXT: No change ADDITIONAL INFORMATION: USDA-FGIS GIPSA Standards equivalent to “B” with the understanding that in the U.S.“……farmer uses mechanical drying and meets the GIPSA standards for grain type and end use OR delivers to a dryer and/or miller that meets the GIPSA standards for grain type and end use…..” is equivalent to criteria 5 and 6 (option B). There is no sun-drying in the U.S. The U.S. Department of Agriculture’s (USDA) Grain Inspection, Packers and Stockyards Administration’s (GIPSA) Federal Grain Inspection Service (FGIS) establishes quality standards for rice. FGIS provides impartial inspection and weighing services through a network of Federal, State, and private entities. FGIS monitors marketing practices to enforce compliance with the U.S. Grain Standards Act of 1916[42] and the Agricultural Marketing Act of 1946[43]. To get the best price for their product, US farmers adhere to FGIS quality standards, which include general and specific quality factors for rice. The Rice Inspection handbook[44] defines the characteristics that must be inspected for which include color, smell, broken rice and moisture content. Dryers (on site and third party) must routinely produce rice that meets this standard and can pass inspection. If drying occurs on farm, moisture content will be recorded in the combine computer and if at mill will be on the bill of lading. GIPSA in the Technology and Science Division’s Laboratory currently uses eight air-oven moisture reference methods to

[42] https://www.ams.usda.gov/rules-regulations/us-grain-standards-act
[43] https://www.ams.usda.gov/sites/default/files/media/Agricultural_Marketing_Act_Of_1946%5B1%5D.pdf
[44] https://www.ams.usda.gov/sites/default/files/media/RiceHB.pdf

			determine moisture in the major U.S. grains; these methods are recognized internationally to encourage worldwide confidence[45]. For milled rice, the moisture restriction in the US is ≤ 16%, and for rough rice it is ≤ 13%[46] when rice reaches the equilibrium moisture content (EMC)[47], then rice is transferred to bins, silos or flat warehouses. US farmers must adhere to GIPSA standards for their rice to not be discounted at time of grading. These reference methods vary per grain type, moisture, and commodity and are maintained at GIPSA in the Technology and Science Division's Laboratory.

[45] https://www.ams.usda.gov/sites/default/files/media/MoistureHB.pdf
[46] https://www.nist.gov/sites/default/files/documents/2017/03/14/c-011.pdf
[47] http://www.fao.org/docrep/015/i2433e/i2433e10.pdf

23: RICE STORAGE

SRP Question Text	SRP Response Options	SRP Points	Comments US National Interpretation Guideline for U.S.
Rice is safely stored to maintain its quality, through hermetic storage or the following measures: 1. Prevent contamination with hazardous substances, such as agrochemicals. 2. Maintain 14% moisture content or less. 3. Prevent rewetting. 4. Prevent pest damage without fumigation. 5. Rice is cleaned before storage (removal of dirt, weeds, and insects).	a. Farmer does not store rice on-farm. b. Farmer practices hermetic storage or applies all five measures. c. Farmer applies measures 1, 2, 3 and 4 only. d. Farmer applies measures 1 and 2 only. e. None of the above.	on/a o3 o2 o1* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change ADDITIONAL INFORMATION: USDA-FGIS GIPSA Standards and USDA CCC UGRSA equivalent to "B" with the understanding that in the U.S."….farmer stores rice on farm and practices all five measures OR delivers to a storage facility, dryer or miller that either uses hermetic storage OR storage systems that meet GIPSA specifications….." is equivalent to B. Improper food storage leads to loss of quality, which translates to lower rice prices per the GIPSA grading process[48], [49]. GIPSA grades rice based on its quality before trading, and factors described in measures 1-5, define rice grading and certification according the U.S. rice standards. GIPSA may require storage facilities/warehouse information to meet specifications at the time of testing when rice properties such as moisture content, sanitary conditions, and temperature throughout the storage period are certified. Additionally, in the US, when rice is stored in a warehouse, a USDA Commodity Credit Corporation (CCC-25) Uniform Grain and Rice Storage Agreement (UGRSA) needs to be signed by the parties to assure grain identity preservation and appropriate handling[50]. Legal and financial consequences are tied to the UGRSA.

