Useful Tree Species for Africa

A species selection tool based on The Vegetation Map of Africa

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Suggestions for selecting tree species for a particular site and purpose

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Consult an associated document for some suggestions how the mapping unit of your area of interest can be determined from the interactive map (Suggestions for using the map.pdf).

Information on species composition - including suggestions for useful tree species that could be planted in the respective mapping units - are provided in one or two species composition tables that were prepared for the mapping units (see figure 1 [next page]).

- One species composition table cross-tabulates the various vegetation types associated with a mapping unit (the main vegetation type, possible vegetation subtypes and possible vegetation types that are not mapped separately; see main documentation AfricaVeg_Main.pdf) with plant species (including woody species, grasses and other herbs for which the current name was checked, see below)
- A second species composition table cross-tabulates "useful tree species" associated with the mapping unit with documented uses for these species.

These species composition tables were prepared in MS Excel, but can also be opened with the OpenOffice Calc software (http://www.openoffice.org).

The first composition table crosstabulates plant species with vegetation types (including the main vegetation type and other types that are not mapped separately) documented for the mapping unit (figure 2). Clicking on the hyperlinks provided in the "PROTA" (Plant Resources of Tropical Africa; http://www.prota4u.org/) column takes you to a description of a particular species (figure 3). The column of "Main vegetation types" indicates whether a species was listed for the main vegetation type. The column of "uses" indicates whether this species is a "useful tree species" for which information is available in the second composition table. **You can use the column of "I select" to remember the species that you selected - you are invited to change "NO" into "YES" in this column for the species that you select.**

Note that the documentation of the original map potentially listed a larger set of species as we focused on woody species. We only listed species that were either listed in PROTA4U or for which we checked for current taxonomy as we had identified them as woody species (see documentation and notes on species composition given for a particular mapping unit).

The second composition table crosstabulates useful tree species with documented uses of these species (figure 4). Invoke the *AutoFilter* selection options by clicking on the arrow button that is provided for each column heading (figure 5). Arrow buttons that restrict the number of rows that are displayed (*i.e.* that select a subset of useful tree species based on particular criteria) are displayed in blue (figure 6; note also that subsets of rows are given a row number that is shown in blue).

Be aware that information on uses is limited to those uses that were provided in the references that we consulted (see documentation). We encourage you to crosscheck with extension officers or other specialists about the tree species that you are planning to plant. We strongly advocate that you adhere to biosafety and seed exchange regulations.

Figure 1. Clicking on the hyperlink of the mapping unit (example: Mapping unit 26a) from the interactive vegetation map links to a page that provides more information (the figure shows the lower half of this page). The hyperlinks shown at the bottom ("Link to main composition tables") link to two species composition tables (one that crosstabulates different vegetation types that occur in the mapping unit with plant species that occur within these vegetation types; another one that crosstabulates useful tree species with documented uses for these species; these files were prepared in MS Excel but can also be opened with OpenOffice).

