



Food and Agriculture Organization
of the United Nations

The AGROVOC Editorial Guidelines 2020



Required citation:

FAO. 2020. *The AGROVOC Editorial Guidelines 2020*. Rome.

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

© FAO, 2020



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original [Language] edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization <http://www.wipo.int/amc/en/mediation/rules> and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

Abbreviations and acronyms

AGROVOC	Agriculture vocabulary thesaurus (a portmanteau of agriculture and vocabulary)
BARTOC	Basel Register of Thesauri, Ontologies & Classifications
EuroVoc	European Union (EU) vocabulary
EPPO	European and Mediterranean Plant Protection Organization
EFAO	Food and Agriculture Organization of the United Nations
FAOTERM	FAO Terminology
GEMET	General Multilingual Environmental Thesaurus
IPNI	International Plant Names Index
ISO	International Organization for Standardization
LOD	Linked Open Data
NALT	National Agricultural Library Thesaurus
NOCS	FAO Names of Countries
RDF	Resource Description Framework
REST API	Representational State Transfer Application Programming Interface
SKOS	Simple Knowledge Organization System
SPARQL	SPARQL Protocol and RDF Query Language
UNBIS	United Nations Bibliographic Information System
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
USDA	United States Department of Agriculture
W3C	World Wide Web Consortium
WBG	World Bank Group
XML	eXtensible Markup Language



Executive summary

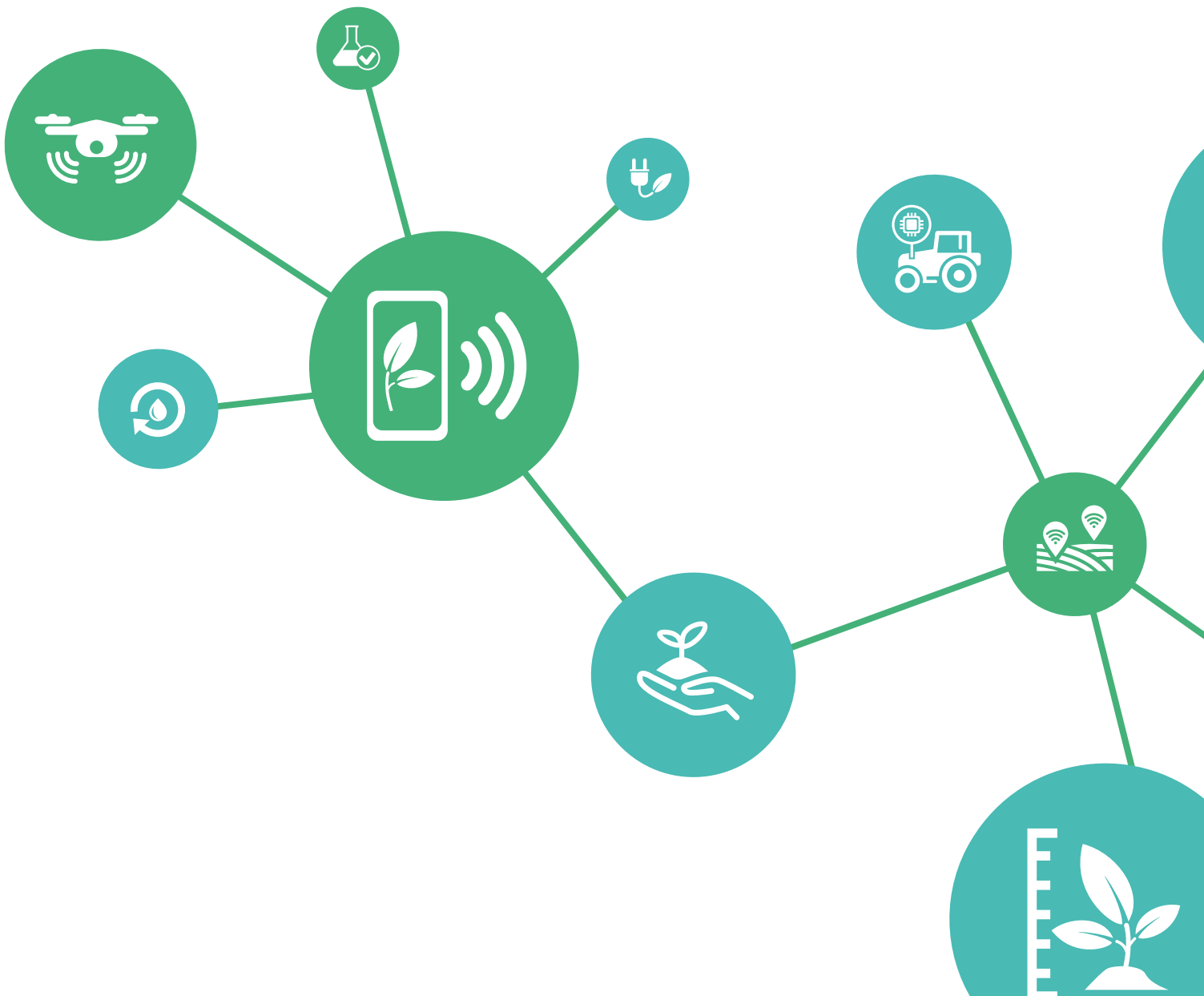
Since the early 1980s, the Food and Agriculture Organization (FAO) of the United Nations has promoted greater knowledge sharing and access among its member countries through the publication of AGROVOC, a controlled vocabulary and thesaurus covering all FAO's areas of interest. Coordinated by FAO, AGROVOC is currently maintained by over 25 organizations and communities of experts volunteering as focal points for specific languages and/or specific food and agriculture-related domains.

In recent years, AGROVOC has evolved into a Simple Knowledge Organization System (SKOS) concept scheme, and a Linked Open Data (LOD) set. SKOS is a World Wide Web Consortium (W3C) recommendation designed for representation of thesauri, classification schemes, taxonomies, subject-heading systems, or any other type of structured controlled vocabulary. AGROVOC is currently linked to over 20 other vocabularies.

AGROVOC is based on a concept model and, as of October 2020, consisted of up to 38 000 concepts and over 760 000 terms in 40 languages. In order to be added to AGROVOC, a language must have an International Organization for Standardization (ISO) code and a responsible editing institution. In recent years, AGROVOC has expanded its coverage with a significant annual growth in the number of terms and concepts. This success requires precise rules and protocols on how to edit the vocabulary in order to facilitate maintenance of AGROVOC.

For many years, the most substantial work in maintaining AGROVOC was carried out by FAO based on internal guidelines, openly published in 2008 and 2015 but not regularly updated. However, with a shift to distributed management of AGROVOC by working with editors worldwide, clear, concise and agreed guidelines are needed to guarantee consistency and coherence on selection of concepts and terms, e.g. to clarify whether to use the singular or plural in each language, how to deal with proper names, scientific names, and geographical names, etc. The guidelines also apply to subvocabularies in AGROVOC.

This guide is a set of editorial recommendations for adding content to AGROVOC, with a strong focus on multilingual aspects.





Contents

Abbreviations and acronyms	3
Executive summary	4
Contents	6
1. About the AGROVOC editorial guidelines	8
2. How to access AGROVOC	11
3. Editing AGROVOC	13
4. Suggesting terms	18
4.1 Punctuation, diacritics and special characters	18
4.2 Regional language variants	19
4.3 Disambiguation	20
4.4 Adjectives and nominalization	20
4.5 Prepositional phrases	20
4.6 Gender-neutral language	20
4.7 Abbreviations and acronyms	21
4.8 Capitalization	21
4.9 Singular and plural	24
4.10 Other	26
5. Scientific and common names	27
6. Chemical compounds and elements	28
7. Geographical names	29

8. Other descriptive information	30
8.1 Definitions	30
8.2 Notes	31
8.3 Alignments	32
9. Frequently asked questions (FAQs)	33
10. Future action	35
Bibliography	36
Glossary	38
Annex. AGROVOC 25 top concepts	40



1

About the AGROVOC editorial guidelines

The AGROVOC editorial guidelines include different elements related to AGROVOC editing. After introducing the AGROVOC concept model, specifications and considerations are highlighted as key elements to ensure coherence and consistency during the data entry.

AGROVOC was born as a terminological (technical terms) resource organized hierarchically and covering all FAO's areas of interest i.e. a thesaurus. AGROVOC has evolved into a SKOS concept scheme; SKOS is part of the Semantic Web family of standards, and its main objective is to enable easy publication and use of such vocabularies as linked data. Today, AGROVOC is a fully web-oriented resource, in which all notions related to thesauri, like related term (RT), broader term (BT) or narrower term (NT), have a translation into SKOS properties.

AGROVOC supports the organization of knowledge through a structured collection of concepts, terms, definitions and relationships. AGROVOC is organized as a hierarchy of concepts in various languages under 25 top concepts, see Annex 1. Concepts may also be linked by non-hierarchical relations, either expressing a generic notion of 'relatedness', or expressing some more refined relation (e.g. something 'is a product of' something else).

Operationally, a concept is the set of terms used in any language to describe the same idea. In AGROVOC, concepts are represented by terms, i.e. words in a given language. In SKOS, concepts are formalized as `skos:Concept` and identified by a dereferenceable Uniform Resource Identifier (URIs), i.e. URL.

URI http://aims.fao.org/aos/agrovoc/c_12332 is the AGROVOC concept for maize. Terms are the actual terms used to name a concept. For example maize, maïs, and 玉米 are terms for the same concept in English, French, and Chinese.

A concept has only one preferred term in a language. All the alternative terms to name a concept in any given language are called non-preferred terms. In AGROVOC, concepts always have at least one preferred term in a language. A concept may have zero or more non-preferred terms.

In SKOS, terms are known as preferred and non-preferred labels. In order to be more expressive, AGROVOC uses the SKOS extension for labels, SKOS-XL. The predicates used are: `skosxl:prefLabel`, used for preferred terms (“descriptors” in thesaurus terminology), and `skosxl:altLabel`, used for alternative or non-preferred terms.

From a formal point of view, AGROVOC is an RDF/SKOS-XL concept scheme. The classical BT/NT thesauri relations are expressed by the SKOS predicates `skos:broader` and `skos:narrower`, see Figure 1. In addition to SKOS properties, it is possible to use a number of relations to state that two concepts are related to one another through the Agrontology, a support ontology for AGROVOC to accommodate non-hierarchical relations. Examples of these domain-specific relations between concepts are `hasScientificName`, `affects`, `isAffectedBy`.