[48] https://www.ams.usda.gov/sites/default/files/media/RiceHB.pdf
[49] https://www.ams.usda.gov/sites/default/files/media/MoistureHB.pdf
[50] https://www.fsa.usda.gov/Internet/FSA_File/ccc0025_110607v01.pdf

24: RICE STUBBLE

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
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.[51]	a. Stubble is not burned and not plowed under while the soil is dry, with time (at least 3 weeks) to allow aerobic decomposition before wetting. b. Stubble is plowed under while the soil is dry, with time (at least 3 weeks) to allow aerobic decomposition before wetting. c. Stubble is plowed under while the soil is flooded, without time (at least 3 weeks) to allow for aerobic decomposition. d. Stubble is burned.	o3 o2 o1* o0	See NIG-US question 24. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: In addition to the priorities listed at left (air quality, greenhouse gas emissions and soil quality), the creation and maintenance of bird habitat is an environmental priority in the U.S. must also be balanced against the other three. Declining soil health and lack of habitat for migrating birds are currently the top environmental priorities in the rice growing regions of the U.S. Burning of agricultural waste is already extremely restricted by regulation in the state of California, and criteria pollutant levels in air in the other 5 rice growing states are below public health thresholds set by the US EPA. Agricultural burning is very rare in California but does occur in other rice growing states although is generally declining. It is not possible for a farmer to simultaneously improve soil health (allow reside decomposition or some return to soil), flood for bird habitat (cover residue before decomposition) in time for the bird migration, without creating massive methane emissions unless the farmer burns, especially if the farmer practices no-till which is strongly incentivized in the U.S. Massive declines in soil health in the agricultural regions of the U.S. have forced the USDA and other agricultural agencies to aggressively promote no-till and reduced till, cover crops and other soil health initiatives. Layered on top of this is strengthening regulation on agricultural burning (already in place in California and emerging in other areas) to which farmers must respond. Agricultural burning in the U.S. is declining as regulations strengthen. Finally, the scale on which reside is produced on an average sized U.S. rice

[51] 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.

			farm (~1000 ha) constrains options for safe, on-site storage and disposal if removed from fields when markets (emerging but not yet at scale in the U.S.) are not available. See document: 7_Residue Management_F.PDF

25: Rice Straw

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Rice straw managed in a sustainable way to mitigate greenhouse gas emissions, minimize environmental impacts, and retain or improve soil quality. Rice straw is: 1. Not burned. 2. Allowed sufficient time (at least 2 weeks) for aerobic decomposition if rice straw is left on the field or plowed under. 3. Collected, used a livestock feed or composted, and returned to the field.	a. Farmer meets criteria 1 and 3. b. Farmer meets criteria 1 and 2 only. c. Farmer meets criteria 1 only. d. Farmer burns rice straw.	o3 o2 o1* o0	See NIG-US question 25. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: See Q 25

26: Safety Instructions and First Aid

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Workers, including working household members, receive regular safety instructions on how to prevent work-related accidents or diseases, where to access first aid kits, and how to contact health workers. The first aid kit should be well-labeled and available on-farm or placed at a designated medical center known by and accessible to farmers in a group.	a. Workers, including working household members, receive safety instruction annually, and first aid kit is available on-farm or at a designated medical center known by and accessible to farmers in a group. b. Workers, including working household members, have received safety instruction, and are aware of how to contact the nearest health worker or clinic. c. There is no safety instruction.	o2 o1* o0	All U.S. Producers answer “B”. Option to answer “A” see NIG-US question 26e. POINTS: No change. TEXT: No change ADITIONAL INFORMATION: U.S. federal law equivalent to “B”. Farmers can optionally select “A” if performing annual instruction sessions. Agricultural operations are covered by several Occupational Safety and Health standards under the Occupational Safety and Health Act of 1970 including Agriculture (29 CFR 1928), General Industry (29 CFR 1910), and the General Duty Clause[52]. The Act is enforced through the U.S. Department of Labor (DOL) Occupational Safety and Health Administration (OSHA) which conducts inspections[53]. Although OSHA has fewer safety and health standards for agricultural operations than it has for general industry or construction, and farms classified as “small farm operations” are exempt from some OSHA provisions and inspections, if a specific standard does not exist for a serious hazard, OSHA uses the statutory General Duty Clause (Section 5(a)(1) of the OSH Act) to issue citations to the employer and propose penalties. Under Federal OSHA Regulation Standard 1910.151.b: "Adequate first aid supplies shall be readily available."[54] This rule applies to treatment of minor injuries that occur in the workplace and refers in Appendix A to ANSI Z308.1 as the basis for minimum first aid kit content. In the U.S. it is common knowledge that emergency medical treatment is available by calling 911. Information about the common agriculture safety hazards and how to prevent them is available through

[52] https://www.osha.gov/dsg/topics/agriculturaloperations/
[53] https://www.osha.gov/OshDoc/data_General_Facts/factsheet-inspections.pdf
[54] https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9807

			OSHA's[55] and state agriculture extension offices[56]. If a farmer is compliant with the law and is aware of the resources, the risk is extremely low that workers would not have access to information or supplies.

