




Millet vs. millets

Inconsistency of number in popular communication.

Reviews of use of both singular & plural forms within selected webpages
& online articles about millets

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What this is about

- This is a presentation of a few (6) of the many articles & webpages about millets that mix usage of the singular & mass-noun form “**millet**,” with the plural form “**millets**”
- “**Millet**” is most often read & understood as a singular noun, and grammatically is treated as a singular (e.g., “millet is”)
- The grains described are actually a group of distinct, though related, species most appropriately referred to in the plural – “**millets**”
- Mixing the two forms in text can confuse readers
- Misuse of “varieties” to describe species of millets is a related problem
- The goal is to help raise awareness among writers in order to improve practice as we head into the International Year of Millets (2023)

How this is presented

- This presentation shows example images from online articles & webpages, with added markup, comments & suggestions
- Each article/webpage reviewed is indicated in section title slides, with 1-3 slides following, each with an image & text
- Color underlining (also noted in footer) is used on the images for: plural, & appropriate use of singular (& of “varieties”); problematic use of singular form; and unclear or ambiguous wording
- Explanations of the issues identified, and suggestions how the wording could be improved, accompany each image
- This presentation does not otherwise review content
- The order of the items reviewed is roughly chronological

Summary of observations up front

- Mixed plural & singular forms (even if latter may be intended as “mass-noun”), with the following patterns:
 - Interspersed, or “back and forth” more than once
 - Shift from consistent use of one form to another in mid article
 - Use of singular form, but brief use of plural before returning to singular
- Occasional misuse of “variety” or “varieties” where “species” would be the operant concept – each millet species has its own varieties
 - This seems to track with inconsistent use of “millet” & “millets”
- Lack of clarity in transitions between, or in reference to, different terms



1. “Grasses and seeds can be nutritious!”

A selective review of a section of an article by Cathy Newkirk, published online by Michigan State University Extension, 28 Aug. 2015 (*1 slide*)

https://www.canr.msu.edu/news/grasses_and_seeds_can_be_nutritious

A tale of two paragraphs

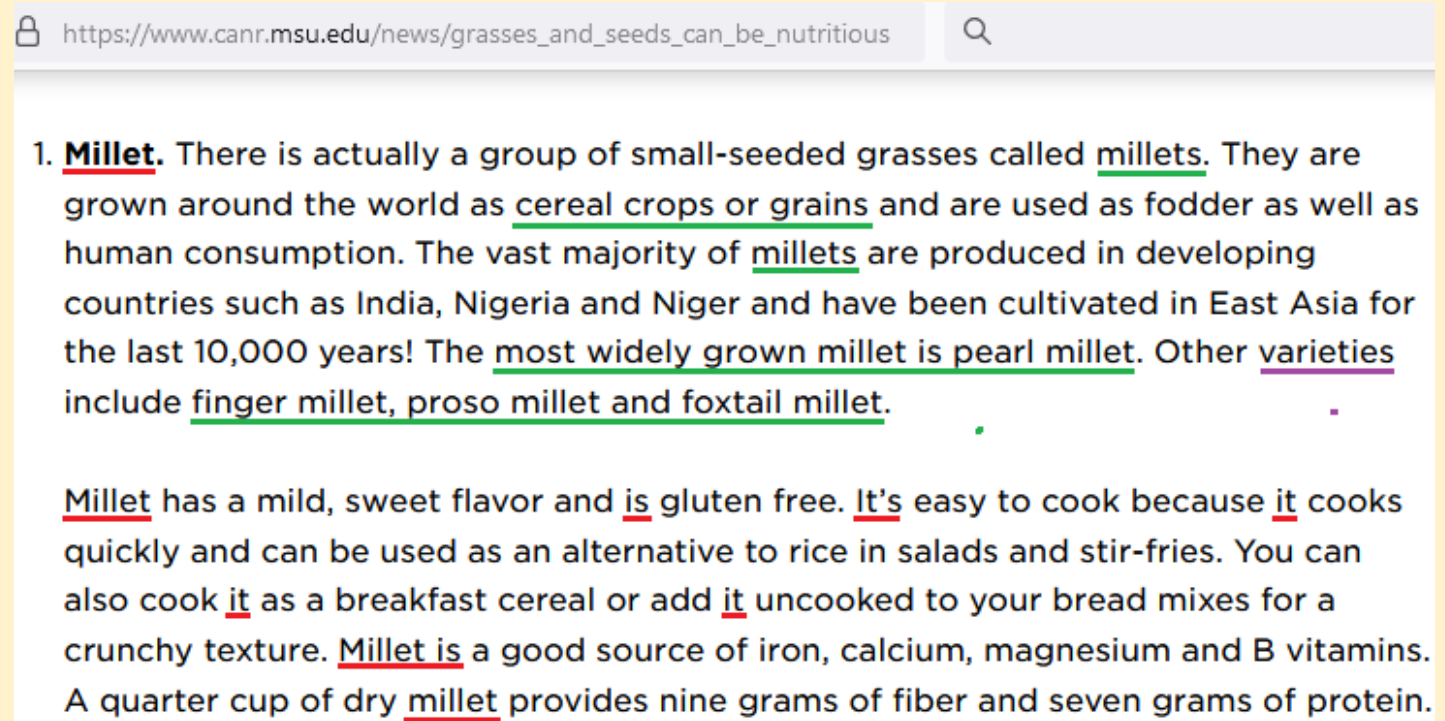
This is one section of an article on “millet, teff and amaranth,” which consists of two paragraphs on millets

