

## SPATIAL SAMPLING

The shapes may show an area of farmland or part of a town

Random points on the grid chosen for a land-use survey using random number tables.

Systematic land-use survey at regular points on the grid, such as every 3<sup>rd</sup> intersection.

Stratified sample, 60% of the points chosen must be on the chalk, 40% of the points chosen must be on the clay.

Chalk, 60% of the area

Clay, is 40%

## SAMPLING TECHNIQUES

### WHY SAMPLE?

In cases where the whole population is too large and recording every item would be too time consuming or too expensive.

Only the UK National Census, every 10 years, attempts to get data from **all** residents in the UK.

### WHAT DO SAMPLING TECHNIQUES TRY TO DO?

The aim is to try to make sure the sample is representative of the total population from which it is drawn, and is free from bias.

### SAMPLE SIZE

The larger the sample is the more representative of the total population it is.

Small samples <30 are likely to show bias and you should be less confident about assumptions you make and conclusions you draw.

A large sample is >30. Very large samples often do not give the increase in accuracy that the extra time and cost would warrant.

### PRAGMATIC / CONVENIENCE SAMPLING

Easier and cheaper, takes ease of access to sites, safety, permission problems and speed into account. But may be biased / unrepresentative..

### RANDOM SAMPLING

Each item has an equal and independent chance of being chosen. On a beach or river bed it is done out of sight with replacement. In other circumstances random number tables may be used.

### SYSTEMATIC SAMPLING

Easier to organise and quicker than random sampling it is also free from bias and ensures all possible data is covered. May involve interviewing, say every 3<sup>rd</sup> person or in a river sampling depths at a regular interval of say 20 cm.

### STRATIFIED SAMPLING

This attempts to sample all sections of the population that may be missed by random sampling. A questionnaire may be stratified by age, sex or socio-economic status. Sampling on a beach may involve upper, middle and lower sections.