[55] https://www.osha.gov/dsg/topics/agriculturaloperations/publications.html
[56] https://www.osha.gov/dsg/topics/agriculturaloperations/generalresources.html

27: TOOLS AND EQUIPMENT

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Tools and equipment for farm operations and postharvest processes are working and efficient in use by regular and proper maintenance and calibration. Tools are adequately stored. Pesticide application equipment (if pesticide(s) is (are) applied) is maintained and calibrated to prevent leakage or contamination.	a. Tools and equipment maintained and calibrated within the current cropping season. b. Tools and equipment maintained and calibrated within the past 2 years. c. Tools and equipment not maintained and calibrated within the past 2 years.	o2 o1* o0	See NIG-US question 27. POINTS: No change. TEXT: Revised option A to, “Farm equipment is inspected every year prior to use and maintained and calibrated as required by the manufacturer”. Revised option B to, ““Farm equipment is not inspected, calibrated and maintained as recommended by manufacturer, but is inspected regularly (not necessarily annually) and maintained as issues arise”.

28: Training of Pesticide Applicators

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Pesticide applicators receive training and apply good practices on the safe handling and use of pesticides, including: • An explanation of the names, toxicity, health risks, and other relevant information related to all substances to be applied. • Techniques for correct handling of substances. • Preventative measures for reducing possible damage to health and the environment caused by substances. • Emergency procedures for cases involving poisoning or undue contact with substances.	a. There is no use of pesticides. If pesticide(s) is (are) used, in the last five years: b. Pesticide applicators participated in training and demonstrate that relevant content is applied. c. Pesticide applicators participated in training. d. Pesticide applicators did not participate in training.	o2 o2 o1* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Chemical Applicator's License equivalent to "B". A chemical applicator's license is required in all rice growing states for both ground and aerial application and commercial and non-commercial applicators of certain chemicals. Applicators must complete training and an exam to receive the license and complete continuing education to maintain the license. Licenses and training programs are administered by state agencies. Each state produces training manuals, which are identical to or almost identical to the national chemical applicator's training manual[57] which covers the following topics: Emergency response; Incident response; Environmental concerns; Federal pesticide laws and regulations; Harmful effects of pesticides; Integrated pest management; Mixing, loading and applying pesticides; Personal protective equipment; Pesticide application planning; Pesticide application procedures; Pesticide application training; Pesticide disposal; Pesticide formulations; Pesticide hazards and first aid; Pesticide labeling; Pesticide security; Pesticide storage; Pesticide transportation. State manuals and specific applications may include additional materials. If farmers hold a current chemical applicator's license or hire a third party that holds a current chemical applicator's license, the requirements of question 28 will be met. Farmers must provide their license number or that of a third-party applicator in the NIG-US questionnaire.

[57] http://www.ag.utah.gov/documents/CoreManual.pdf

29: PERSONAL PROTECTIVE EQUIPMENT (PPE)

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Pesticide applicators use functional and good-quality PPE as recommended on the product label, including: • Chemical-resistant gloves • Masks • Dermal protection (e.g., long-sleeved shirt, long-trouser legs) • Boots • Eye protection during mixing and application	a. There is no use of pesticides. If pesticide(s) is (are) used: b. In the case of spraying: Pesticide applicators use all five of the listed PPE items of good quality (or what is recommended on the product label). c. In the case of plane, drone, or tractor application: Pesticide applicators use chemical-resistant gloves and masks of good quality during mixing (or what is recommended on the product label). d. In the case of spraying: Pesticide applicators use at least chemical-resistant gloves and masks of good quality. e. None of the above.	o2 o2 o2 o1* o0	All U.S. Producers answer “B”. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Chemical Applicator’s License equivalent to “B”. A chemical applicator’s license is required in all rice growing states for both ground and aerial application and commercial and non-commercial applicators of certain chemicals. Applicators must complete training and an exam to receive the license and complete continuing education to maintain the license. Licenses and training programs are administered by state agencies. Each state produces training manuals, which are identical to or almost identical to the national chemical applicator’s training manual[58] which covers the following topics: Emergency response; Incident response; Environmental concerns; Federal pesticide laws and regulations; Harmful effects of pesticides; Integrated pest management; Mixing, loading and applying pesticides; Personal protective equipment; Pesticide application planning; Pesticide application procedures; Pesticide application training; Pesticide disposal; Pesticide formulations; Pesticide hazards and first aid; Pesticide labeling; Pesticide security; Pesticide storage; Pesticide transportation. State manuals and specific applications may include additional materials. If farmers hold a current chemical applicator’s license or hire a third party that holds a current chemical applicator’s license, the requirements of question 29 will be met and very likely that all 5 protective measures routinely used. Farmers must provide their license number or that of a third-party applicator in the NIG-US questionnaire.