Figure 1. AGROVOC concept model. Source: FAO, 2020

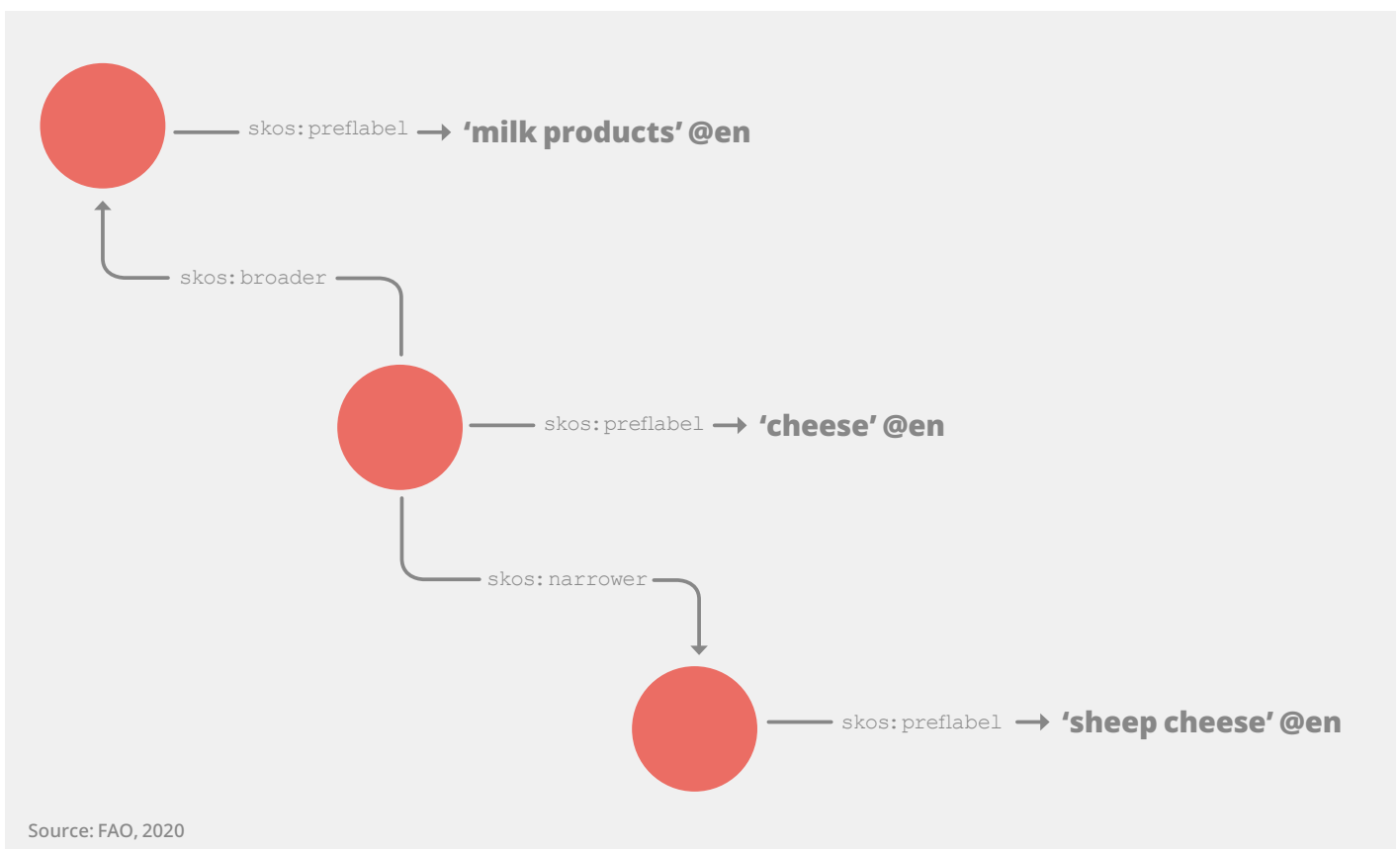


Table 1 defines the items and their formatting to make reading of this document easier. Note that this formatting is only to be used in these guidelines and not when editing AGROVOC.

Element	Formatting in guidelines	Example
Concept	All terms are in quotation marks and italics. Except for English, the term language is indicated by @ plus the ISO 639-1 language code.	<i>"growth control"</i> <i>"Controllo della crescita"@it</i> <i>"Wachstumssteuerung"@de</i>
Preferred term	Preferred terms are in italics and with an asterisk* when appearing with a non-preferred term for the same concept in the same language.	<i>"growth control"*</i>
Non-preferred terms	Non-preferred terms are in italics but do not have any asterisk.	<i>"growth regulation"</i>
URIs	In abbreviated form In full form	:c_345 < http://aims.fao.org/aos/agrovoc/c_345 >
Relations	The relation name is listed in font type Courier New	agrontology:hasProducts skos:related

Table 1. The main elements and their formatting in these guidelines

2

How to access AGROVOC

VocBench is designed to meet the needs of the semantic web and is made available as an open source solution.

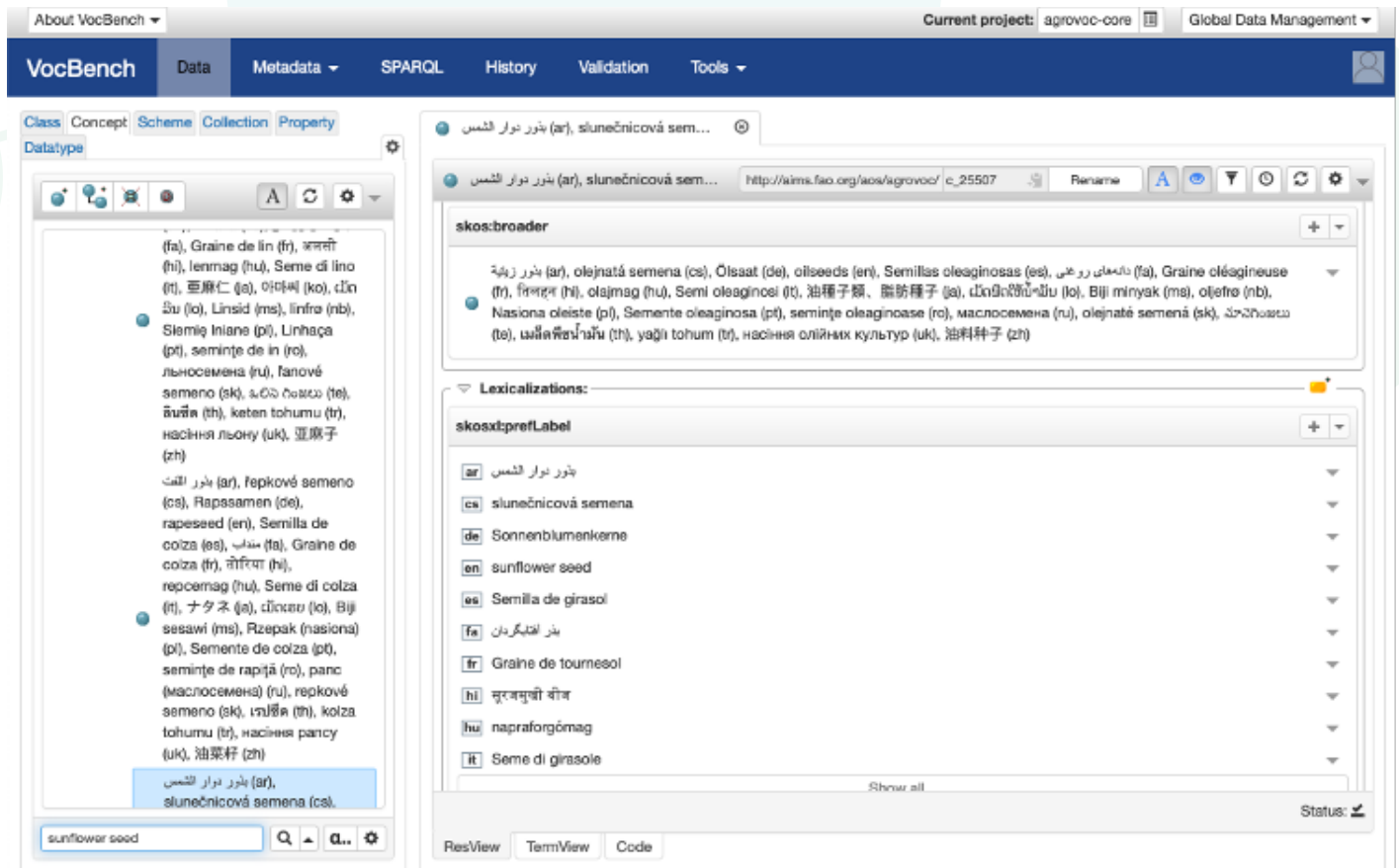
AGROVOC is edited in the online open source platform VocBench,¹ see Figure 2. VocBench is a free web-based platform facilitating collaborative editing and management of authority lists, taxonomies, thesauri and ontologies. AGROVOC editors can request VocBench credentials in order to use the platform for collaborative content editing, either for editing languages or schemes. All suggested changes to concepts, terms and relationship are reviewed and validated by the FAO/AGROVOC team.

If an editor wants to browse AGROVOC, search for concepts or terms, or look at the structure, the web browsing interface Skosmos² is the best option, which is an open source web-based SKOS browser and publishing tool, see Figure 3. This interface offers search and browse functionalities, an alphabetical and thematic index, a structured concept display, a concept hierarchy and multilingual user interface.