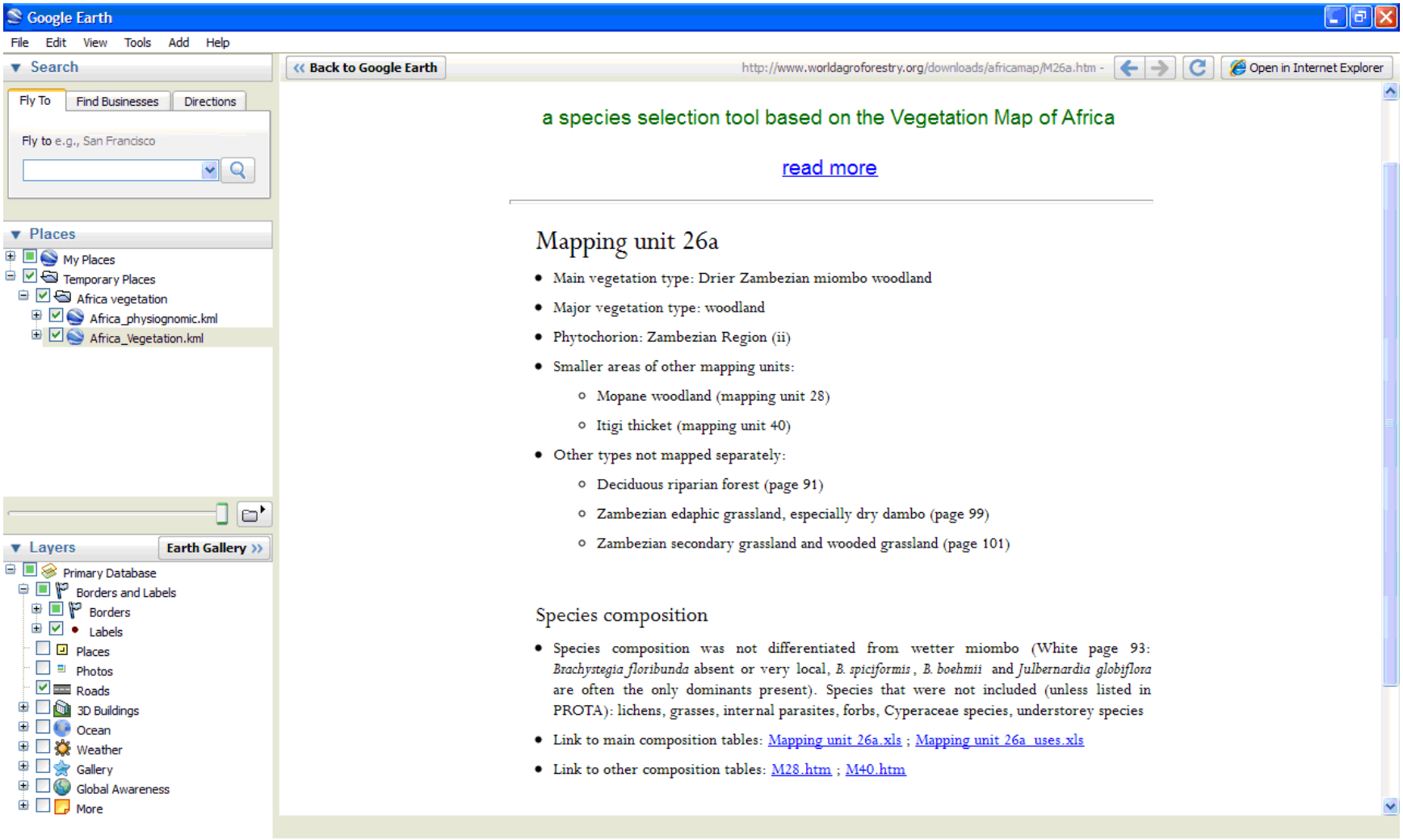
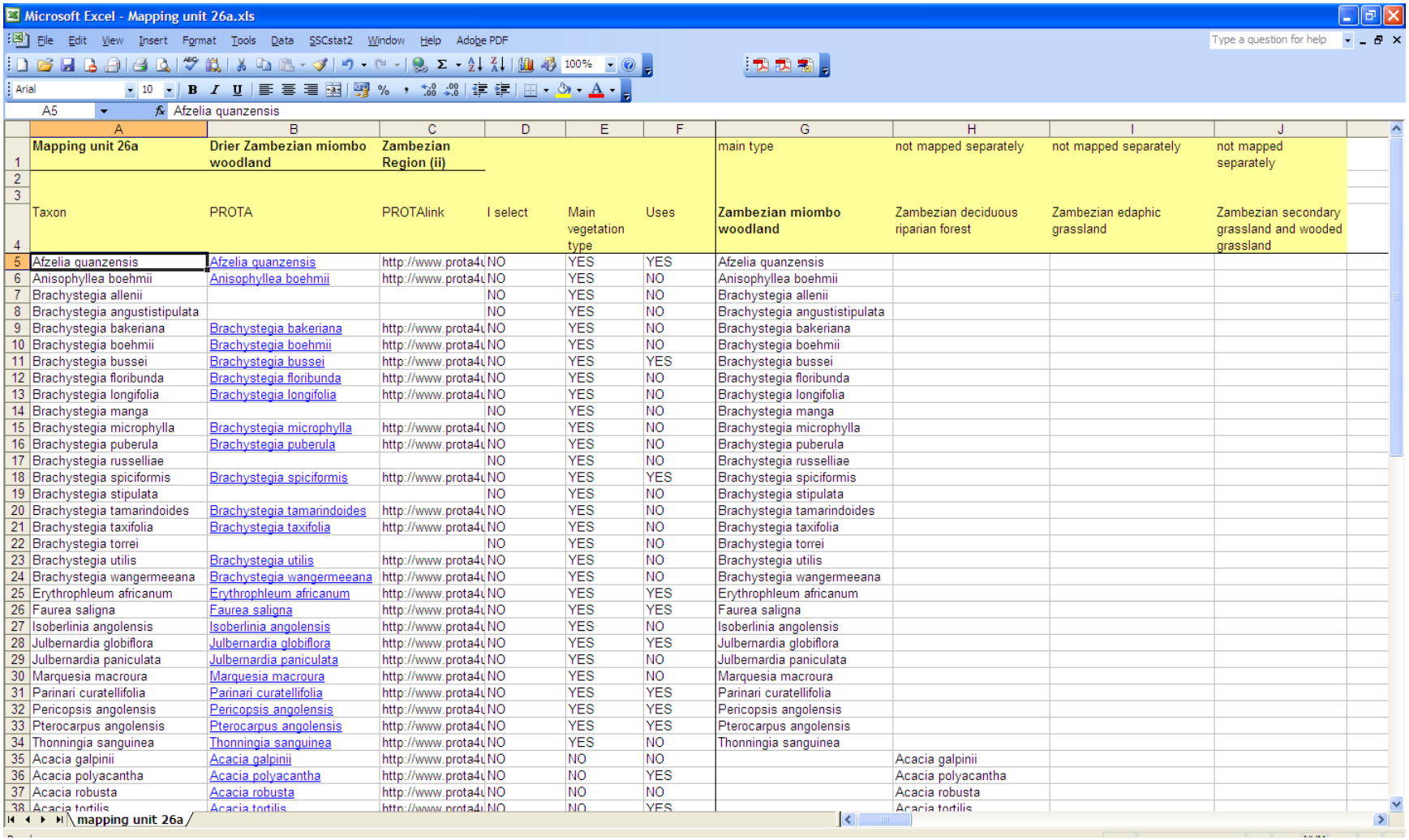


