Annual reporting guidance 2021
Number of innovations

Definition

What should be considered an innovation:

What should be reported as an innovation	
New or significantly improved (updated) outputs or groups of outputs – including significant **research findings, methods or tools, management practices, knowledge, or technologies**. An updated innovation builds on a previously reported innovation that serves a new purpose or a new class of users to employ it, e.g., a recently released superior crop variety which has been scaled up with evidence of, e.g., cultivation area, number of users. Qualitative findings would normally be evidenced by the results of a set of studies rather than a single study.	
What is NOT to be considered an innovation	
Activities (such as development of an innovation) or how partners have used an innovation (the latter could be reported as an OICR).	**Studies, publications** or widespread media uptake and downloads of articles (although an innovation could be a significant finding from a study, or a set of studies).

Types of innovations are categorized as follows:

Genetic (varieties and breeds) include new and adapted varieties, cultivars, lines, and breeds. For example, innovations derived from conventional plant breeding, transgenic plant breeding, and animal breeding. This also includes more upstream genetic work such as identifying genes. It is important to distinguish pre-breeding lines from "candidate" varieties, where program participants co-develop with, or provide to partners, "candidate" varieties that may be released by them.

The stages of reporting in this category include the successful production of a new or adapted variety that has, potentially, a substantial impact (whether through tolerance, efficiency, productivity or other) as evidenced in a paper due for publication (stage 1); which is then tested more widely (stage 2). If the innovation is successfully tested and ready for uptake, certification and licensing are taken care of as necessary (stage 3). The innovation is then taken up and used by a next user/s (stage 4). Note that for stages 1 and 2, pools of researched/tested varieties are reported together, although the number of individual improved lines/varieties is disaggregated. For stages 3 and 4, a single variety released in a single country is one innovation. This means that genetic innovations should be reported individually when at stages 3 and 4. A CRP should not be reporting a "pool/cluster" of varieties at stages 3 and 4 as a single innovation. For example, if 11 maize hybrids are officially released for commercialization, the CRP should report the 11 maize hybrids as individual innovations.

Also note that the counting varieties and breeds is by trait and by agro-ecological zone – each unique trait in a zone can be counted as one innovation. The assumption is that the trait will be adapted sufficiently for each zone to be considered a separate innovation.[1]

Production systems and management practices include integrated pest management (including grafting), sustainable intensification (e.g., mechanization, small-scale irrigation, planting schedules, soil management, etc.); livestock management; post-harvest technologies or management practices for feed or food; natural resource management; vaccines; and animal health services. An innovation should be assessed and counted in terms of whether the research firstly identifies potential practices and system components that generate new/improved system components or whether management practices have the potential to be superior to current farmer practices in field testing under end-user conditions (stage 1). The innovation is then tested more widely (stage 2), and if successfully tested, it is ready for uptake, and certification and licensing are taken care of as necessary (stage 3). The innovation is then taken up and used by a next user/s (stage 4).

Social science includes research concerning the effectiveness of agricultural policy options (policy research); research on the socio-behavioral, socioeconomic, or sociopolitical factors that influence decision-making; research concerning economic forces affecting farmer choices, technology, and management practice adoption, etc.; research or creation of new/improved tools for market access, including financial and insurance products; and nutrition research. Further examples of innovation in social science research include evidence and recommendations to influence changes in policy and regulatory frameworks; methods, decision-support tools and models to design/improve programs and projects or to develop value chains, land use planning approaches, etc.; and development of new curricula or behavioral change models with the potential to influence the design of educational/extension programs. The choice to report social science research findings as innovations is determined by the uniqueness or value of the research finding(s) as evidenced in an article submitted for publication, or a working or conference paper (stage 1). Replicating the research in other sites and/or testing it through examining causality and proxy/intermediate results through quasi-experimental or experimental (randomized trials) techniques[2] corresponds to stage 2. At stage 3, the innovation is ready for uptake by users. Stage 4 corresponds to demonstrated uptake of the innovation.

Biophysical research applies the approaches and methods of physical sciences to study biological systems and may include computational biology, decision support tools, and geospatial analysis. The uptake and reporting pathway is similar to previous categories of research innovation; with findings from biophysical research that are considered potentially innovative outlined in a paper as the first

[1] The variety produced in this area of research runs the risk of misbalancing the number of innovations heavily towards genomics. For example, within transgenic rice lines for drought, salt and low nitrogen tolerance, USAID-funded work in India produced eight different transgenes in 22 different configurations into indica rice. The same can be found with maize. To ensure that each area of research has an equivalent basis for defining an innovation, the approach is to count innovations by trait and agro-ecological zone.

[2] It is important to state here that CGIAR is not preferring particular approaches over others, whether quantitative, qualitative or a mix of both, but providing some examples of how project teams might seek to assess the veracity of findings in other settings through rigorous analysis.

stage (excluding breeding and production systems research captured elsewhere); this is followed by wider testing of this research (stage 2); the results of this research available for uptake (stage 3) and actual proven uptake and application (stage 4).