¹ <http://agrovoc.uniroma2.it/vocbench3/>

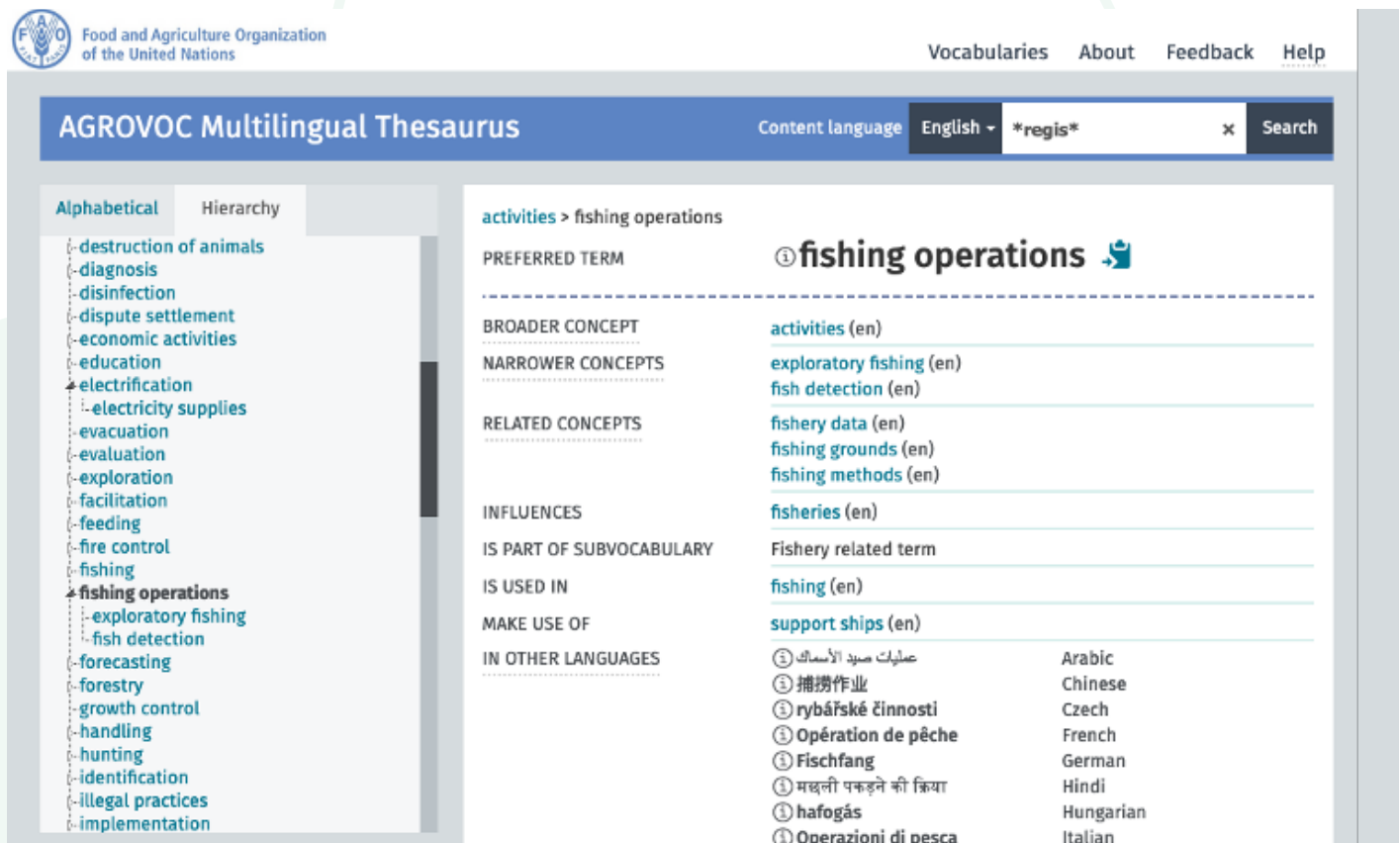
² <http://agrovoc.uniroma2.it/agrovoc/agrovoc/en/>

Figure 2. VocBench, the online editing interface for AGROVOC.



Source: FAO, 2020

Figure 3. Skosmos, the public browsing interface for AGROVOC.



Source: FAO, 2020

3

Editing AGROVOC

Editors can suggest and create concepts and terms within the food and agriculture domains within AGROVOC.

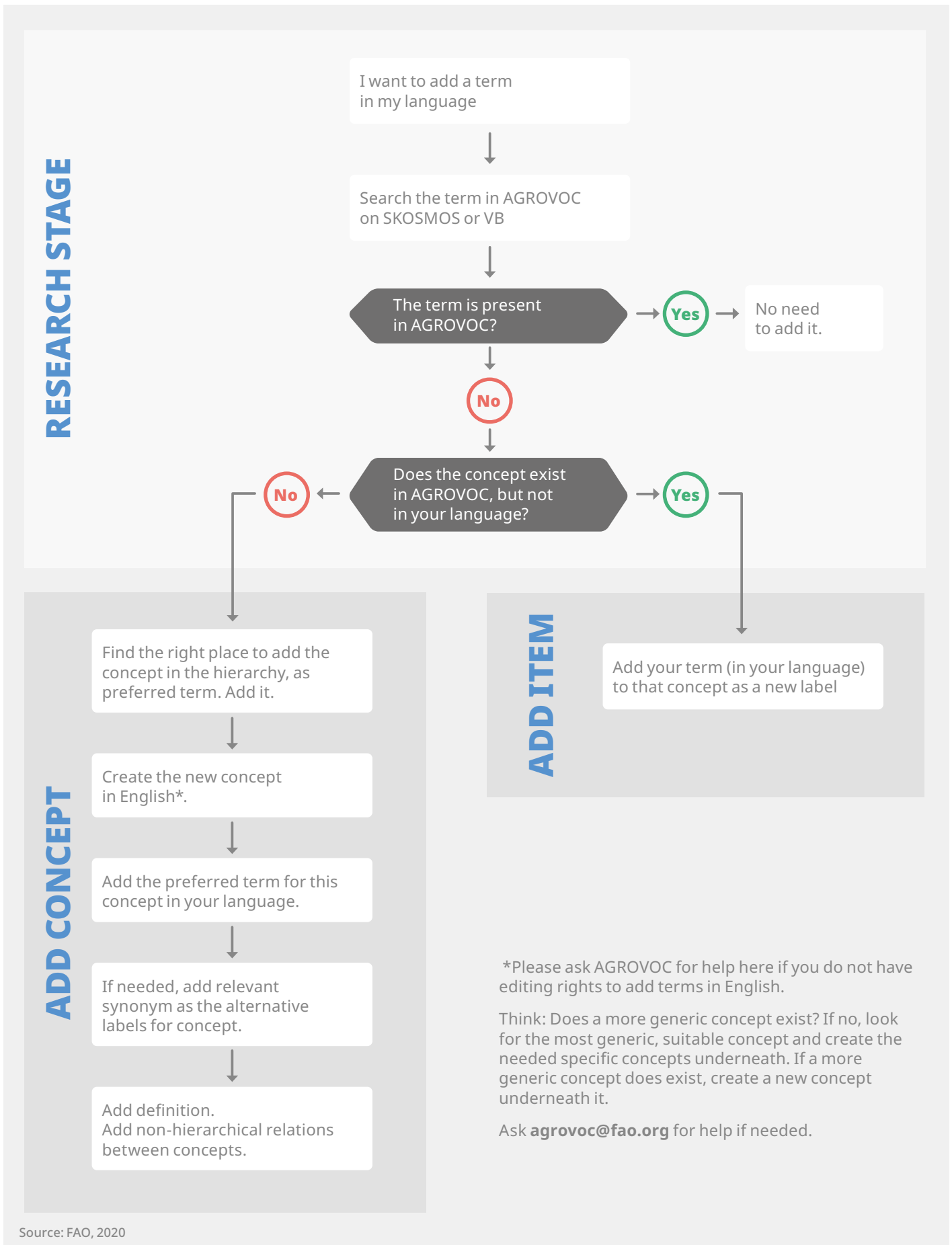
As a preliminary step, it is recommended that the editor checks whether the concept or term already exists in AGROVOC using Skosmos or VocBench and that it is relevant to the scope of AGROVOC. If a term or a concept is missing, there are some steps to take into consideration, see Figure 4. New terms or concepts can be suggested through VocBench or by e-mail to AGROVOC@fao.org.

When making a suggestion, the following elements should be avoided:

- duplicates of existing concepts;
- trademarked names (brand names, commercial names);
- names of plant varieties;
- individuals;
- programmes/initiatives of limited duration;
- individual publication titles (example: “The Eatwell Guide”); and
- concepts not within the scope of AGROVOC (example: “intensive care”, “mortgage holiday”)

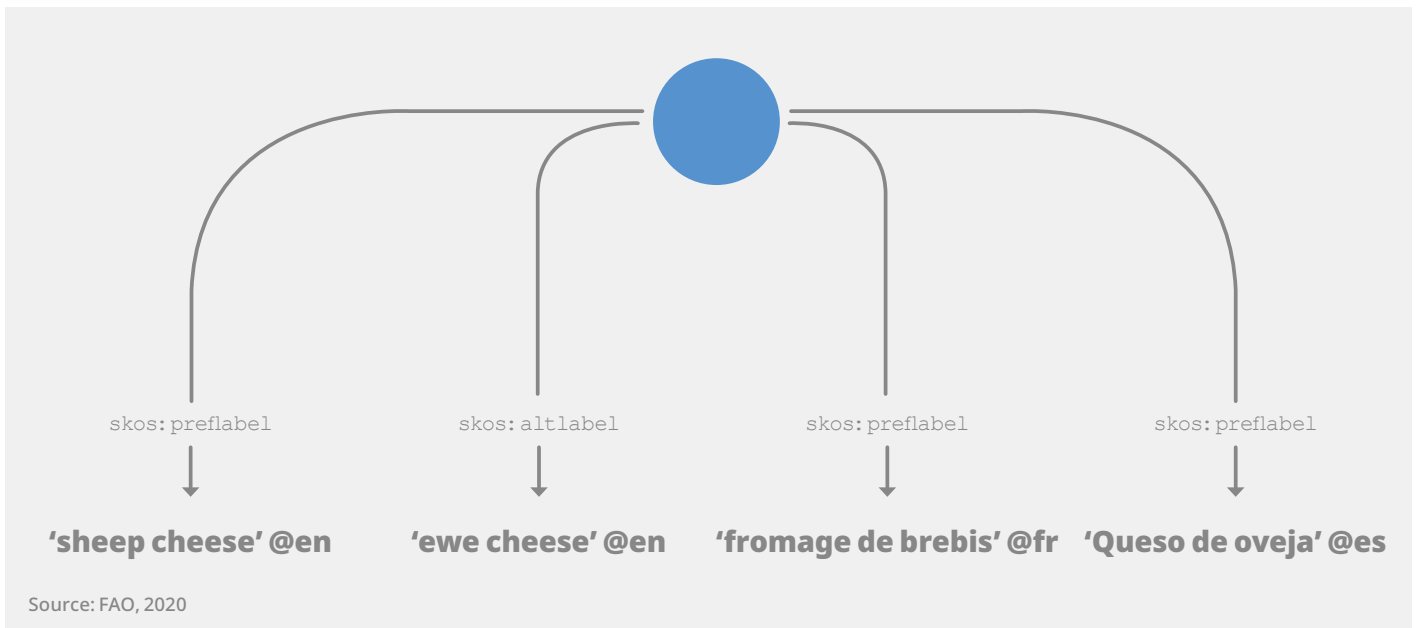
Concepts might exist which do not follow the current guidelines because they were created when other rules existed so this might lead to inconsistencies. In the past, some antonyms were included as non-preferred terms for the same concept, because they dealt with the same topic, for example :c_2636 “*erectness*”* with non-preferred term “*prostrate plants*”. This practice is no longer valid: antonyms should be generated into a separate concept.