[58] http://www.ag.utah.gov/documents/CoreManual.pdf

30: WASHING AND CHANGING

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Designated areas for washing of PPE, bathing, and changing are available for pesticide applicators after finishing the application. All PPE worn during pesticide application is washed after use and does not enter housing. These designated areas are separated from areas used for household laundry.	a. There is no use of pesticides. If pesticide(s) is (are) used: b. Designated areas for washing and changing (separated) are available, and they are not used for household laundry. c. Designated area for washing and changing (combined) is available, and it is not used for household laundry. d. Area(s) for washing and changing for pesticide applicators is (are) used for household laundry.	o2 o2 o1* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Chemical Applicator's License equivalent to "B". A chemical applicator's license is required in all rice growing states for both ground and aerial application and commercial and non-commercial applicators of certain chemicals. Applicators must complete training and an exam to receive the license and complete continuing education to maintain the license. Licenses and training programs are administered by state agencies. Each state produces training manuals, which are identical to or almost identical to the national chemical applicator's training manual[59] which covers the following topics: Emergency response; Incident response; Environmental concerns; Federal pesticide laws and regulations; Harmful effects of pesticides; Integrated pest management; Mixing, loading and applying pesticides; Personal protective equipment; Pesticide application planning; Pesticide application procedures; Pesticide application training; Pesticide disposal; Pesticide formulations; Pesticide hazards and first aid; Pesticide labeling; Pesticide security; Pesticide storage; Pesticide transportation. State manuals and specific applications may include additional materials. If farmers hold a current chemical applicator's license or hire a third party that holds a current chemical applicator's license, the requirements of question 30 will be met. Farmers must provide their license number or that of a third-party applicator in the NIG-US questionnaire.

[59] http://www.ag.utah.gov/documents/CoreManual.pdf

31: APPLICATOR RESTRICTIONS

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Pesticides are not applied by pregnant or lactating women, by persons below 18 years, or by persons who suffer from chronic or respiratory diseases.	a. There is no use of pesticides. If pesticide(s) is (are) used: b. Pesticides are not applied by pregnant or lactating women, by persons below 18 years, or by persons who suffer from chronic or respiratory diseases. c. Pesticides are applied by pregnant or lactating women, by persons below 18 years, or by persons who suffer from chronic or respiratory diseases.	o2 o2* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Chemical Applicator's License equivalent to "B". A chemical applicator's license is required in all rice growing states for both ground and aerial application and commercial and non-commercial applicators of certain chemicals. Applicators must complete training and an exam to receive the license and complete continuing education to maintain the license. Licenses and training programs are administered by state agencies. Each state produces training manuals, which are identical to or almost identical to the national chemical applicator's training manual[60] which covers the following topics: Emergency response; Incident response; Environmental concerns; Federal pesticide laws and regulations; Harmful effects of pesticides; Integrated pest management; Mixing, loading and applying pesticides; Personal protective equipment; Pesticide application planning; Pesticide application procedures; Pesticide application training; Pesticide disposal; Pesticide formulations; Pesticide hazards and first aid; Pesticide labeling; Pesticide security; Pesticide storage; Pesticide transportation. State manuals and specific applications may include additional materials. If farmers hold a current chemical applicator's license or hire a third party that holds a current chemical applicator's license the risk is extremely low that a pregnant woman, lactating woman or minor would be allowed to apply chemicals. OSHA regulations would also deter this occurrence. Farmers must provide their license number or that of a third-party applicator in the NIG-US questionnaire.

[60] http://www.ag.utah.gov/documents/CoreManual.pdf

32: Re-entry Time

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Re-entry time after the use of pesticides: 1. Follows the recommendation on the product label, or after 48 hours if the label does not give a recommendation. 2. Is clearly communicated.	a. There is no use of pesticides. If pesticide(s) is (are) used: b. Farmer meets criteria 1 and meets criteria 2 by placing warning signs or symbols in the fields. c. Farmer meets criteria 1 and meets criteria 2 by verbally communicating re-entry time. d. Farmer does not meet criteria 1 and/or 2.	o2 o2 o1* o0	All U.S. Producers answer “C”. Option to answer “B” see NIG-US question 32e. POINTS: No change. TEXT: No change ADDITIONAL INFORMATION: Chemical Applicator’s License equivalent to “C”. A chemical applicator’s license is required in all rice growing states for both ground and aerial application and commercial and non-commercial applicators of certain chemicals. Applicators must complete training and an exam to receive the license and complete continuing education to maintain the license. Licenses and training programs are administered by state agencies. Each state produces training manuals, which are identical to or based upon the national chemical applicator’s training manual[61] which covers the following topics: Emergency response; Incident response; Environmental concerns; Federal pesticide laws and regulations; Harmful effects of pesticides; Integrated pest management; Mixing, loading and applying pesticides; Personal protective equipment; Pesticide application planning; Pesticide application procedures; Pesticide application training; Pesticide disposal; Pesticide formulations; Pesticide hazards and first aid; Pesticide labeling; Pesticide security; Pesticide storage; Pesticide transportation. State manuals and specific applications may include additional materials. If farmers hold a current chemical applicator’s license or hire a third party that holds a current chemical applicator’s license, the risk is extremely low that proper re-entry time per label instructions would be not adhered to and would not be communicated verbally, at a minimum. Farmers must provide their license