Research and communication methodologies and tools include research and communication tools, including Information Communication Technology (ICT), such as seed catalogues and nutrient content databases that are used to disseminate scientific information and research findings to the public and private sectors. Communication tools include approaches and tools that have innovations embedded within them. For example, apps or platforms that can be applied in novel or different ways or generate new types of information. This does not include all communication-oriented deliverables (websites, databases, videos, guides, etc.), but pertains to products which offer special and novel methods of information sharing, training, research methodologies, and/or communication of research. The stages of reporting are as per the previous examples.

Name of innovation (max. 30 words)

The name should be **clear, informative**, focused on the innovation itself, and:

- Highlight the actual findings.
- State the geographical scope, when relevant.
- Include the number of products, when relevant.

(See examples in the Annex below)

Description of the innovation (optional, max. 75 words)

Please provide a short description of the innovation here if further context is required to explain the nature of the innovation.

Disaggregation

The influence or use of CGIAR research should be disaggregated in the following way:

Name and description of disaggregate	Disaggregation options
Stage of innovation *The stage in the research to uptake pathway that the innovation has completed at the point of reporting. Note that it is not required that all innovations pass through all four stages to be reported on, nor is it necessary for an innovation to start at stage 1.* *For **stage 1 – the innovation has completed the initial research phase**. For policy research, this could include the identification and testing of policy options. For technologies and varieties, this means that the innovation has been tested under*	**SELECT ONE STAGE, and MULTIPLE organization types, if applicable.** Stage 1: End of research phase (discovery/proof of concept) Stage 2: End of piloting phase Stage 3: Available for uptake Stage 4: Uptake by next user Specify next user organizational type: *[More than one option can be selected.]* CGIAR Academic and research Development organizations (NGOs, networks, and

ideal or controlled conditions such as laboratory, greenhouse, or confined settings (for example, on-station). Research IN development, action research, co-development of an innovation etc. are all counted as "research" until there are clear recommendations made for a broader scale, which are counted as stage 3. *For **stage 2 – the innovation has completed the piloting phase**. The technology or practice has successfully completed broader testing under conditions intended to resemble those that the potential users of the new technology will encounter. The innovation has achieved a documented "real world" assessment of potential performance and feasibility. This may or may not mean that the innovation is immediately available for use.* *For **stage 3 – the innovation is ready to be taken up by next users or end users**. All conditions, such as licensing, certification, and regulatory approvals have been met so that end users (e.g., farmers, service providers) are able to use and disseminate the innovation legally. If an innovation made available for uptake in a previous year has increased its geographic scope (e.g., certification and release in a new country) it can also be included here.* *For **stage 4 – the innovation has demonstrated uptake by next users**. This includes any support for, or adoption by, public, private, or non-governmental institutions. It does not include uptake by end users (the underlying logic here is that next users are much easier to count/evidence, and that it would be very unusual to have uptake by end users at scale without involvement of any next users). To report stage 4 requires an Outcome/Impact Case Report (OICR).*	regional organizations) NARES/NARS (National agricultural research and extension systems or National agricultural research systems) CBOs (Community based organizations) and farmers' groups Private sector Foundations and financial institutions Government Bilateral and donor governments Multilateral Other, please specify ...
Description of stage reached (optional, max. 50 words) *Please provide a short description/explanation of the completed stage.*	See examples in the Annex below.

Names of contributing CRPs/Platforms	**SELECT MULTIPLE** ❑ Add the reporting CRP/PTF, and others if

	relevant.
Innovation type *Indicate which category the innovation falls into, based on the definitions above.*	**SELECT ONE** Genetic (variety and breeds) Production systems and management practices Social science Biophysical research Research and communication methodologies and tools Other, please specify ...
Number of individual improved lines/varieties	For genetic innovations only, provide the number of individual improved lines/varieties.
Geographic scope *The scope of research, testing, intended area of use or actual uptake at the time that the innovation is recorded.* *It is understood that as an innovation is scaled up and out, this geographical area may broaden over time, but it is not required to go back and change the record as this will be recorded in other studies. However, if there are significant changes made to the innovation to enable it to be used by people in new geographic areas, this may be reported as a separate and updated innovation.* *[More than one option can be selected.]*	**Multiple selection possible** ❏ Global ❏ Regional ❏ *Northern Africa* ❏ *Sub-Saharan Africa* ❏ *Eastern Africa* ❏ *Middle Africa* ❏ *Southern Africa* ❏ *Western Africa* ❏ *Latin America and the Caribbean* ❏ *Northern America* ❏ *Central Asia* ❏ *Eastern Asia* ❏ *South-eastern Asia* ❏ *Southern Asia* ❏ *Western Asia* ❏ *Eastern Europe* ❏ *Northern Europe* ❏ *Southern Europe* ❏ *Western Europe* ❏ *Australia and New Zealand* ❏ *Melanesia* ❏ *Micronesia* ❏ *Polynesia* ❏ Multi-national *[indicate countries]* ❏ National *[indicate country]* ❏ Sub-National [*indicate country*]

Evidence

Evidence should be presented to validate the specific claims made about the innovation and where it sits from stage 1 to stage 4, as follows.