Figure 4. Adding new terms and concepts to AGROVOC.



A concept has only one preferred term in a language. All the alternative terms to name a concept in any given language are called non-preferred terms, see Figure 5. The more commonly-used term is the preferred term, but the editor can check with other reputable authorities, see Section 3.1.

Figure 5. Preferred and non-preferred terms.



If a concept exists in AGROVOC, but is not a term in a specific language, it is possible to suggest a new preferred term (and non-preferred terms, if needed), see Section 4. However, an exact term may not always exist in the target language. In this case, a term that is commonly used is recommended over an artificial or literal translation. In addition, it is also preferable to use a term from the source language, for example in English, only if it is used in the target language, e.g. "*Farmer Field School*"@de. Another option is to use a similar term with the same meaning, e.g. :c_2cfe62a "*from farm to fork*"@en, "*de la ferme à la table*"@fr, "*fra jord til bord*"@nb.

3.1 Checking an authoritative source

It is important to check terms with other vocabularies, but to avoid circular reasoning (if a term is wrong in vocabulary X that cites AGROVOC, future AGROVOC editors may think X must be correct). When possible, primary authorities should be used e.g. consulting agricultural thesauri like the CAB Thesaurus or the United States Department of Agriculture (USDA) National Agricultural Library thesaurus (NALT) to have a better idea of the names they use to represent concepts. Trusted sources are also recommended, for example International Committee on Taxonomy of Viruses (IcTV) for viruses, or FAO Terminology (FAO TERM) for general agricultural terms.

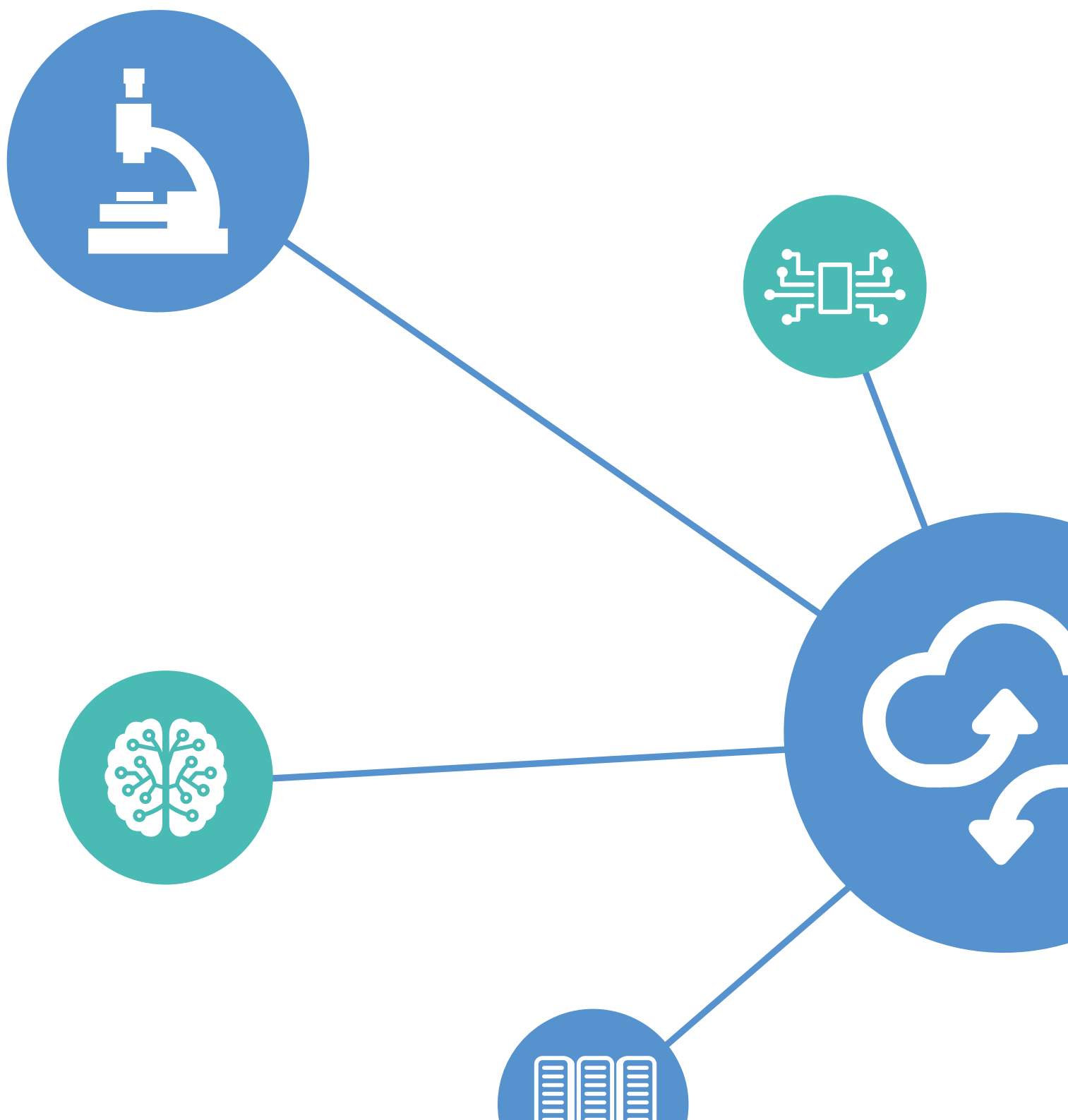
Some examples of primary authorities for editors to consult include:

- **FAO Terminology (FAOTERM)**
<http://www.fao.org/faoterm/en/> (multilingual)
- **Food and Agriculture Organization of the United Nations (FAO) Names of Countries (NOCS)**
<http://termportal.fao.org/faonocs/appl/> (multilingual)
- **United Nations Bibliographic and Information System (UNBIS) Thesaurus** <http://metadata.un.org/thesaurus/> (multilingual)
- **CAB Thesaurus** <https://www.cabi.org/cabthesaurus/> (multilingual)
- **National Agricultural Library Thesaurus (NALT)**
<https://agclass.nal.usda.gov/thesaurus-search>
- **Basel Register of Thesauri, Ontologies & Classifications (BARTOC)**
<http://bartoc-skosmos.unibas.ch/en/>
- **Interactive Terminology for Europe**
<https://iate.europa.eu/home> (multilingual)
- **European Union (EU) Vocabularies**
<https://op.europa.eu/en/web/eu-vocabularies> (multilingual)
- **General Multilingual Environmental Thesaurus (GEMET)**
<https://www.eionet.europa.eu/gemet/> (multilingual)
- **AgroPortal** <http://agroportal.lirmm.fr/>
- **AlgaeBase** <http://www.algaebase.org/>
- **CGIAR Crop Ontology** <https://www.cropontology.org>
- **European and Mediterranean Plant Protection Organization (EPPO) Global Database** <https://gd.eppo.int/>
- **International Committee on Taxonomy of Viruses**
<https://talk.ictvonline.org/taxonomy/>
- **International Plant Names Index (IPNI)** <http://www.ipni.org>
- **International Union of Pure and Applied Chemistry**
<https://iupac.org/>
- **Fungi Index Fungorum** <http://www.indexfungorum.org/>
- **SciName Finder** <http://www.sciname.info/>
- **Global Biodiversity Information Facility** <https://www.gbif.org/>
- **World Checklist of Selected Plant Families**
<https://wcsp.science.kew.org/>
- **World Register of Marine Species** <http://www.marinespecies.org/>

Terms included in AGROVOC must be used in relevant literature (scientific papers, books, etc.) or by relevant institutions (public sector organizations, agricultural extension organizations, etc.). For names of animals and plants, it is necessary to search for both their scientific/taxonomic names and common/local names.

Is this the accepted species name, or a synonym?

What is the correct name of a virus or a country?



4

Suggesting terms

The guidance given in this section applies to all languages represented in AGROVOC, including specifications for particular languages.

The FAOSTYLE guide is also recommended for English, French, Spanish, Arabic, Chinese, and Russian languages. *Note: AGROVOC uses British English spelling as standard, with some FAO spelling exceptions.*

For spelling, the official rules of the languages should be followed. In addition, all terms should be given in the script of the individual languages, unless writing a scientific name.

4.1 Punctuation, diacritics and special characters

Appropriate punctuation, diacritics and any other special characters of an individual language should be used.

4.1.1 Alphabet, diacritics and special characters: language variants

Brazilian Portuguese (pt-br) and Portuguese (pt). The characters Á, á, É, é, Í, í, Ó, ó, Ú, ú, ã, õ, ê, ô, â, à and ç are used according to the common spelling of the word (note: ü is no longer used according to the Orthographic Agreement signed in 1990 to establish a single official orthography for the Portuguese language).

German (de). The characters Ä, Ö, Ü, ä, ö, ü and ß are used according to the common spelling of the word. In early versions of AGROVOC, other rules applied.

Norwegian Nynorsk (nn). Nynorsk uses some diacritic signs: é, è, ê, ó, ò, â, and ô. The vowels æ, ø and å never take diacritics.

Polish (pl). The Polish alphabet uses diacritics in the letters ć, ń, ó, ś, ź; ł; ż; ą, ę.