[61] http://www.ag.utah.gov/documents/CoreManual.pdf

			number or that of a third-party applicator in the NIG-US questionnaire.

33: Pesticide and Chemical Storage

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Pesticides and inorganic fertilizers (including partly-empty containers) are: 1. Labeled. 2. Stored in a locked place that is separate from fuel, food, and rice and which is out of reach of children.	a. There is no use of pesticides and/or inorganic fertilizers. If pesticide(s) and/or inorganic fertilizers (are) used: b. Farmer OR licensed third-party applicator meets criteria 1 and 2. c. Farmer OR licensed third-party applicator meets criteria 2. d. None of the above.	o2 o2 o1* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Chemical Applicator's License equivalent to "B". A chemical applicator's license is required in all rice growing states for both ground and aerial application and commercial and non-commercial applicators of certain chemicals. Applicators must complete training and an exam to receive the license and complete continuing education to maintain the license. Licenses and training programs are administered by state agencies. Each state produces training manuals, which are identical to or based upon the national chemical applicator's training manual[62] which covers the following topics: Emergency response; Incident response; Environmental concerns; Federal pesticide laws and regulations; Harmful effects of pesticides; Integrated pest management; Mixing, loading and applying pesticides; Personal protective equipment; Pesticide application planning; Pesticide application procedures; Pesticide application training; Pesticide disposal; Pesticide formulations; Pesticide hazards and first aid; Pesticide labeling; Pesticide security; Pesticide storage; Pesticide transportation. State manuals and specific applications may include additional materials. If farmers hold a current chemical applicator's license or hire a third party that holds a current chemical applicator's license, the risk that chemicals are not labeled and stored properly by the farmer or a third party is extremely low. Farmers must provide their license number or that of a third-party applicator in the NIG-US questionnaire.

[62] http://www.ag.utah.gov/documents/CoreManual.pdf

34: PESTICIDE DISPOSAL

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Empty pesticide containers, surplus pesticides, and obsolete pesticides (e.g., past shelf life or banned) are disposed of properly, through a collection, return, or disposal service, or through good practices in pesticide disposal. Good practices in pesticide disposal include: 1. Empty containers are rinsed three times with water. Surplus spray and wash-water is applied over an unmanaged part of the farm, away from water bodies. 2. Containers are made unusable by crushing or puncturing before burying them on-farm. 3. Containers are buried in a designated area (at least 20 meters away from a water body) and are not accessible to children or unauthorized persons. 4. Obsolete pesticides are returned to the dealers or, if not possible, disposed of in a manner that minimizes exposure to humans and the environment.	a. There is no use of pesticides. If pesticide(s) is (are) used: b. Farmer participates in a collection, return, or disposal service, especially if there is a large volume of waste. c. In the absence of such a service, farmer meets all four criteria for good practices in pesticide disposal. d. In the absence of such a service, farmer does not meet all four criteria for good practices in pesticide disposal. e. There is a collection, return, or disposal service, but it is not used.	o2 o2 o1* o0 o0	All U.S. Producers answer “B”. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Chemical Applicator’s License equivalent to “B” with understanding that, “……. OR licensed applicator removes chemicals from property and disposes according to state law at appropriate sites/returns” is equivalent to “B”. It’s common for U.S. farmers to hire a licensed third-party pesticide applicator that would be responsible for disposal. Disposal is outside of the control of the farmer but hiring a licensed professional is at the discretion of the farmer. A chemical applicator’s license is required in all rice growing states for both ground and aerial application and commercial and non-commercial applicators of certain chemicals. Applicators must complete training and an exam to receive the license and complete continuing education to maintain the license. Licenses and training programs are administered by state agencies. Each state produces training manuals, which are identical to or based upon the national chemical applicator’s training manual[63] which covers the following topics: Emergency response; Incident response; Environmental concerns; Federal pesticide laws and regulations; Harmful effects of pesticides; Integrated pest management; Mixing, loading and applying pesticides; Personal protective equipment; Pesticide application planning; Pesticide application procedures; Pesticide application training; Pesticide disposal; Pesticide formulations; Pesticide hazards and first aid; Pesticide labeling; Pesticide security; Pesticide storage; Pesticide transportation. State manuals and specific applications may include

[63] http://www.ag.utah.gov/documents/CoreManual.pdf

			additional materials. If farmers hold a current chemical applicator's license or hire a third party that holds a current chemical applicator's license, the risk is extremely low that the best practices for chemical disposal would not be adhered to by the farmer or a third party. Farmers must provide their license number or that of a third-party applicator in the NIG-US questionnaire.