This section is presented with the commonly seen singular form “millet,” then uses the plural to describe these grains, followed by discussion of some specific millets

The term “varieties,” however, generally refers to subgroups within a species. Millets are actually different species

The second paragraph reverts to the singular, contrasting with the previous paragraph, where several millets were mentioned.

Discussion of taste, nutritional profiles, fiber & protein content, and cooking characteristics across the several millets certainly presents a challenge, so this part would need a rewrite to harmonize with the previous paragraph



https://www.canr.msu.edu/news/grasses_and_seeds_can_be_nutritious

1. **Millet.** There is actually a group of small-seeded grasses called millets. They are grown around the world as cereal crops or grains and are used as fodder as well as human consumption. The vast majority of millets are produced in developing countries such as India, Nigeria and Niger and have been cultivated in East Asia for the last 10,000 years! The most widely grown millet is pearl millet. Other varieties include finger millet, proso millet and foxtail millet.

Millet has a mild, sweet flavor and is gluten free. It's easy to cook because it cooks quickly and can be used as an alternative to rice in salads and stir-fries. You can also cook it as a breakfast cereal or add it uncooked to your bread mixes for a crunchy texture. Millet is a good source of iron, calcium, magnesium and B vitamins. A quarter cup of dry millet provides nine grams of fiber and seven grams of protein.



2. “Millet: How A Trendy Ancient Grain Turned Nomads Into Farmers”

A selective review of an article by Jeremy Cherfas published online by National Public Radio (NPR.org), 23 Dec. 2015 (*2 slides*)

<https://www.npr.org/sections/thesalt/2015/12/23/460559052/millet-how-a-trendy-ancient-grain-turned-nomads-into-farmers>

An article taking two approaches

This article begins by discussing “millet” as a single grain, in the title (not pictured) and the first 4 paragraphs (shown at right). At this point, a reader unfamiliar with the subject would get the clear idea that “millet” is one thing

It would be fairly straightforward to change to plurals, but that would make the lede’s comparison with amaranth and quinoa, and its use of the expression “an ‘it’ grain,” somewhat awkward

Like amaranth and quinoa before it, millet – a hardy, gluten-free ancient seed – has become an “it” grain in recent years. Once dismissed as birdseed, millet can now be found sprinkled on top of mashed potatoes at top-rated restaurants, cooked into baby foods, and generally extolled for its nutritious virtues. Some have even dubbed millet “the new quinoa.”