Figure 2. Selecting the first composition table crosstabulates plant species with vegetation types documented for the mapping unit (mapping unit 26a in the example). As indicated in the description of the mapping unit (see figure 1), species composition is given separately for the main vegetation type (Zambezian miombo woodland) and for other types that are not mapped separately.



Microsoft Excel - Mapping unit 26a.xls

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A5 Afzelia quanzensis

	A	B	C	D	E	F	G	H	I	J
1	**Mapping unit 26a**	**Drier Zambezian miombo woodland**	**Zambezian Region (ii)**				main type	not mapped separately	not mapped separately	not mapped separately
2										
3										
4	Taxon	PROTA	PROTAlink	I select	Main vegetation type	Uses	**Zambezian miombo woodland**	Zambezian deciduous riparian forest	Zambezian edaphic grassland	Zambezian secondary grassland and wooded grassland
5	Afzelia quanzensis	Afzelia quanzensis	http://www.prota4u	NO	YES	YES	Afzelia quanzensis			
6	Anisophyllea boehmii	Anisophyllea boehmii	http://www.prota4u	NO	YES	NO	Anisophyllea boehmii			
7	Brachystegia allenii			NO	YES	NO	Brachystegia allenii			
8	Brachystegia angustistipulata			NO	YES	NO	Brachystegia angustistipulata			
9	Brachystegia bakeriana	Brachystegia bakeriana	http://www.prota4u	NO	YES	NO	Brachystegia bakeriana			
10	Brachystegia boehmii	Brachystegia boehmii	http://www.prota4u	NO	YES	NO	Brachystegia boehmii			
11	Brachystegia bussei	Brachystegia bussei	http://www.prota4u	NO	YES	YES	Brachystegia bussei			
12	Brachystegia floribunda	Brachystegia floribunda	http://www.prota4u	NO	YES	NO	Brachystegia floribunda			
13	Brachystegia longifolia	Brachystegia longifolia	http://www.prota4u	NO	YES	NO	Brachystegia longifolia			
14	Brachystegia manga			NO	YES	NO	Brachystegia manga			
15	Brachystegia microphylla	Brachystegia microphylla	http://www.prota4u	NO	YES	NO	Brachystegia microphylla			
16	Brachystegia puberula	Brachystegia puberula	http://www.prota4u	NO	YES	NO	Brachystegia puberula			
17	Brachystegia russelliae			NO	YES	NO	Brachystegia russelliae			
18	Brachystegia spiciformis	Brachystegia spiciformis	http://www.prota4u	NO	YES	YES	Brachystegia spiciformis			
19	Brachystegia stipulata			NO	YES	NO	Brachystegia stipulata			
20	Brachystegia tamarindoides	Brachystegia tamarindoides	http://www.prota4u	NO	YES	NO	Brachystegia tamarindoides			
21	Brachystegia taxifolia	Brachystegia taxifolia	http://www.prota4u	NO	YES	NO	Brachystegia taxifolia			
22	Brachystegia torrei			NO	YES	NO	Brachystegia torrei			
23	Brachystegia utilis	Brachystegia utilis	http://www.prota4u	NO	YES	NO	Brachystegia utilis			
24	Brachystegia wangermeeana	Brachystegia wangermeeana	http://www.prota4u	NO	YES	NO	Brachystegia wangermeeana			
25	Erythrophleum africanum	Erythrophleum africanum	http://www.prota4u	NO	YES	YES	Erythrophleum africanum			
26	Faurea saligna	Faurea saligna	http://www.prota4u	NO	YES	YES	Faurea saligna			
27	Isoberlinia angolensis	Isoberlinia angolensis	http://www.prota4u	NO	YES	NO	Isoberlinia angolensis			
28	Julbernardia globiflora	Julbernardia globiflora	http://www.prota4u	NO	YES	YES	Julbernardia globiflora			
29	Julbernardia paniculata	Julbernardia paniculata	http://www.prota4u	NO	YES	NO	Julbernardia paniculata			
30	Marquesia macroura	Marquesia macroura	http://www.prota4u	NO	YES	NO	Marquesia macroura			
31	Parinari curatellifolia	Parinari curatellifolia	http://www.prota4u	NO	YES	YES	Parinari curatellifolia			
32	Pericopsis angolensis	Pericopsis angolensis	http://www.prota4u	NO	YES	YES	Pericopsis angolensis			
33	Pterocarpus angolensis	Pterocarpus angolensis	http://www.prota4u	NO	YES	YES	Pterocarpus angolensis			
34	Thonningia sanguinea	Thonningia sanguinea	http://www.prota4u	NO	YES	NO	Thonningia sanguinea			
35	Acacia galpinii	Acacia galpinii	http://www.prota4u	NO	NO	NO		Acacia galpinii		
36	Acacia polyacantha	Acacia polyacantha	http://www.prota4u	NO	NO	YES		Acacia polyacantha		
37	Acacia robusta	Acacia robusta	http://www.prota4u	NO	NO	NO		Acacia robusta		
38	Acacia tortilis	Acacia tortilis	http://www.prota4u	NO	NO	YES		Acacia tortilis		

mapping unit 26a

Figure 3. Clicking on the hyperlink provided under the "PROTA" (Plant Resources of Tropical Africa) column links to information of a particular species provided in the PROTA4U webdatabase (example: *Afzelia quanzensis*).