35: CHILD LABOR

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Children below 15 years are not engaged as workers.[64] Family members below this minimum work age living on family farms may participate in farming activities that consist of light, age-appropriate duties that give them an opportunity to develop skills, only if activities are: 1. Not harmful to their health and development. 2. Do not interfere with schooling and leisure time. 3. Under supervision of an adult. 4. Not in excess of 14 hours a week. Age of workers is always verified and documented.	a. Farmer does not engage children below the minimum working age as workers. b. Family members below the minimum working age are living and working on the farm, and farmer complies with all four criteria. c. Family members below the minimum working age are living and working on the farm, and farmer does not comply with one or more criteria. d. Farmer engages persons below the minimum working age as workers.	o3 o3* o0 o0	All U.S. Producers answer “B”. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Federal and state labor law equivalent to “B”. The Fair Labor Standards Act (FLSA) establishes a minimum age for non-family, full-time, unrestricted work (16). The FLSA establishes a minimum age for non-family, part-time, non-hazardous work (14). The FLSA establishes minimum age for family, part-time, non-hazardous work (12). The FLSA defines hazardous work activities and hours during the school year when minors can work. Other federal and state laws may have higher standards. When these apply, the more stringent standard must be observed. All states have child labor laws and compulsory school attendance laws with enforcement and establish the minimum ages and conditions under which youths may operate motor vehicles. Unless otherwise exempt, a covered minor employee is entitled to receive the same minimum wage, overtime, occupational safety and health, and non-discrimination protections as adult workers. If farmers comply with existing labor laws, the requirements of question 35 will be met. Farmers attest to knowledge of and compliance with U.S. labor law in PART D of the NIG-US.

[64] ILO Minimum Age Convention, 1973 (No.138)

36: HAZARDOUS WORK

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Children below 18 years are not assigned to work which is likely to harm their safety and health. If national law has set the minimum age at 16 (on condition that appropriate prior training is given and the safety and health of the young workers are fully protected), this age applies.[65] Children below this age do not conduct hazardous work or work that may harm their physical, mental, or moral well-being.[66] They do not: 1. Work in dangerous locations. 2. Work with dangerous machinery, equipment, and tools (as defined by national laws and regulations). 3. Carry heavy loads. 4. Work with dangerous substances. 5. Work at night. Age of workers is always verified and documented.	a. There are no children below 18 years of age working on farm. b. There are children below 18 years of age working on the farm, and farmer complies with all 5 criteria. c. There are children below 18 years of age working on the farm, and farmer does not comply with one or more criteria.	on/a o3* o0	All U.S. Producers answer “B”. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Federal and state labor law equivalent to “B”. The Fair Labor Standards Act (FLSA) establishes a minimum age for non-family, full-time, unrestricted work (16). The FLSA establishes a minimum age for non-family, part-time, non-hazardous work (14). The FLSA establishes minimum age for family, part-time, non-hazardous work (12). The FLSA defines hazardous work activities. State laws establish prohibited nighttime hours of work for minors both during and outside of the school year. Other federal and state laws may have higher standards. When these apply, the more stringent standard must be observed. All states have child labor laws and compulsory school attendance laws and establish the minimum ages and conditions under which youths may operate motor vehicles. Unless otherwise exempt, a covered minor employee is entitled to receive the same minimum wage, overtime, occupational safety. If farmers comply with existing labor laws, the requirements of question 36 will be met. Farmers attest to knowledge of and compliance with U.S. labor law in PART D of the NIG-US.