This newly trendy grain was once far more prominent in human diets: It played a pivotal role in the rise of multi-crop agriculture and settled farming societies.

That’s according to research from Martin Jones, a professor of archaeology at Cambridge University in England, and co-leader of a team whose work on the origin and spread of millet this month won a 2015 Research Award from the Shanghai Archaeological Forum.

The research sheds light on the earliest days of agriculture in China. But more importantly, according to Jones, the prize may help millet to regain its rightful place in modern agriculture.

Shifting gears

The article then introduces the fact that “millet” is actually several grains, and continues more or less consistently to use the plural – “millets” – through to the end (there are numerous uses, which will not be shown in this presentation)

One exception is mention of mapping “the grain’s” relationship with people. Since the article just introduced 2 specific millets, this would be clearer as a plural possessive: “the grains’”

The use in the second paragraph at right of “varieties” – sometimes confusing where it’s not clear whether different species or types within a species are meant – seems appropriate here, if indeed it refers to varieties of one or both of the two species under study. (Reference not explicit)

Now, millet isn't just one grain but, rather, a ragbag group of small-seeded grasses. About 50 species of grass have been cultivated for their seeds. And while millets remain a staple in parts of Asia and Africa, they are in decline around the world, pushed out by larger-seeded, higher-yielding crops such as wheat, rice and corn. Jones and his colleagues studied two: broomcorn millet (*Paniceum miliaceum*) and foxtail millet (*Setaria italica*).



THE SALT
Can Millet Take
First, It'll Need

Radiocarbon dating of seeds from archaeological sites across China and Mongolia, along with DNA studies of modern varieties, enabled the researchers to piece together a sweeping chronology and map of the grain's relationship with people.

Archaeological remains show that these millets became common in their north China heartland around 7,500 years ago. Seeds recovered from sites of different ages show signs of being domesticated and selected — namely, they got bigger and bigger over time. Human skeletons of the same age show that millets were a staple food source.



3. “What Is Millet? Nutrition, Benefits, and More”

A selective review of an article by Ariane Lang that appeared on Healthline.com, updated 12 November 2021 *(3 slides)*

<https://www.healthline.com/nutrition/what-is-millet>

Another article taking two approaches

This article begins with a decent introduction to millets – except that everything is phrased as if the subject were one grain

Changes to plural could be readily done:

- Millets are cereal crops...
- They're widely consumed...
- ... they may look like seeds, millets' nutritional profiles ...
- Etc.

The subtitle reference to “types of millet” – itself a bit ambiguous without knowing where the article is going with it after consistent use of the singular – is the lead-in to a shift to use of plurals in following paragraphs (next slide)

Millet is a cereal grain that belongs to the *Poaceae* family, commonly known as the grass family (1).

It's widely consumed in developing countries throughout Africa and Asia. While it may look like a seed, millet's nutritional profile is similar to that of sorghum and other cereals (2 [👉]).

Millet has gained popularity in the West because it's gluten-free and boasts high protein, fiber, and antioxidant contents (3 [👉]).

This article reviews everything you need to know about millet, including its nutrients, benefits, and downsides.



Attributes and types of millet

Millet is a small, round whole grain grown in India, Nigeria, and other Asian and African countries. Considered an ancient grain, it's used both for human consumption and livestock and bird feed (4, 5 [👉]).

It has multiple advantages over other crops, including drought and pest resistance. It's also able to survive in harsh environments and less fertile soil. These benefits stem from its genetic composition and physical structure — for example, its small size and hardness (4, 5 [👉], 6 [👉]).

Changing the frame of reference, temporarily

The article then introduces the plurality of millets, but as “varieties” or “types,” which again are refer to variations within a species

“Species” is actually mentioned, which is a positive, but as a subordinate distinction to variety (reverse of what one would expect). And the opportunity is missed to use “species” to explain the helpful lists of specific millets that follow.