Romanian (ro). The letters with diacritics (ă, â, î, ș and ț) are used according to common orthographic rules.

Serbian (sr). Cyrillic is used. Latin used for some scientific names.

Thai (th). Spaces between words are not used.

Turkish (tr). In Turkish, vowels are characterised by how and where they are articulated. If the first vowel of the first syllable of a word is one of the bold vowels a/i/o/u, bold vowels follow in the following syllables. If the first vowel of a first syllable of a word is one of the subtle vowels e/i/ö/ü, subtle vowels follow in the following syllables. For example, böcek, toprak, kalın, sözcük, inek, etc.

Turkish words do not have the letters b, c, d, g at the end. For this reason, words that enter Turkish and have the letter b, c, d, g at the end become harder, p, ç, t, k with some exceptions. For example kitap (b), hibrit (d), etc.

Ukrainian (uk). Cyrillic is used.

4.2 Regional language variants

English (en). Regional variants exist in English but are not used (@en-gb, @en-us).

German (de). The spelling and use of terms for German in AGROVOC should follow the common language use in the Federal Republic of Germany. Regional variants, for example for Austria, Switzerland, Belgium, Luxembourg, and Italy might be added, when required.

Portuguese (pt) and Brazilian Portuguese (pt-br). The spelling and use of terms in Brazilian Portuguese in AGROVOC follow the common language use in Brazil. These may differ from regional variants in Portugal (and Angola, Cabo Verde, Guinea-Bissau, Equatorial Guinea, Mozambique, Sao Tome e Príncipe and Timor-Leste), which might be added, if necessary.

Spanish (es) and (es-419). AGROVOC differentiates between Spanish as used in Spain and Spanish as used in Latin America and the Caribbean, using the UN M.49 region code.

When suggesting a term, it is important to avoid empty spaces before and after the term, and avoid adding extra empty spaces within a term. Extra spaces are removed by quality checks before each AGROVOC release. Between releases, however, unnecessary empty spaces could compromise search results, especially in SPARQL, since “rice bran” is different from “rice bran”. An additional empty line as well as non-breaking spaces (white spaces) in the labels should also be avoided (although this can be hard to spot if editors are doing copy-and-paste from existing text).

4.3 Disambiguation

In AGROVOC, a term should only be used once, either as a preferred or non-preferred term. In some cases, disambiguation (term qualifiers, in parentheses) is needed, particularly to uniquely identify one concept from another, e.g. if one wants to suggest a term for a concept already available but the term is already in use by another concept. This requires an evaluation and disambiguation action by the editor. However, disambiguation should be used only when necessary. Examples include :c_15903 “*poisson (aliment)*”@fr and :c_2943 “*poisson (animal)*”@fr, and :c_6831 “*boards (wooden)*” and :c_50163 “*boards (organizations)*”.

4.4 Adjectives and nominalization

The use of adjectives (without a noun), verbs and initial articles (such as A, An, or The) should be avoided. In AGROVOC, verbs are nominalized, e.g. “threshing” instead of “thresh”. Adjectives are only ever used in compound terms, such as “*early diagnosis*”.

4.5 Prepositional phrases

Depending on the language, the use of prepositional phrases should be avoided (use “*carbohydrate metabolism*” rather than “*metabolism of carbohydrates*”).

4.6 Gender-neutral language

AGROVOC seeks to use gender-neutral language, although this depends on the specific language. English examples include using “*fishers*”^{*} rather than “*fishermen*” as the preferred term (with “*fishermen*”, “*fisherwomen*” as non-preferred terms); and “*humans*” rather than “*mankind*”; and “*workforce*” rather than “*manpower*”.

4.7 Abbreviations and acronyms

Abbreviations are a shortened form of a word or set of words, while an acronym is an abbreviation formed from the initial letters of other words and pronounced as a word. An initialism is an abbreviation consisting of initial letters pronounced separately. The full form of the word should be generally selected as the preferred term. The abbreviated form, acronym or initialism should be selected (as the preferred term) only when it has become so well established that the full form is rarely used. In that case, the full form should be included as the non-preferred label. Examples: "HACCP"* is preferred label, "hazard analysis and critical control point" is the non-preferred label; "COVID-19"* is the preferred label, "coronavirus disease 2019" is the non-preferred label. Following the official spelling of organization names is recommended.

4.8 Capitalization

Capitalization rules vary by language and are often quite complex. In writing systems with a case distinction, capitalization is writing a word with its first letter as a capital letter (upper case letter) and the remaining letters in lower case. The agreed and appropriate capitalization of an individual language should be used when editing AGROVOC.

Common nouns and noun phrases use lower case except for proper names, acronyms, geographical names and scientific names for plants, animals, fungi, bacteria and viruses, see below.

Common names for plants, animals, fungi, bacteria and viruses use lower case. Note: scientific names of organisms are often anglicized by changing their endings to English format, which should not be capitalized, e.g. scientific name: "*Vertebrata*", common name: "*vertebrates*". Anglicized names of scientific names are considered common names. All taxonomic rank names start with a small letter.

Proper names. In general, the first letter of each word of a proper name is capitalized. Note: the official spelling of the organization should be used. Proper names also occur within longer terms, for example, in combination with "*method*", "*theory*", "*disease*", e.g. "*Bayesian theory*" or "*Kjeldahl method*".

Geographical names begin with a capital letter. In the case of geographical names consisting of several words, all of them are capitalized. In the case of names of physical geography entities, such as names of mountains, rivers and lakes, the words "*mountain*", "*river*", and "*lake*" are usually also capitalized, for example "*Amazon River*".

Geographical adjectives or nouns used in a name also start with a capital letter. Look in authorized resources for the official form.

Chemical compounds. The full form (written out) of chemical compounds and elements are written in lower case, e.g. "*ethylene*", "*methabenzthiazuron*", while the chemical symbol is always capitalized "*O (symbol)*".

4.8.1 Capitalization: language variants

Albanian (sq). Lower case is used throughout, , except where capitals are required in acronyms, scientific names, geographical names and proper names.

Arabic (ar). Arabic does not have capital letters. However, letters generally have four forms: initial, medial, final, and isolated.

Catalan (ca). Common nouns and noun phrases begin with a capital.

Chinese (zh). Chinese characters are not case-sensitive in form.

Czech (cs). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

Danish (da). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

English (en). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

Estonian (et). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

Farsi (fa). The last letter of each word is capitalized. Common nouns and noun phrases are written in lower case. Farsi, or Persian, is written like Arabic from the right, not the left. Farsi has two models for letters: small, or capitalized.

Finnish (fi). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

French (fr). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names. Adjectives qualifying a mountain, an ocean, or a river are capitalized, for example "*golfe Persique*"@fr. When the words "nord", "sud", "est" and "ouest" are part of the name of a state, or designate a region or a portion of territory, these words take a capital letter, for example "*Afrique du Sud*"@fr. Accents are retained on capital letters.

Gaelic (ga). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

Georgian (ka). Modern written Georgian does not distinguish cases.

German (de). Terms may start with a lower case if the first word is not a noun, for example *"natürliches Gründland"*@de. In proper names, all terms start with a capital letter, for example *"Indischer Ozean"*@de or *"Indischer Elefant"*@de.

Italian (it). Common nouns, verbs and noun phrases start with a capital.

Malay (ms). Common nouns start with a capital.

Norwegian Bokmål (nb) and Norwegian Nynorsk (nn). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

Polish (pl). Common nouns start with a capital.

Portuguese (pt) and Brazilian Portuguese (pt-br). Common nouns and noun phrases in Portuguese are written in lower case, while capitals are used to distinguish proper nouns. Proper names turned into adjectives (in an expression) are written in lower case, e.g. *"teoria bayesiana"*, but *"teoria de Bayes"*. Geographical adjectives or nouns used in a name also start with lower case letters, e.g. *"elefante asiático"*.

Romanian (ro). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

Russian (ru). Common nouns and noun phrases are written in lower case, while upper case is used to distinguish proper nouns (starting with a capital) or abbreviations (all upper case). Adjectives formed from geographic names are written in capital letters if they are included in complex geographic names such as *"Восточная Европа"*@ru, *"Индийский Океан"*@ru, and in lower case if they are not included in a complex proper geographical name, e.g. *"африканская чума лошадей"*@ru.

Spanish (es) and (es-419). Common nouns and noun phrases start with a capital. Accents should be retained on capital letters, e.g. *"África"*@es. When the cardinal directions (north, east, south, and west) have a geopolitical value or are part of a geographical name, they are capitalized, as in *"América del Norte"*@es.

Swahili (sw). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

Swedish (se). Lower case is used throughout, except where capitals are required in acronyms, scientific names, geographical names and proper names.

4.9 Singular and plural

Thai (th). In Thai, letters are not case-sensitive in form.

Turkish (tr). Common nouns and noun phrases are written in lower case. The first letter of proper nouns are written in upper case.

Ukrainian (uk). Proper nouns start with uppercase capital.

For English, all **countable common nouns** should be plural, while **uncountable common nouns** (e.g. liquid, powder) should be singular.

Names of **parts of the body** should be expressed in plural when more than one occurs in a fully formed organism (e.g. knees), but in the singular if only one is present (e.g. heart).

If a given **substance or material** is regarded as a class with more than one member, the class should be expressed in the plural.

The names of **abstract concepts**, e.g. systems of belief, activities, emotions, properties and disciplines, should be expressed in the singular.

For all **multi-word names** composed of nouns and content words (i.e. verbs, adjectives, most adverbs), the same editorial rules apply as for common nouns.

Common names for plants, fungi, bacteria and viruses

Family. Common family names for plants and animals should be either singular or plural ("pondweed family", "legumes"). Common names for fungi at genus and family level are uncommon.

Genus. Common genus names for plants and animals should be singular, or plural if referring to all species with that genus.

Species. Common species names for plants and animals should be plural ("*millet*s", "*dog*s"). Common names for fungi, bacteria and viruses should be singular ("*oyster mushroom*").

Scientific names for plants, animals, fungi, bacteria and viruses

Scientific family, subfamily (and upper taxonomic levels). Scientific names for plants, animals and fungi above species level should be plural ("*Solanaceae*", "*Salmonidae*", "*Pucciniales*").