[65] ILO Safety and Health in Agriculture Convention, 2001 (No. 184)

[66] ILO Worst Forms of Child Labour Convention, 1999 (No. 182) and Recommendation, 1999 (No.190)

37: EDUCATION

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Children living on the farm in the age of compulsory schooling go to school all year long.	a. There are no children living on the farm within the age of compulsory schooling. b. Children living on the farm within the age of compulsory schooling go to school all year long. c. Children living on the farm within the age of compulsory schooling go to school, but not all year long. d. Children living on the farm within the age of compulsory schooling do not go to school, but efforts are made to provide education. e. Children living on the farm within the age of compulsory schooling do not go to school, and no efforts are made to provide education.	on/a o3 o2 o1* o0	All U.S. Producers answer “B”. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Federal and state labor law equivalent to “B”. The Fair Labor Standards Act (FLSA) establishes a minimum age for non-family, full-time, unrestricted work (16). The FLSA establishes a minimum age for non-family, part-time, non-hazardous work (14). The FLSA establishes minimum age for family, part-time, non-hazardous work (12). The FLSA defines hazardous work activities, prohibits work during school hours and defines school hours. State laws establish prohibited nighttime hours of work for minors both during and outside of the school year. Other federal and state laws may have higher standards. When these apply, the more stringent standard must be observed. All states have child labor laws and compulsory school attendance laws and establish the minimum ages and conditions under which youths may operate motor vehicles. Unless otherwise exempt, a covered minor employee is entitled to receive the same minimum wage, overtime, occupational safety and health, and non-discrimination protections as adult workers. If farmers comply with existing labor laws, the requirements of question 37 will be met. Farmers attest to knowledge of and compliance with U.S. labor law in PART D of the NIG-US.

38: FORCED LABOR

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
There is no forced, compulsory, or slave labor used, including trafficked and bonded labor, labor by prisoners, or the use of extortion, debt, threats, fines or penalties.[67] The following criteria are met: 1. No withholding of (part of) the worker's salary, benefits, property, or documents (e.g., identity cards and travel documents) in order to force such worker to continue to work. 2. Workers are not charged recruiting or hiring fees that require them to be indebted to the farm (or recruiting agency). 3. Workers are allowed to leave the farm's premises at the end of their shifts. 4. Regular working hours of workers do not exceed 48 hours per week, with at least one full day of rest for every six consecutive days worked. 5. Spouses and children of contracted workers are not forced to work on the farm. 6. The farm does not participate in or allow human trafficking.	a. Farmer does not engage any workers. b. Farmer demonstrates full compliance with all six criteria. (Smallholders may demonstrate compliance without documentation.) c. Farmer does not comply with one or more of the criteria.	on/a o3* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Federal and state labor law equivalent to "B". The Fair Labor Standards Act and the Migrant and Seasonal Worker Protection Act, define wages, schedule of payment, disclosure of work contract and conditions as well as minimum requirements for housing and transportation when provided by the farmer. When these services are contracted, the provider must be licensed by the Department of Labor. The risk for human trafficking is low due to the highly mechanized nature of rice production in the U.S. and extremely low numbers of workers required. If farmers comply with existing labor laws, the requirements of question 38 will be met. Farmers attest to knowledge of and compliance with U.S. labor law in PART D of the NIG-US.

[67] ILO Forced Labour Convention, 1930 (No. 29) and ILO Abolition of Forced Labour Convention, 1957 (No. 105)

39: DISCRIMINATION

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
There is no discrimination or disrespectful treatment of workers, including working household members.[68] The following criteria are met: 1. No discrimination on the basis of gender, ethnic background, national origin, religion, disability, sexual orientation, pregnancy, organization membership, or political affiliation. 2. No distinction, exclusion, or preference to harm equality of opportunity with regard to hiring, training, task assignment, benefits, remuneration, advancement, termination, retirement, or other employment-related decision. 3. No job-related medical testing as a condition of employment (except lawful drug testing). 4. No behavior, gesture, language, or physical contact that is sexually abusive, coercive, or threatening. 5. No bullying or physical punishment.	a. Farmer does not engage any workers. b. Farmer demonstrates full compliance with all five criteria. (Smallholders may demonstrate compliance without documentation.) c. Farmer does not comply with one or more of the criteria.	on/a o3* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Federal and state labor law equivalent to "B". Discrimination, Distinction, Exclusion or preference on the basis of gender, ethnic background, sex, national origin, religion, disability, pregnancy, political orientation or organization membership is prohibited under title VII of Civil Rights Act of 1964[69]. Sexual Harassment and physical punishment are also prohibited under title VII of the Civil Rights Act of 1964. Workplace bullying (i.e. harassment) is prohibited under title VII of the Civil Rights Act of 1964. Workplace violence is defined by the Occupational Safety and Health Administration (OSHA) Office of the US Department of Labor and enforcement procedures defined in OSHA Directive CPL 02-01-058. State laws around criminal assault and threatening may also apply. Medical Testing as a requirement for work other than lawful drug testing is prohibited under the Workforce Investment Act of 1998[70]. The Workforce Investment Act and title VII of the Civil Rights Act of 1964 are enforced through Equal Employment Opportunity Act (EEOA)[71]. If farmers comply with existing labor laws, the requirements of question 39 will be met. Farmers attest to knowledge of and compliance with U.S. labor law in PART D of the NIG-US.