Also, in the midst of the reference to the plurality of millets, there’s another singular reference – “this crop”

Rewrites here would refer to “these crops” and center the concept of species, above varieties, in discussing the plurality of millets

Although all millet varieties belong to the *Poaceae* family, they differ in color, appearance, and species.

This crop is also divided into two categories — major and minor millets, with major millets being the most popular or commonly cultivated varieties (4).

Major millets include:

- pearl
- foxtail
- proso (or white)
- finger (or ragi)

Minor millets include:

- Kodo
- barnyard
- little
- Guinea
- browntop
- fonio
- adlay (or Job’s tears)

Pearl millet is the most widely produced variety intended for human consumption. Still, all types are renowned for their high nutritional value and health benefits. ▪

Retreat to the singular

But then the article reverts to treating millets as one grain, beginning with this discussion of nutrition – something that does vary among species of millets

In fact, the nutritional profile may be for one specific millet, but we aren't told which one

The reference to calcium content of finger millet (an appropriate use of the singular) hints at the nutritional variation, but there was no effort to expand on that theme

The rest of this article refers to these grains in the singular form

This is actually a good article overall, in terms of its coverage of different aspects of millets. However, the predominant use of the singular undercuts its utility, & risks giving the misimpression that this is basically one grain rather than a group of grains

In this context, the brief shift to treating diverse millets (previous slide) may raise more questions for readers than it answers

Nutritional profile

Like most cereals, millet is a starchy grain — meaning that it's rich in carbs. Notably, it also packs several vitamins and minerals (4).

One cup (174 grams) of cooked millet packs (7[Ⓢ]):

- **Calories:** 207
- **Carbs:** 41 grams
- **Fiber:** 2.2 grams
- **Protein:** 6 grams
- **Fat:** 1.7 grams
- **Phosphorus:** 25% of the Daily Value (DV)
- **Magnesium:** 19% of the DV
- **Folate:** 8% of the DV
- **Iron:** 6% of the DV

Millet provides more essential amino acids than most other cereals. These compounds are the building blocks of protein (4, 8[Ⓢ], 9[Ⓢ]).

What's more, finger millet boasts the highest calcium content of all cereal grains, providing 13% of the DV per 1 cooked cup (100 grams) (4, 10[Ⓢ], 11[Ⓢ]).



4. “What are millets and can they help create global food security?”

A selective review of an article that appeared on DW.com, 9 June 2022 (3 slides)
<https://www.dw.com/en/sustainable-agriculture-ukraine-grain/a-61682721>

Title & kicker disagree

The title of this piece from DW, “What are millets and can they help create global food security?” is clear on this fact: Millets are something plural

However the kicker then turns around and treats it as one thing: “an overlooked cereal”

Suggested solutions:

“these overlooked cereals”

“a group of overlooked cereals”



Back & forth in mid-article

This section starts out well, with “grains” in the header and then leading with “millets.” But then in mid sentence there is reference to them as “a staple crop.” Suggested solution: Use “staple crops”

The next paragraph, devoted to the term coined in India, “nutri-cereals,” is all in plural.

A photo caption then has “millet is the main crop in the Sahel,” where it would have been more helpful to specify “pearl millet”

Ensuing uses of singular forms could easily be replaced as follows:

- “these ancient, humble grains
- “these cereals’ health benefits”
- “their ability”

A new era for old grains?

Millets have been around since 3000 BC and are believed to be among the earliest domesticated plants, long serving as a staple crop for millions of farmers, particularly in India, China and many parts of Africa.

Sometimes dubbed “nutri-cereals” due to their high levels of iron, fiber and certain vitamins, they are still grown in more than 130 countries. Yet they only play a significant role in the diets of some 90 million people in Africa and Asia, and are often regarded as food for the poor.

By comparison, around half the global population relies on rice, and more than one-third on wheat.