Genus. Scientific genus names for plants, animals, fungi, bacteria and viruses are usually used in the singular ("*Salmo*", "*Poa*", "*Aparavirus*"), but can be used in the plural if referring to all species within that genus.

Species. The scientific species names for plants, animals, fungi, bacteria and viruses (genus name + epithet) should be singular ("*Salmo salar*", "*Poa pratensis*", "*Kashmir bee virus*").

4.9.1 Singular and plural: language variants

Arabic (ar). Plural is used for countable and uncountable nouns.

Catalan (ca). Plural is used for countable nouns.

Chinese (zh). Chinese nouns and noun phrases have no distinction between singular or plural.

Danish (da). Words representing units, types and parts that can be counted are put in plural, while what cannot be counted is singular. Properties, processes, operations, activities, disciplines, materials and raw materials are used in the singular.

English (en). Plural is used for countable nouns.

Estonian (et). Plural is used for countable nouns.

Farsi (fa). Farsi uses both the singular and plural forms for countable nouns, with the suffixes added for plural nouns. In modern Farsi, the plural suffix is not connected to the noun, while in the old Farsi the plural suffix is connected to the noun. For example, قلمها (old); قلمرها (modern). Some plural nouns follow the Arabic model.

French (fr). Singular is used for countable nouns.

Georgian (ka). Singular is used for countable nouns or in the plural if the singular does not exist. The plural is more common.

German (de). Singular is used for countable nouns, nominative unless a term does not exist in singular, e.g. "Leute". Articles ("der", "die", "das") are not used at the beginning of a term. Compound terms might be single words, connected by a hyphen or consist of multiple words, e.g. :c_9000046 "Energie für die Landwirtschaft"@de or :c_16146 "Pflanze-Boden-Beziehung"@de.

Italian (it). Plural is used for countable nouns.

Norwegian Bokmål (nb) and Norwegian Nynorsk (nn). Words representing units, types and parts that can be counted are put in plural, while what cannot be counted is singular. Uncountable nouns, like properties, processes, operations, activities, disciplines, materials and raw materials, are used in the singular

Portuguese (pt) and Brazilian Portuguese (pt-br). Common nouns are used in the singular, unless a noun does not exist in singular or has a distinct meaning in plural (distinction between countable and uncountable nouns is not used to define plural or singular in Portuguese). Compound terms might be single words, connected by hyphen or consist of multiple words. Adjectives are only used in compound terms. Verbs are nominalized.

Romanian (ro). Plural is used for countable nouns. Singular is used for uncountable nouns, like activities, processes, operations, properties and disciplines.

Russian (ru). No regulations related to the use of plural or singular, but in general plural is used for countable nouns. The lowest concepts in the hierarchy are written mostly in singular, while broader concepts can be written in plural. Elements of a collection are listed in singular, and the generic name is in the plural.

Swedish (se). Words representing units, types and parts that can be counted are put in plural, while what cannot be counted is singular. Properties, processes, operations, activities, disciplines, materials and raw materials are set in singular.

Thai (th). There is no distinction between singular and plural.

Turkish (tr). Singular is used for terms.


Ukrainian (uk). Plural is used for countable nouns. Singular is used for uncountable nouns, like activities, processes, operations, properties, disciplines, and materials.

4.10 Other

Arabic (ar). Known scientific names are written in Arabic, while names that have no equivalent in Arabic are written in Latin. To translate a specific term from English to Arabic, translate it as close to English as the Arabic words allow.

Chinese (zh). For scientific names, there are three methods: Replace the foreign words with translations; use the translation and attach the original text in parentheses after it, or no translation, use foreign language directly. In AGROVOC, the first and third methods are used.

German (de). Adjectives are only used in compound terms. Example "landwirtschaftlich" is not a valid term. Verbs are nominalized (c_14721 "Schwitzen"@de).



5

Scientific and common names

The scientific species name for plants, animals, fungi and bacteria is always binomial, consisting of a genus name and a specific name.

The genus name comes first and starts with a capital, the specific name comes second and starts with a lower-case letter. Scientific names are usually written in the Latin alphabet (scientific names are Latinate words, meaning it is not a Latin word, but is derived from Latin). However, they may be also transliterated in different alphabets. Scientific names for virus species do not follow the Linnaean system. A virus may have a non-Latinate scientific name, for example "*Coconut cadang-cadang viroid*".

In AGROVOC, scientific names do not use italics. The names of the ranks above species, such as the instances of families and orders, start with a capital, e.g. "*Eukaryota*", "*Animalia*", "*Chordata*".

Common names and scientific names should be kept in separate hierarchies, wherever possible, unless a scientific name is used as a common name. Scientific or common names of animals, plants, fungi and bacteria, may be preferred terms, depending on the hierarchy in which common names or the scientific names are placed.

If adding scientific or common names, the corresponding common or scientific name should also be added, with related links between them. The common name and scientific name should be linked by means of a `skos:related` relation, e.g. to explain that "banteng" is related to "*Bos javanicus*", or that "*Apis mellifera*" is related to "honeybees".

Scientific names should not be used as non-preferred terms in the common name hierarchy. However, there are a few exceptions to this rule, i.e. cases where common names and scientific names can be found together. For scientific names, the taxonomic rank should be added for organisms, example: "*Apis mellifera*" has taxonomic rank "*species (taxa)*".

6

Chemical compounds and elements

Recommendations for the chemical compounds and elements.

For chemical compounds and elements, the full form is always the preferred term and the symbol the non-preferred term. "*trinitrotoluene*"* preferred, "*TNT*" non-preferred; "*oxygen*"* preferred, "*O (symbol)*" non-preferred. A chemical symbol is followed by the specification "*symbol*" between round brackets. "*P (symbol)*", "*C (symbol)*". Chemical compounds and chemical elements written out are non-countable nouns and should be expressed in the singular.



7

Geographical names

AGROVOC contains all names of countries recognized by the United Nations (UN), as defined in FAOTERM and in FAO Names of Countries database (NOCS) and/or the UN Bibliographic and Information System (UNBIS) Thesaurus.

Short names are entered as preferred terms (`skos:prefLabel`), while long names and abbreviations/acronyms are entered as non-preferred or alternative terms (`skos:altLabel`), for example: "*Rwanda*"*, "*Republic of Rwanda*"; "*European Union*"*, "*EU*"*; "*Saint Lucia*"*, "*St Lucia*". Types of countries, like "*Small Island Developing States*", are under subconcept "*countries*".

Authoritative resources should be consulted for the geographical entities, sub- and super-nationals, and entities of physical geography, , e.g. for the official form of names of mountains, rivers, lakes, valleys etc. The official form should be the preferred term, all other variants are considered non-preferred terms.

In the case of names of entities from physical geography, such as names of mountains, rivers and lakes, for English consider adding the word "mountain", "river", "lake", etc. directly to the term (without parentheses) to disambiguate it from regions, cities, etc. with the same name.

8

Other descriptive information

Other descriptive information includes definitions, notes and alignments.

8.1 Definitions

Definitions help AGROVOC users to understand concepts and decide whether to use them. In SKOS, definitions are expressed by the predicate `skos:definition`. These guidelines should be followed when adding definitions:

- Definitions consist of a narrative and its source, which are both mandatory.
- Only one definition per language is recommended.
- The definition may be expressed in one or more AGROVOC languages.
- The definition does not have to be a translation of an existing definition, but all definitions for a concept should have the same conceptual meaning.
- Editors are strongly encouraged to provide a definition in English when adding a new concept to AGROVOC, independently of their preferred language. This helps users to understand the concept and other editors to find appropriate translations to other languages.
- A definition is a sentence that requires orthographical rules such as starting a sentence with a capital letter and to end the sentence with a period. The AGROVOC definitions need to be concise (ideally, one sentence) and clear.
- The definition should contain a unique identifier for chemical substances, such as the CAS number "CAS NO. 422556-08-9".

A trusted and stable source for the definition, such as an external glossary, dictionary or thesaurus of a well-known institution, is required. Credit must be given to the creator. When copyright is restrictive, it must be respected. The source should be either:

- a Uniform Resource Locator (URL), e.g. <http://www.fao.org/3/ca9182en/CA9182EN.pdf>.
- a descriptive text like the name of the publication, e.g. "The pollination of cultivated plants: a compendium for practitioners-Vol. 2, FAO, 2018". If descriptive text is selected, the citation of the source (like the title, author, year) should be added.
- a source ("Land Administration Domain Model ISO 19152:2012").

To combine free text and URL, the descriptive text should be used.

8.2 Notes

Three types of notes are currently in use.

- **Editorial note:** The note `skos:editorialNote` is used for editorial comments, such as reasons for changing a concept. This type of note is also used for adding the author of a species. Term: "*Caudiverbera caudiverbera*" `skos:editorialNote` "Author: (Linnaeus 1758)".
- **Scope note:** The note `skos:scopeNote` is used to explain the application of a term and to indicate limitations or extensions of the term meaning.
 - For "*consistency*", the scope note reads: "Restricted to the physical property".
 - For "*agricultural sector*", the scope note indicates "Includes fishery and forestry sectors".
 - For "*growth rate*", the scope note explains "Restricted to the biological phenomenon; in economics use :c_29767".
- **History note:** The note `skos:historyNote` can be used to provide more details for the editorial history.
 - For "*Eswatini*", the history note explains "The country name was changed from the former name of the Kingdom of Swaziland (former short form: Swaziland). Effective date: 19 April 2018."
 - For "*Balistes capricus*", the history note indicates "Previously *Balistes carolinensis* Gmelin, 1789 (synonym)".

For translation, notes are optional.

8.3 Alignments

AGROVOC uses `skos:mappingRelation` sub properties for aligning to concepts in other vocabularies. In particular, these are: `skos:closeMatch`, `skos:exactMatch`, `skos:broadMatch`, `skos:narrowMatch` and `skos:relatedMatch`. Using `skos:exactMatch` is strongly preferred.

When adding a new concept, it is recommended to add one or more alignments wherever possible. Only URIs should be used, not web page URLs, e.g. `:c_6599 "rice"` has `skos:exactMatch` to `<http://lod.nal.usda.gov/nalt/56293>` and `<http://eurovoc.europa.eu/3732>`.