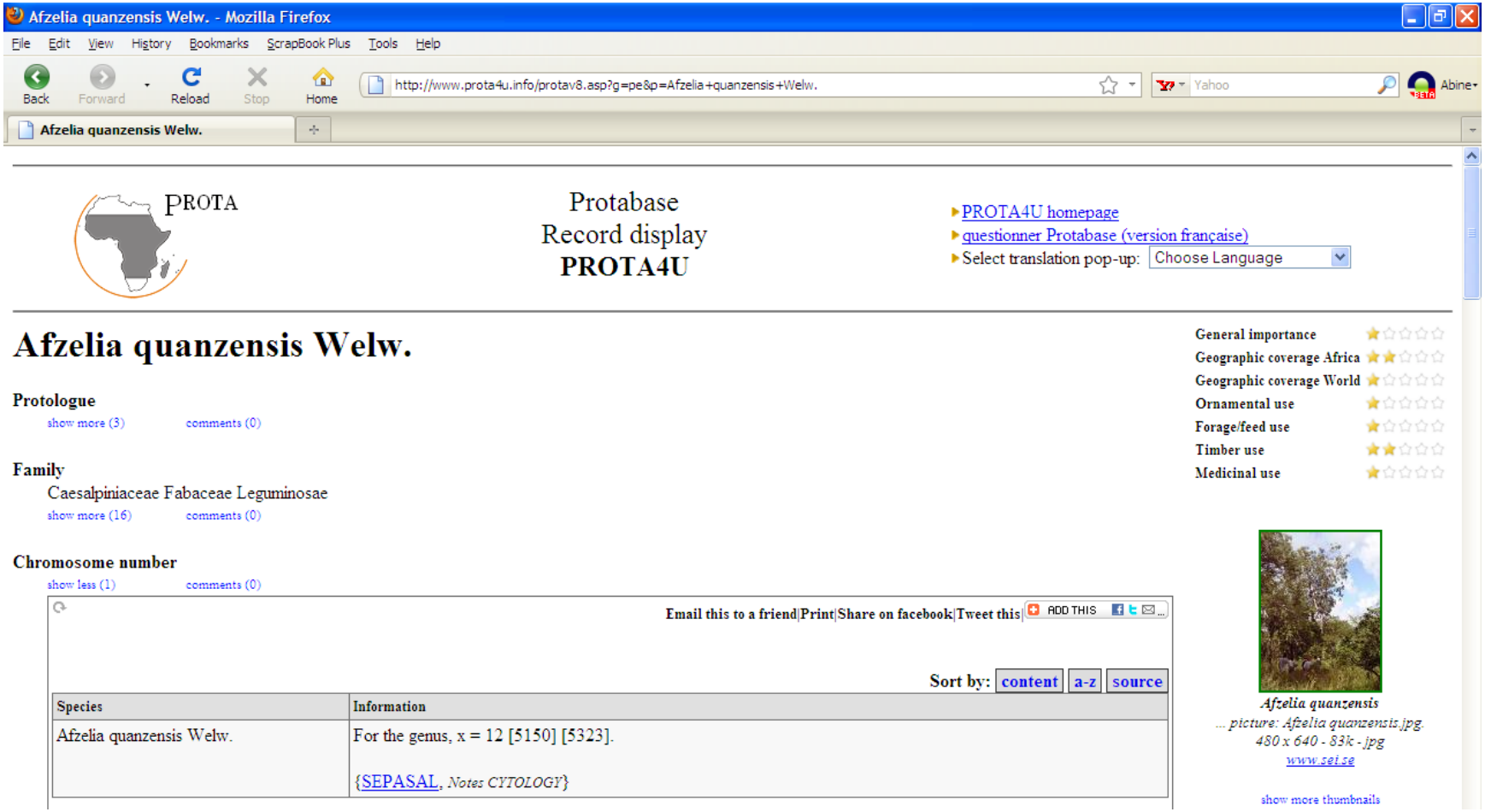


Figure 4. Selecting the second composition table crosstabulates "useful tree species" with documented uses for these species (mapping unit 26a in the example).