Millet is the main crop in the Sahel, where the lack of rainfall makes it hard to cultivate other crops

Yet with 2023 declared as the UN International Year of Millets, the fortunes of this ancient, humble grain could be on the cusp of changing. That, experts say, would be a good thing — not only due to the cereal's health benefits, but also its ability to thrive in tough conditions. And in a world marked by climate change, that rings with promise.

More complicated questions at the end

The picture caption “Millet comes in many different varieties” has, in addition to the singular/plural issue, the term “varieties,” which is usually associated types within a species. Suggested solution: “Millets are a group of many different crop species”

After reference to pearl millet (appropriately in singular) and use of the plural, two other uses of singular could be readily changed to:

- “these unsung grains”
- “role of millets” or “roles of millets”

Use of “millet” as a modifier – “millet farmers” & “millet production” – is a more nuanced issue, but one could be modify the phrasing as follows to better harmonize with use of plurals above:

- “minimum prices for farmers of millets”
- “production of millets”



Millet comes in many different varieties

Guru also said it's vital to secure a minimum price for millet farmers.

"Otherwise it often ends up benefiting only middlemen and not the farmer," he said.

Vettavalan Manikandan agrees. He is the president of a farming association in the southern Indian state of Tamil Nadu, where the government is set to boost production. "In my village, we sell pearl millet for 10 cents per kilo, but the same millet is packaged, branded and sold for about €1 in supermarkets in cities," he said.

He believes a growing global demand for millets would see cultivation move from dry to fertile lands, where the yield would be of both higher in quality and quantity — perhaps helping to change the stigma attached to this unsung grain.

Ethnobotanist King said perceptions are already beginning to shift, and he is optimistic about the role of millet moving forward.

"With improvement in technology and recipe creation, millet production may well eventually become a pillar in global food security," he said.

Edited by: Tamsin Walker

This article was last updated on June 9.





5. “Ending edible extinction: Why we need to revive global food diversity”

A selective review of sections of an article by Dan Saladino, published on Greenbiz.com, 15 April 2022 (*3 slides*)

<https://www.greenbiz.com/article/ending-edible-extinction-why-we-need-revive-global-food-diversity>

Millet and their varieties

Here we see use of singular forms (“millet”, “cereal” & pronoun) several times, but a shift to the plural “millets” once in mid-paragraph

Reference to singular “millet” could readily be shifted to plural:

- “Millets are ... cereals”
- “millets’ unique nutritional qualities”
- “The decline of millets”

In this context, “varieties of millet” & “millet varieties” are ambiguous – millets are entirely different plants, not varieties of a generic “millet.” However, each millet has its own varieties. The first instance would more optimally reference the plural, & thereby also set the context for the second, as it is. So:

- “varieties of millets”

In India, farmers are looking once again to landrace, or native, varieties of millet. Millet is a nutrient-packed and diverse cereal that sustained generations of people in India. But British colonizers, unaware of millet’s unique nutritional qualities and resilience, replaced it with varieties of bread wheat and cash crops such as indigo. Those millets that survived were mostly relegated to animal feed. The decline of millet continued after Indian independence and was intensified by the Green Revolution as rice cultivation expanded. As a result, the last harvests of many millet varieties were recorded in the early 1970s.

“ Despite its many achievements, the Green Revolution locked us into an unsustainable system. ”

Sometimes, the singular is appropriate

In the first paragraph, reference is to a specific kind of millet (raishan, *Digitaria compacta*), so the singular is appropriate

The 3rd use is ambiguous, however. Clearer to use “Raishan millet – labor intensive ...”

The shift to “millets” at end of the paragraph is consistent

However in the third paragraph, the singular “millet” is then used where the plural “millets” would be indicated. In India itself, the plural is fairly consistently used now in promoting this group of grain crops in response to its food problems

Among these was a millet grown by the Khasi people of Meghalaya, in northeast India. Their millet was called Raishan, an ivory-colored grain cooked into soups and baked into biscuits and flatbreads. Like millions of Indians, the Khasi became dependent on the state-run Public Distribution System, which today provides \$2.25 billion worth of subsidized food — mostly rice, wheat and sugar — to India’s poorest 160 million households. Millet — labor-intensive to harvest and to mill — was the first food they stopped growing themselves. Then, in 2008, in India and in the rest of rice-growing Asia, a huge supply crisis caused by a sequence of bad harvests, disease outbreaks and low grain reserves hit food systems. Governments responded by banning rice exports, which in turn triggered panic and a massive price spike. In many of the Khasi villages of Meghalaya, one response was to bring back lost millets.