[68] ILO Equal Remuneration Convention, 1951 (No. 100) and ILO Discrimination (Employment and Occupation) Convention, 1958 (No. 111)

[69] https://www.eeoc.gov/laws/statutes/titlevii.cfm

[70] https://www.govinfo.gov/content/pkg/PLAW-105publ220/pdf/PLAW-105publ220.pdf

[71] https://www.eeoc.gov/eeoc/

40: Freedom of Association

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
Workers have the right to establish and/or join an association of their choice without interference and take part in collective bargaining on working conditions.[72] The following criteria are met: 1. Workers can freely establish and join workers' organizations, both internal (e.g., workers' representations) and external (e.g., trade unions), and take part in collective bargaining on working conditions. 2. Labor organizations are allowed to conduct activities on-farm. 3. Effective functioning of labor organizations is not blocked and representatives of such organizations are not discriminated against. 4. Farmer complies with collective bargaining agreements.	a. Farmer does not engage any workers. b. Farmer demonstrates full compliance with all four criteria. (Smallholders may demonstrate compliance without documentation.) c. Farmer does not comply with one or more of the criteria.	on/a o3* o0	All U.S. Producers answer "B". POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Federal and state labor law equivalent to "B". Discrimination against workers affiliated with a labor union is prohibited under title VII of the Civil Rights Act of 1964[73] and enforced through the Equal Employment Opportunity Act. Congress enacted the National Labor Relations Act ("NLRA") in 1935[74] to protect the rights of employees and employers, to encourage collective bargaining, and to curtail certain private sector labor and management practices, which can harm the general welfare of workers, businesses and the U.S. economy. Section 1. [§151.] Agricultural workers are, however, exempt from NLRA, and not provided any mechanism for enforcement, even if the right to assemble is guaranteed through provisions in the First, Fifth and Fourteenth amendments of the U.S. Constitution. In the absence of a recorded instance where a farmer prevented free assembly or declined to allow labor organizations access to property or did not comply with collective bargaining, it is impossible to verify that the farmer is NOT meeting the criteria above. If the farmer is aware of U.S. law, including the U.S. Constitution, and complies with both, the requirements of 40 will be met. The high level of mechanization on U.S. farms and consequent low number of required workers in general in the rice industry, also reduces risk of prevented labor organization on farm. Farmers attest to knowledge of and compliance with U.S. labor law in PART D of the NIG-US.

[72] ILO Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) and ILO Right to Organise and Collective Bargaining Convention, 1949 (No. 98)

[73] https://www.eeoc.gov/laws/statutes/titlevii.cfm

[74] https://www.nlrb.gov/how-we-work/national-labor-relations-act

41: WAGES

SRP Question Text	SRP Response Options	SRP Points	Comments for National Interpretation Guideline for U.S.
The following criteria are met: 1. Wages of workers meet or exceed the legal minimum wage required under local or national laws and regulations. If wages are negotiated voluntarily between employers and workers' associations, the negotiated wage amount(s) apply to all workers covered under the negotiated agreement. This includes providing equal pay to men and women for work of equal value. 2. Wages are paid in a timely manner and on a regular basis. 3. Wages are paid in a legal currency, or in another form acceptable to workers without creating any form of dependency. 4. Overtime is voluntary and is paid at the rate required by local or national laws and regulations, or as collectively negotiated.	a. Farmer does not engage any workers. b. Farmer demonstrates full compliance with all four criteria. c. Farmer demonstrates less than full compliance and/or does not comply with one or more of the criteria.	on/a o3* o0	All U.S. Producers answer “B”. POINTS: No change. TEXT: No change. ADDITIONAL INFORMATION: Federal and state labor law equivalent to “B”. The Fair Labor Standards Act[75] and the Migrant and Seasonal Agricultural Worker Protection Act[76] defines wages, schedule of payment, disclosure of work contract, record keeping for payment and overtime pay. Agricultural workers are sometimes exempt from the overtime pay requirements, so farmers can comply with the law without paying overtime. The law is administered and enforced by DOL's Wage and Hour Division, and through lawsuits in federal courts that may be filed by farmworkers. In the absence of a complaint or a violation discovered by the DOL, it is impossible to assure that a farmer is NOT meeting the requirements. The high level of mechanization on U.S. farms and consequent low number of required workers in general in the rice industry, also reduces risk of unfair compensation practices on farm. Farmers attest to knowledge of and compliance with U.S. labor law in PART D of the NIG-US.

[75] https://www.dol.gov/whd/regs/compliance/hrg.htm
[76] https://www.dol.gov/whd/mspa/