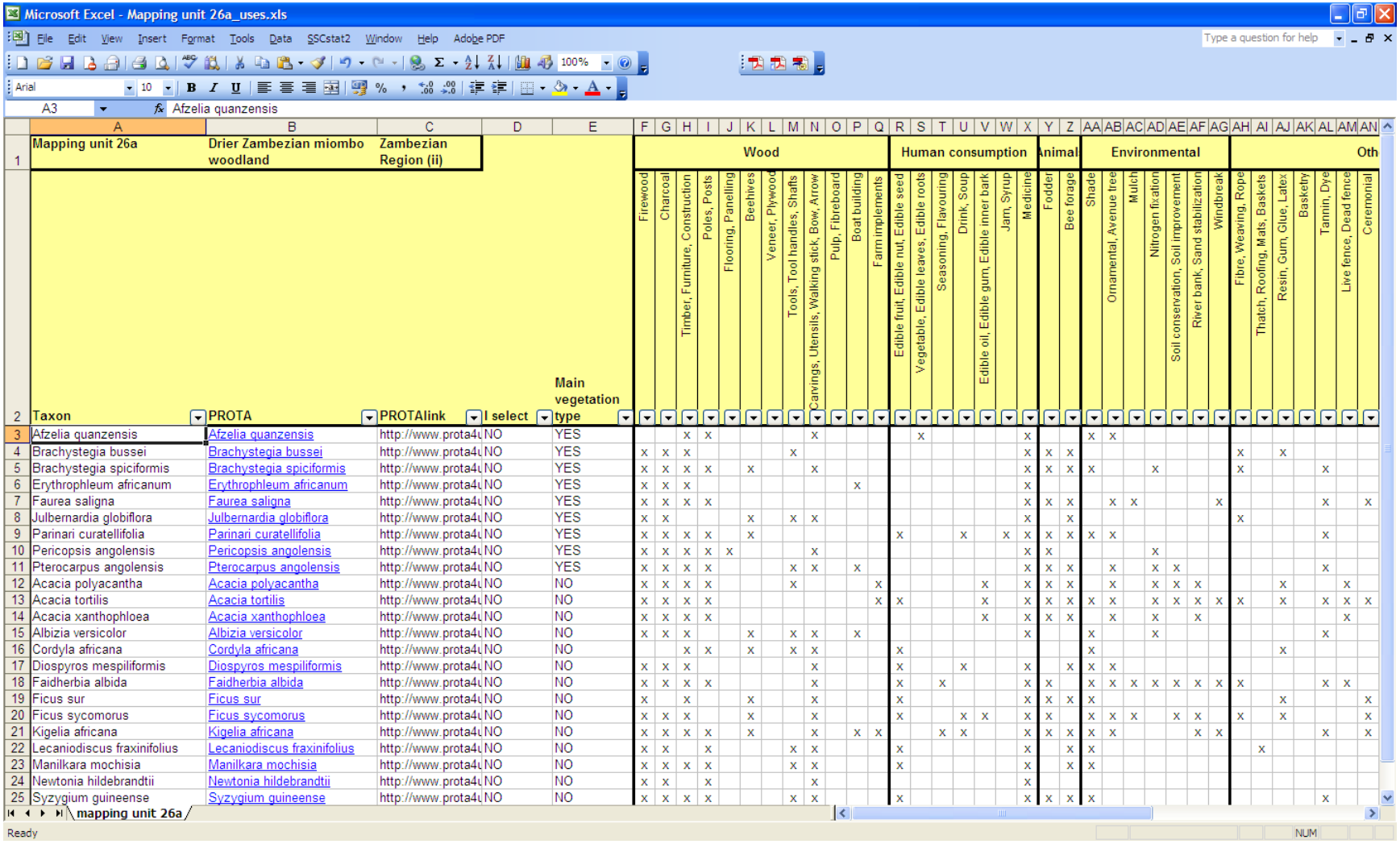