- *Stages 1 and 2* require self-reported evidence. Wherever possible, links (preferably public, although limited access SharePoint-type links are allowed) to relevant project reports or publications should be provided. Evidence in languages other than English is allowed.
- *Stage 3* requires documentation (a public link such as a DOI for an article, a scan of a certification, a repository handle to a manual or link to a web tool) that demonstrates a degree of "completeness" and "readiness" of the innovation to be taken up.
- *Stage 4* requires a link to an OICR supported by appropriate evidence. When an OICR is provided, other links to evidence are not required for the innovation. Ensure that the OICR references the innovation.

For long reports, include the page number(s) in the citation field. List evidence from the most relevant and updated to the least. Only the first 10 links will be quality assessed.

Responsibility for reporting

The decision to report an innovation is the responsibility of Project Leaders (PLs) in conjunction with research managers (e.g., Flagship leaders, CRP PMUs). Discussions between Flagship (FP) leaders and PLs to identify innovations can take place annually, prior to annual reporting. Relevant information should be recorded in respective Management Information Systems (MIS). It should be stressed that reporting on this indicator should take place at the end of each stage, once the innovation's research has been carried out (for stage 1), once piloting has been completed (for stage 2), once the innovation is available for uptake (stage 3) and once there is evidence that it has been taken up by a next user/s (stage 4). If a reported innovation does not change stages or geographies or have an increased impact in subsequent years, it should not be reported even if there are new publications linked to it.

The purpose of reporting ex-post is to help clarify what constitutes an innovation, and to ensure it is captured and counted accurately. FP leaders will consult with PLs reflecting back over the previous year as to whether any of the projects have adapted research in new ways, or created novel findings that should be categorized and reported as an innovation; or to see whether an existing innovation has moved from one stage to another.

Rationale and limitations

This indicator tracks the progression of new or significantly improved varieties, practices, technologies, knowledge, practices, and tools. In aggregate it provides the body of cutting-edge products and services being produced by CGIAR, and evidence of their uptake and application. This indicator is crucial for some of CGIAR's funders, such as USAID, who capture this across the body of research for development that they finance globally.

This is a complex indicator that tracks new knowledge, new or significantly improved management practices and new or significantly improved technologies as they move through the research and development cycle from idea to widespread dissemination. This is often a very long process.

The biggest challenge with this indicator is defining what constitutes an "innovation". For some types of research, for example, it might be possible to capture thousands of slight genetic variations. The important thing to bear in mind is that the main objective is not to produce large numbers, but to put together a database that shows progress clearly to others. We will follow a "case law"-type approach of reviewing submissions, presenting good examples, and helping research programs to define, categorize, and exemplify innovation types as experience builds.

Annex: Examples

Examples of titles

Wrong formulation	What is missing	Preferred title
Farming system sustainability assessment	Geographic location A better description of the finding	Farming system sustainability assessment *using a mixed methods approach* for **arid and semi-arid regions in Ethiopia**
Groundnut cultivar: CG7 (EUGN-1)	Geographic location A better description of the finding	*Large seeded groundnut* variety, CG7 (EUGN-1) for **Kenya**
QC panel developed and initially validated in groundnut and pearl millet	Geographic location Spell out acronyms in title that are not on the CGIAR accepted acronyms list	*Quality Control* panel developed and initially validated in groundnut and pearl millet **in country X**
Potato and sweet potato screening for integration into cropping systems	Geographic location A better description of the finding	*Five potato (high yield and large size) and six sweetpotato genotypes (multitraits)* selected for further integration into cropping systems **in Nigeria**
The title of a published paper	The focus on the actual innovation	Provide a title that focuses on the new knowledge/main findings of the paper(s).

Example 1

Name of innovation: Fortifer production – Development of a sanitized and pelletized excreta turned fertilizer called Fortifer. A new variation of a waste compost.

Reporting year: 2017

Stage of innovation	Stage 4* – commercial production by third parties. Organization type involved in uptake: Private sector
Names of contributing CRPs/Platforms	WLE
Innovation type	Production systems and management practices
Geographic scope	Multi-national: Ghana, Sri Lanka, Uganda

*Innovations cited as Stage 4 require an Outcome/Impact Case Report.

Example 2

Name of innovation: IFPRI's "Lean" Nutritional Component to the Bangladesh Vulnerable Group Development Program (BVGDP)

Reporting year: 2017

Stage of innovation	Stage 2 – An inexpensive nutritional training component within a social protection program has been piloted by the Government of Bangladesh to test whether it can be effective in generating nutritional outcomes while remaining sufficiently low in cost to be used in a large-scale program.
Names of contributing CRPs/Platforms	A4NH, PIM
Innovation type	Social science
Geographic scope	National: Bangladesh