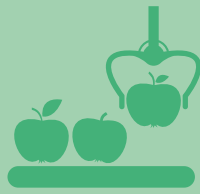
Alignment targets are checked periodically and removed from AGROVOC releases if they are no longer available.

Only concepts in other trusted thesauri should be aligned to AGROVOC, not classes from ontologies (DBpedia and Wikidata are exceptions).

Examples of trusted alignment targets include:

- National Agricultural Library Thesaurus (NALT)
<http://agclass.nal.usda.gov/>
- EuroVoc <http://eurovoc.europa.eu/>
- General Multilingual Environmental Thesaurus (GEMET)
<http://www.eionet.europa.eu/gemet>
- World Bank Group (WBG) Thesaurus
<http://vocabulary.worldbank.org/thesaurus/>
- United Nations Bibliographic and Information System (UNBIS)
<http://metadata.un.org/thesaurus/?lang=en>
- DBPEDIA <http://dbpedia.org/void/Dataset>
- Wikidata <https://www.wikidata.org/>

9



Frequently asked questions (FAQs)

What topics does AGROVOC cover?

AGROVOC covers all areas of interest to FAO, such as food, nutrition, agriculture, forestry, fisheries, names of animals and plants, environment, biological notions, plant cultivation techniques, etc. The thesaurus is hierarchically organized under 25 top concepts.

What type of information is attached to AGROVOC concepts?

For each concept in AGROVOC, the following types of information can be distinguished:

- Terminological information: All the terms/labels in all languages that represent the concept.
- Structural information: Relations between concepts and between terms.
- Semantic information: Definitions and/or pictures of the concept.
- Editorial information: Editorial notes and scope notes.

If a language is not covered by AGROVOC, can it be added?

Yes. For the maintenance of each language version, AGROVOC collaborates with different domain experts (or information managers with domain knowledge) and institutions. If an organization is interested in translating and curating (a part of) AGROVOC into a specific language, it should inform FAO at agrovoc@fao.org.

How is the quality of AGROVOC content ensured?

All AGROVOC editors are recognized experts in their field, working in centres of recognized value in the area of agriculture. Moreover, the workflow distinguishes three editorial roles: “validator”, “editor” and “lexicographer”. Beyond being very knowledgeable in their specific area of expertise, validators are also well acquainted with the AGROVOC structure and editorial issues. Validators are entitled to accept or reject contributions made by editors and lexicographers.

AGROVOC is a KOS. What does this mean?

KOS stands for Knowledge Organization System. Thesauri, authority lists, controlled vocabularies and classification systems are examples of KOS. In particular, AGROVOC is a KOS because its terms and concepts are normally used as values of certain metadata properties.

Who maintains AGROVOC?

AGROVOC is a collaborative effort. The AGROVOC team at FAO keeps AGROVOC up-to-date, together with a number of partner institutions.

How often is AGROVOC updated?

AGROVOC is updated on a continuous basis. Updated AGROVOC content is released once a month.

What tool is used to maintain AGROVOC?

AGROVOC is edited using VocBench, a web-based vocabulary management tool. VocBench fully supports multilingualism and embodies a formalized editorial workflow. VocBench allows for the distinction between user roles and editing rights. The VocBench installation used to maintain AGROVOC is available only to AGROVOC editors.

Is it possible to view or browse hierarchies when viewing AGROVOC online?

It is possible to view or browse hierarchies through Skosmos. When searching a term, a list of term results that match the search will be displayed. When one of the concepts is clicked, the hierarchy of the selected concept will appear in the left panel and all the information regarding the concept appears in the right panel. It is possible to navigate within the hierarchy by clicking other concepts in the left panel.



10

Future action

The AGROVOC editorial guidelines are not exhaustive, but they are a living document, which will be updated when needed to accommodate the needs of AGROVOC editors and the AGROVOC community of users.

During recent decades, AGROVOC has evolved from a paper printed source to a dynamic online tool with an important number of stakeholders volunteering to contribute to different language versions and subject domains. AGROVOC has started a substantial effort to expand the coverage through collaboration with communities of experts to include specialized domains that benefit from the AGROVOC infrastructure. All this work requires coordination and full understanding about the basic principles behind the maintenance of AGROVOC. With the purpose that AGROVOC will continue growing in a coherent and consistent way, these guidelines will be periodically updated to cover more editorial principles, but also to enlarge the recommendations with more information about language versions.

Suggestions and questions are welcome by emailing agrovoc@fao.org.

Bibliography

American National Standards Institute/National Information Standards Organization. 2005. *Guidelines for the Construction, Format, and Management of Monolingual Controlled Vocabularies (ANSI/NISO Z39.19-2005 (R2010))*. [online] Baltimore. [Cited 9 June 2020]. http://www.niso.org/apps/group_public/download.php/12591/z39-19-2005r2010.pdf

Bisby, F.A. 1994. *Plant names in botanical databases* (Plant Taxonomic Database Standards No.3). Pittsburgh. Published for the International Working Group on Taxonomic Databases for Plant Sciences (TDWG) by the Hunt Institute for Botanical Documentation Carnegie Mellon University. [online] Pittsburgh. [Cited 9 June 2020]. <http://www.tdwg.org/standards/113>

European Parliament. 2018. *Gender-neutral language in the European Parliament* [online] Brussels. [Cited 1 September 2020]. https://www.europarl.europa.eu/cmsdata/151780/GNL_Guidelines_EN.pdf

FAO. 2008. *Basic Guidelines for Managing AGROVOC*. [online] Rome. [Cited 1 July 2020]. <http://www.fao.org/3/a-ai144e.pdf>

FAO. 2010. *Руководство по редактированию документов ФАО на русском языке*. [online] Rome. [Cited 12 October 2020]. <http://www.fao.org/3/a-ac339r.pdf>

FAO. 2015. *AGROVOC Editorial Guidelines* (English). [online] Rome. [Cited 9 June 2020]. http://aims.fao.org/standards/agrovoc/editorial_guidelines

FAO. 2016a. *عوارزلاو ةذغأل ةمرظنم تاعوب طمرل دجوملا يعجر رمللا طمرنل* [online] Rome. [Cited 12 October 2020]. <http://www.fao.org/3/a-ac339a.pdf>

FAO. 2016b. *粮农组织编辑出版规范*. [online] Rome. [Cited 12 October 2020]. <http://www.fao.org/3/a-ac339c.pdf>

FAO. 2017a. *FAOSTYLE English*. [online] Rome. [Cited 1 July 2020]. <http://www.fao.org/3/AC339EN/ac339en.pdf>

FAO. 2017b. *Directives éditoriales internes à la FAO*. Rome. [Cited 12 October 2020]. <http://www.fao.org/3/AC339FR/ac339fr.pdf>

FAO. 2017c. *Guía de estilo editorial de la la FAO*. Rome. [Cited 12 October 2020]. <http://www.fao.org/3/a-ac339s.pdf>

International Federation of Library Associations and Institutions. 2009. *Guidelines for Multilingual Thesauri: IFLA Professional Reports 115*. [online] The Hague. [Cited 9 June 2020]. www.ifla.org/publications/ifla-professional-reports-115

International Organization for Standardization. 2010. *ISO 25964, Thesauri and interoperability with other vocabularies*. [online] Geneva. [Cited 9 June 2020]. <http://www.niso.org/schemas/iso25964/#standard>

World Wide Web Consortium. 2009. *SKOS Simple Knowledge Organization System*. [Cited 9 June 2020]. <https://www.w3.org/TR/skos-reference/>

Language variants

Note for Portuguese (pt) and Brazilian Portuguese (pt-br). The spelling of all words follows the “Vocabulário Ortográfico da Língua Portuguesa” <https://www.academia.org.br/nossa-lingua/busca-no-vocabulario>

Note for German (de). The spelling of all words follows the “Amtliche Regelwerk” <https://www.rechtschreibrat.com/regeln-und-woerterverzeichnis/>

Further online resources

FAO. 2010. *Руководство по редактированию документов ФАО на русском языке*. Rome. 21pp. [Cited 7 July 2020]. www.fao.org/3/a-ac339r.pdf

FAO. 2016a. *粮农组织出版规范*. Rome. 25pp. [Cited 7 July 2020]. www.fao.org/3/a-ac339c.pdf

FAO. 2016b. *ةمرظنمرلا تاعوب طمرل دح و مرلا يعج رمرلا طمرنلا*. Rome. 16pp. [Cited 7 July 2020]. www.fao.org/3/a-ac339a.pdf

FAO. 2017a. *Directives éditoriales internes à la FAO*. Rome. 21pp. [Cited 7 July 2020]. www.fao.org/3/AC339FR/ac339fr.pdf

FAO. 2017b. *FAOSTYLE*. Rome. 32pp. [Cited 7 July 2020]. www.fao.org/3/AC339EN/ac339en.pdf

FAO. 2017c. *Normas de Uso del Español en los Textos de la FAO*. Rome. 26pp. [Cited 7 July 2020]. www.fao.org/3/a-ac339s.pdf

Glossary

Agroontology	Specific vocabulary of non-hierarchical relations developed for AGROVOC, grouped under <code>skos:related</code> .
Concept	<p>Concepts may cover any subject: an animal, a plant, a geographical region, a chemical element, a technique, etc. Operationally, a concept is a set of terms used in any languages to describe the same idea.</p> <p><i>"intensive farming"*@en</i> <i>"intensive agriculture"@en</i> <i>"Explotación agrícola intensiva"@es</i> <i>"agriculture intensive"@fr</i></p>
Sibling concept	Concepts that have the same parent concept. Looking at <i>"wood products"</i> and <i>"non-wood products"</i> , these are sibling concepts, i.e. on the same level in the hierarchy with the shared parent concept <i>"forest products"</i> .
Hierarchical relations between concepts	<p>Concepts are organized hierarchically by means of the relations <code>skos:broader</code> (BT) and its inverse <code>skos:narrower</code> (NT). The relation can be generic between a category and its members.</p> <p><i>"birds" skos:narrower "parrots"</i>, where the biological order <i>"parrots"</i> is one of the members of the class <i>"birds"</i></p> <p>Another hierarchical relation is between the whole and its parts <i>"blood vessels"* skos:narrower "blood veins", "arteries"</i></p> <p>In some cases, the relation is instancial i.e. refers to a particular instance. <i>"mountain ranges"* skos:broader "Alps", "Apennines"</i></p>
Non-preferred term	All the alternative terms to name a concept in any given language are called non-preferred terms. <i>"agrosilvicultural systems"@en</i> , <i>"farm forestry"@en</i> are all non-preferred terms in English which are used for concept <code>:c_207</code> (preferred term <i>"agroforestry"*</i>).
Parent concept	In the hierarchical structure, the more general concept is the parent concept. It is the object of the relation <code>skos:broader</code> . <p><i>"animals"@en</i>, <i>"animales"@es</i> is the parent concept of <i>"aquatic animals"@en</i>, <i>"animales acuáticos"@es</i></p>