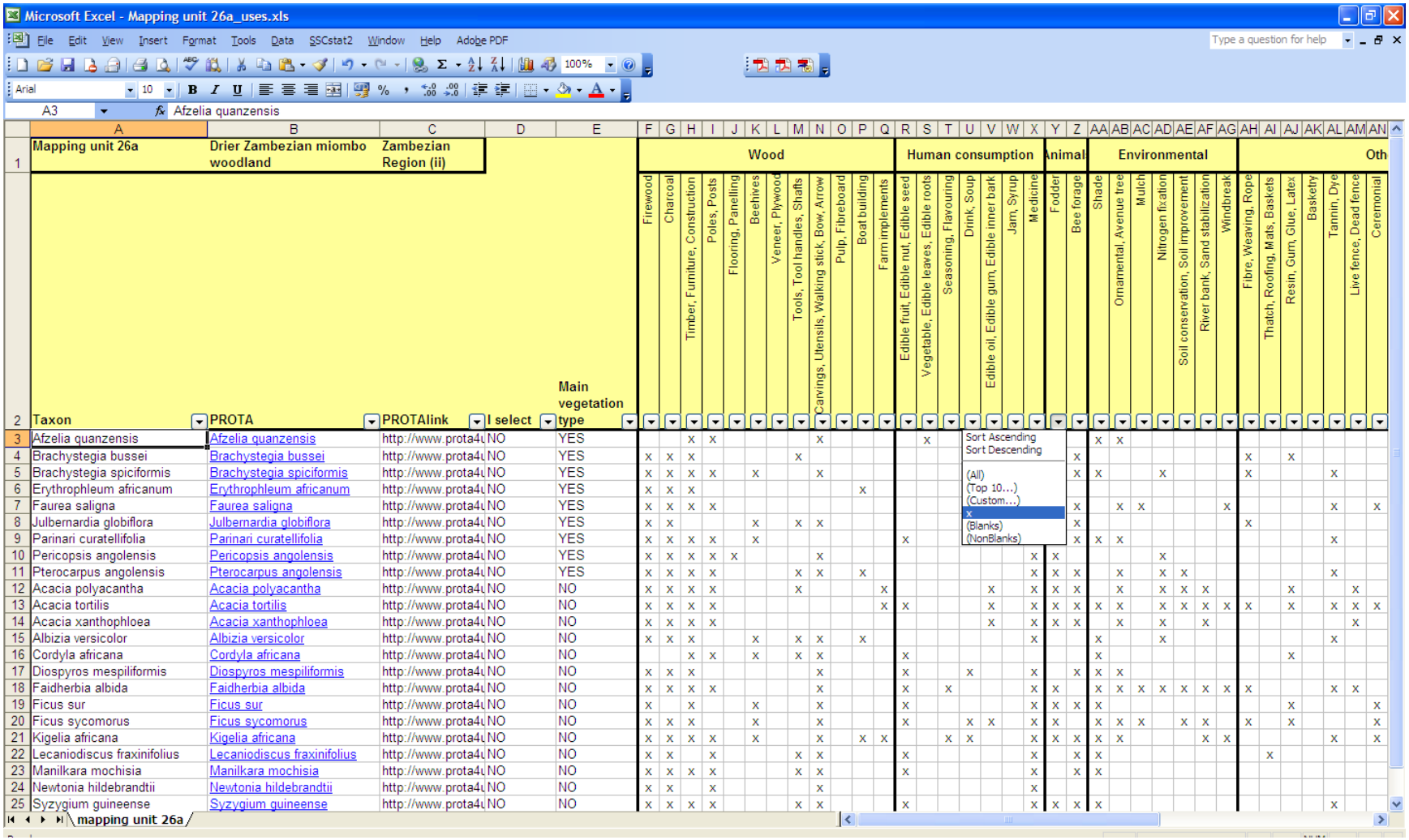


