

Arable plant practical survey: National Vegetation Classification

Objectives:

To identify arable plant species and complete a National Vegetation Classification.
To consider how data could be further used for monitoring or research questions.

Context:

National Vegetation Classification (NVC) is a national standard habitat classification system. It is used for purposes such as describing habitats for conservation management and assessing habitats prior to development or land-use change.

NVC uses plant community data to classify habitat types. NVC comprises 12 major vegetation types, divided into communities and subcommunities. Most arable plant communities classify under vegetation type 12 'vegetation of open habitats' (OV).

NVC uses plant species percentage cover per plot (Table 1) and frequency occurrence (Table 2) across all plots to classify habitat type. The full NVC method is detailed in Rodwell (2006).

Cover	DOMIN
91-100%	10
76-90%	9
51-75%	8
34-50%	7
26-33%	6
11-25%	5
4-10%	4
<4 (many individuals)	3
<4 (several individuals)	2
<4 (few individuals)	1

Frequency class	
I = 1-20% (i.e. 1 plot in 5)	scarce
II = 21-40%	occasional
III = 41-60%	frequent
IV = 61-80%	constant
V = 81-100%	constant

Study site:

Insert a map of the of study area, and adapt the size and scale:



Field methods and interpretation:

- Work in a group of around five people.
- Note the crop, any details you have about management, and any agri-environment schemes.
- You will be allocated a square 1.0x1.0m quadrat to survey within the crop or a long and thin 2.0x0.5m quadrat to survey along the crop edge depending on whether the field is conventional or organic. The quadrat size is recommended by Plantlife for ease of recording within a crop.
- Use identification resources to identify the species present.
- Use the NVC recording form from Rodwell (2006) to record the identity, raw percentage cover and DOMIN scale of each species rooted in your quadrat.
- If time, do more plots until you have at least five.
- Once fieldwork is complete, use the keying out tables in Rodwell (1991) Volume 5 and MAVIS software to find out the classification of the study site.

Using the survey data:

- Write up a professional NVC report for your study site.
- Design and justify a monitoring plan for any changes in plant community.
- Survey a field under contrasting management or crop for comparison and present findings.
- Devise a research project with testable hypotheses relating to arable plant community ecology.

Resources:

Centre for Ecology and Hydrology (2016). *Rare arable flowers identification app*. Retrieved from: <https://itunes.apple.com/gb/app/rare-arable-flowers/id1107601988?mt=8&ign-itsct=1107601988-1107601988&ign-itscg=0177&ign-mpt=uo%3D4>

Plantlife (2019). Arable plant identification keys. Retrieved from: <https://www.plantlife.org.uk/uk/discover-wild-plants-nature/habitats/arable-farmland/surveying-arable-plants>

National Biodiversity Network (2019). *Record, share and explore data*. Retrieved from: <https://nbn.org.uk/record-share-explore-data/>

Rodwell, J. S. (1991). *British plant communities: Volume 5, Maritime communities and vegetation of open habitats* (Vol. 5). Cambridge University Press.

Rodwell (2006). National Vegetation Classification survey handbook. Retrieved from: http://jncc.defra.gov.uk/pdf/pub06_NVCusershandbook2006.pdf

Rose and O'Reilly (2006). *The Wildflower Key*, pages 83-92. Warne.

Smart, S. M. (2000). *MAVIS: Software for Allocation of Vegetation Samples to CVS and NVC Classifications*. CEH. Wallingford

Wilson, P. & King, M. (2004). *Arable plants: a field guide*. Wildguides

Health and safety considerations: Health and safety are the responsibility of the activity leader who must complete a risk assessment for safe surveying on a working farm or outdoor area.