Preferred term	<p>For each concept in each language, one term is preferred representing a single concept. The decision of which term should be preferred usually depends on its domain and its accepted conventions.</p> <p><i>"agroforestry"*@en</i> is the preferred term in English for the concept :c_207.</p>
Simple Knowledge Organization System (SKOS)	<p>SKOS is a World Wide Web Consortium recommendation designed for representation of thesauri, classification schemes, taxonomies, subject-heading systems, or any other type of structured controlled vocabulary. SKOS is part of the Semantic Web family of standards built upon RDF and RDFS, and its main objective is to enable easy publication and use of such vocabularies as linked data.</p> <p>Source: https://en.wikipedia.org/wiki/Simple_Knowledge_Organization_System</p>
SKOS Concept scheme	<p>A SKOS concept scheme is an aggregation of one or more SKOS concepts.</p> <p>Source: https://www.w3.org/TR/skos-reference/</p>
Term	<p>A term is a word or set of words used to name a concept in any given language.</p> <p><i>"ءارڤص ةرد"</i>@ar <i>"zrno kukuřice"</i>@cs <i>"maize"</i>@en <i>"Maíz"</i>@es <i>"Mais"</i>@it <i>"मक्का"</i>@hi <i>"kukorica"</i>@hu <i>"Jagung"</i>@ms <i>"Kukurydza (ziarno)"</i>@pl <i>"milho"</i>@pt, <i>"porumb"</i>@ro <i>"kukurica siata"</i>@sk <i>"玉米"</i>@zh</p>
Uniform Resource Identifier (URI)	<p>A URI is a string of characters used to identify a name or a resource on the Internet. The most common form of URI is the Web page address, which is a particular form or subset of URI called a Uniform Resource Locator (URL). In SKOS, concepts are formalized as skos:Concept and identified by dereferenceable URIs.</p> <p>http://aims.fao.org/aos/agrovoc/c_12332 is the URI of the concept <i>"maize"*@en, "corn (maize)"@en, "mais"@fr, ...]</i></p>

Annex

AGROVOC 25 top concepts

Activities	This contains activities that are conducted along the food supply chain, like <i>"breeding"</i> , <i>"feeding"</i> , <i>"surveying"</i> , <i>"cleaning"</i> , <i>"transport"</i> . Included here are also higher-level management activities like <i>"accounting"</i> and <i>"planning"</i> , activities on nutritional topics like <i>"weight reduction"</i> and activities that are more loosely related to agriculture and food or rural areas like <i>"cartography"</i> , <i>"computer programming"</i> or <i>"recreation"</i> .
Entities	Entities are broadly defined as <i>"something which is distinct and separate from something else."</i> These include narrower concepts like <i>"agencies"</i> , <i>"labels"</i> , <i>"networks"</i> , <i>"policies"</i> .
Events	Events in this context are outlined as something taking place at a certain point in time and involving the participation of people, so includes concepts like <i>"exhibitions"</i> and <i>"training courses"</i> .
Factors	In agricultural research and publications, the term <i>"factors"</i> is frequently used in a number of rather common word combinations. These common combinations are reflected in the narrower concepts to be found here, e.g. <i>"abiotic factors"</i> , <i>"biotic factors"</i> , <i>"environmental factors"</i> or <i>"production factors"</i> .
Features	This relates to the feature concept from geosciences and genetics and contains narrower concepts such as <i>"genomic features"</i> , <i>"physiographic features"</i> and <i>"soil morphological features"</i> .
Groups	Groups are defined as <i>"a number of individual items or people brought together."</i> Narrower concepts like <i>"engineers"</i> , <i>"librarians"</i> but also societal groups like <i>"consumers"</i> and <i>"interest groups"</i> can be found here.
Location	A location is a <i>"a point or extent in space"</i> and thus holds concepts like <i>"climatic zones"</i> , <i>"maritime zones"</i> , <i>"protected areas"</i> and <i>"urban areas"</i> .
Measure	While a measure can also denote an action taken, in this context, it is clearly defined as something that can be observed and involves a measurement: <i>"Number or quantity that records a directly observable value or performance. All measures have a unit attached to them: inch, centimetre, dollar, litre, etc."</i> Examples of narrower concepts are: <i>"altitude"</i> , <i>"breeding value"</i> , <i>"humidity"</i> , <i>"price indices"</i> , and <i>"soil water potential"</i> .

Methods	Methods describe ways of doing things, either in agricultural research or in production but also in everyday life. They are like recipes - and as a notable fact, <i>"cooking methods"</i> is a narrower concept of the methods top concept. Other examples include <i>"autoclaving"</i> , <i>"irrigation methods"</i> , <i>"sampling"</i> , <i>"statistical methods"</i> and <i>"survey methods"</i> .
Objects	Objects in this context include man-made, tangible things like <i>"equipment"</i> and <i>"furniture"</i> .
Organisms	The organisms tree is one of the largest subtrees in AGROVOC and contains the taxonomic trees of organisms relevant to agriculture under concepts like <i>"Eukaryota"</i> and <i>"Prokaryotae"</i> as well as common organism classes like <i>"plants"</i> and <i>"animals"</i> , but also roles that an organism can hold like <i>"hosts"</i> , <i>"pests"</i> or <i>"predators"</i> . Concepts for organisms that live in a certain habitat like <i>"aquatic organisms"</i> or <i>"soil organisms"</i> are also available
Phenomena	In scientific usage, a phenomenon is any event that is observable, however common it might be, even if it requires the use of instrumentation to observe, record, or compile data concerning it. In natural sciences, a phenomenon is an observable happening or event. This tree contains concepts like <i>"deficiencies"</i> , <i>"economic phenomena"</i> , <i>"hazards"</i> , <i>"population dynamics"</i> and <i>"trends"</i> .
Processes	A process is a set of interrelated or interacting activities which transforms inputs into outputs. Examples of narrower concepts of processes include: <i>"anthropogenic changes"</i> , <i>"biological processes"</i> , <i>"evolution"</i> , <i>"inhibition"</i> , <i>"physiological processes"</i> and <i>"synthesis"</i> .
Products	In the context of AGROVOC, these concepts are mostly confined to products and product classes originating from agricultural supply chains, like <i>"animal products"</i> , <i>"feeds"</i> , <i>"foods"</i> or <i>"oil products"</i> . Raw materials or product properties are also represented by concepts such as <i>"resins"</i> , <i>"forest products"</i> , <i>"biodegradable products"</i> and <i>"sustainable products"</i> .
Properties	A property is a characteristic or quality that can be owned or possessed, which serves to define or describe its possessor. This tree contains numerous narrower concepts of differing granularity, e. g. <i>"age"</i> , <i>"colour-fastness"</i> , <i>"periodicity"</i> , <i>"soil properties"</i> , <i>"toxicity"</i> and <i>"wind direction"</i> .
Resources	Resources are things that are used during a production process or that are required to cover human needs in everyday life. Concepts like <i>"economic resources"</i> , <i>"inputs"</i> and <i>"raw materials"</i> would refer to the former category. The latter category is covered by more abstract resources like <i>"cultural heritage"</i> or <i>"natural resources"</i> .

Site	Sites contain narrower concepts that serve to describe locations and facilities that are set up by humans for a certain purpose like <i>"hospitals"</i> , <i>"laboratories"</i> , <i>"meteorological stations"</i> , <i>"restaurants"</i> and <i>"timber yards"</i> .
Stages	Stages has a few narrower concepts: <i>"developmental stages"</i> and <i>"life cycle"</i> . The former concept, however, is highly branched, containing plant and animal development stages like <i>"embryo stage"</i> , <i>"reproductive stage"</i> etc.
State	States are any condition in which a physical substance or organism can be in. Some narrower concepts are: <i>"anoxia"</i> , <i>"colloidal state"</i> , <i>"employment"</i> , <i>"physical states"</i> , and <i>"sleep"</i> .
Strategies	Strategies describe acting options and include communication, rural development and training strategies as well as <i>"approaches"</i> .
Subjects	Subjects are disciplines of study or topics relevant to agriculture and nutrition and includes <i>"cartography"</i> , <i>"humanities"</i> and <i>"sciences"</i> .
Substances	Substances is a broad subtree providing hierarchies for chemical substances according to physical properties like <i>"ceramics"</i> , <i>"explosives"</i> , <i>"oils"</i> or <i>"solutes"</i> but also according to their role or function like <i>"attractants"</i> , <i>"culture media"</i> , <i>"drugs"</i> or <i>"soil amendments"</i> , and their source or place of origin like <i>"exudates"</i> , <i>"filter cakes"</i> or <i>"sediment"</i> .
Systems	The systems top concept contains a wide range of concepts for systems of human action, interaction and thought (<i>"economic systems"</i> , <i>"political systems"</i> , <i>"value systems"</i>), production and supply (<i>"distribution systems"</i> , <i>"drinking water systems"</i> , <i>"agroforestry systems"</i>), technological systems (<i>"information systems"</i> , <i>"photovoltaic systems"</i> , <i>"surveillance systems"</i>) as well as systematic and organizational approaches from science (<i>"knowledge organization system"</i> , <i>"terminology"</i>).
Technology	This includes concepts for technological developments and inventions that are applied in modern agricultural and food systems: <i>"biotechnology"</i> , <i>"food technology"</i> , <i>"information and communication technologies"</i> , <i>"seed technology"</i> , <i>"wood technology"</i> and so on.
Time	This contains concepts that describe timespans with a certain function - e. g. <i>"free time"</i> , <i>"seasons"</i> , <i>"times of the day"</i> , <i>"working hours"</i> and timespans relevant to agricultural production are mostly aggregated in the <i>"timing"</i> concept.