Figure 5. The *AutoFilter* allows to select a subset of useful tree species based on one or several criteria. The example shows how the criterion is set for selecting tree species that are documented to be useful for fodder (accessed by clicking on the arrow button provided in the heading of the "Fodder" column)



Taxon	PROTA	PROTAlink	I select	Main vegetation type
Afzelia quanzensis	Afzelia quanzensis	http://www.prota4u	NO	YES
Brachystegia bussei	Brachystegia bussei	http://www.prota4u	NO	YES
Brachystegia spiciformis	Brachystegia spiciformis	http://www.prota4u	NO	YES
Erythrophleum africanum	Erythrophleum africanum	http://www.prota4u	NO	YES
Faurea saligna	Faurea saligna	http://www.prota4u	NO	YES
Julbernardia globiflora	Julbernardia globiflora	http://www.prota4u	NO	YES
Parinari curatellifolia	Parinari curatellifolia	http://www.prota4u	NO	YES
Pericopsis angolensis	Pericopsis angolensis	http://www.prota4u	NO	YES
Pterocarpus angolensis	Pterocarpus angolensis	http://www.prota4u	NO	YES
Acacia polyacantha	Acacia polyacantha	http://www.prota4u	NO	NO
Acacia tortilis	Acacia tortilis	http://www.prota4u	NO	NO
Acacia xanthophloea	Acacia xanthophloea	http://www.prota4u	NO	NO
Albizia versicolor	Albizia versicolor	http://www.prota4u	NO	NO
Cordyla africana	Cordyla africana	http://www.prota4u	NO	NO
Diospyros mespiliformis	Diospyros mespiliformis	http://www.prota4u	NO	NO
Faidherbia albida	Faidherbia albida	http://www.prota4u	NO	NO
Ficus sur	Ficus sur	http://www.prota4u	NO	NO
Ficus sycomorus	Ficus sycomorus	http://www.prota4u	NO	NO
Kigelia africana	Kigelia africana	http://www.prota4u	NO	NO
Lecaniodiscus fraxinifolius	Lecaniodiscus fraxinifolius	http://www.prota4u	NO	NO
Manilkara mochisia	Manilkara mochisia	http://www.prota4u	NO	NO
Newtonia hildebrandtii	Newtonia hildebrandtii	http://www.prota4u	NO	NO
Syzygium guineense	Syzygium guineense	http://www.prota4u	NO	NO

Figure 6. After selecting tree species documented to be useful for fodder, the colour of the *AutoFilter* arrow button has changed to blue and so have the names of the selected rows (4, 5, 7, 9, …). It is possible to include other criteria to select tree species (for example, restricting to the main vegetation type).