In 2017, as part of the research for my book, I visited one of these villages, Nongtraw, at the bottom of a valley so steep it can only be reached by climbing down the 2,500 steps cut into the landscape. In one of the bamboo huts, I watched as a milling machine did in 10 seconds what used to take an hour with a pestle and mortar.

The Khasi villagers of Nongtraw now look like pioneers, as millet is being seen as one solution to many of India’s food problems. With a diet that became heavily dependent on modern varieties of white rice and refined wheat flour, India suffers from a triple burden of malnutrition: One in nine people is undernourished; one in eight adults is obese; and one in five people is affected by some form of micronutrient deficiency.

Finishing with using the plural

Following the problematic use of the singular “millet” in the last paragraph on the previous slide, the plural “millets” is again used here

This article includes important information on millets. But the reader must navigate several shifts in number. Some of these make complete sense (when discussing a specific kind of millet), while others are potentially confusing (e.g., use of “millet” in discussing these cereals’ importance in addressing food issues, but then “millets” when discussing their broader importance wrt water, climate & nutrition)

(The plant held by a woman’s hand in the photo is another millet, called ragi or finger millet – Eleusine coracana)



Another problem facing India is water — or the lack of it. Half of India’s rice crop is irrigated by underground water supplies, and Indian aquifers are emptying at a faster rate than they are being replenished. When a team of scientists — including water experts, plant breeders and nutritionists — calculated what would happen if large areas of water-intensive rice cultivation were replaced with millets and sorghum, they found benefits on every level: more dietary nutrients, lower greenhouse gas emissions, greater resilience to climate change, reduced water and energy use. All of this could be achieved without losing a single calorie or expanding croplands, they concluded.



6. “The revival of millets is improving the lives of tribespeople in Odisha”

A selective review of an article by Gurvindar Singh that appeared on Lifegate.com on 19 August 2022 *(1 slide)*

<https://www.lifegate.com/revival-of-millets-improving-conditions-tribespeople-in-odisha>

Overall, a good example

This article uses the plural, “millets,” quite consistently

At the same time, it uses the singular form, “millet,” as a modifier (“millet farming,” “millet plants,” “millet production”)

However, the reference to “35 varieties of millet” would be more helpful as, say, “35 varieties of 3 millets” (assuming that the three millets mentioned earlier in the article – finger, little, & foxtail – are the only ones involved)

An editing error in the name of OMM (Millet instead of Millets) is an example of the need for attention to the forms used (which a spell check won’t flag)



The production of millets had dwindled over the years © Gurvinder Singh

Odisha Millets Mission (OMM)

The women belonging to local tribes claim that they have **revived around 35 varieties of millet** and have been growing them in their fields. “We started farming millets in our fields again with the exchanged seeds. The exchange helps us to grow crops that were not available in our village or had gone extinct. This has helped us provide healthy food for our children and keep them **safe from diseases.**”

The state government also played a major role in the revival of millets across Odisha by launching the **Odisha Millet Mission (OMM)** in 2017. Its aim was also to tackle malnutrition by introducing millets into the Public Distribution System (PDS) and other state nutrition schemes, “The scheme was mostly focused on areas where severe malnutrition and poverty are widespread. The aim was to create a livelihood for farmers while also offering them nutritious food and ensuring a good supply of millets to urban areas. The project is running in **84 blocks across 15 districts, covering over 1 lakh (100,000) farmers**, most of whom are women,” says a senior government official who asked to remain anonymous.



Millet vs. millets

Don Osborn, East Lansing, MI, US

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