model:

$$Y_{ijl} = \mu + \alpha_i + \beta_j + \varepsilon_{ij} + \delta_{ijl}$$

where

$i = 1, \ldots, k$	indexes treatments
$j = 1, \ldots, b$	indexes blocks
$l = 1, \ldots, s$	indexes subsamples (within each plot)
$\varepsilon_{ij} \sim \mathcal{N}(0, \sigma^2_\varepsilon)$	corresponds to plot error, e.g. variation from plot to plot
$\delta_{ijl} \sim \mathcal{N}(0, \sigma^2_\delta)$	corresponds to subsample error, e.g. variation between subsamples

ANOVA table

Source	df	SS	MS	$\mathbb{E}$(MS)
Blocks	$b-1$	$ks\sum_j(\bar{y}_{\cdot j\cdot} - \bar{y}_{\cdots})^2$	MSBlk	$\sigma^2_\delta + s\sigma^2_\varepsilon + ks\sum_j \beta_j^2/(b-1)$
Treatment	$k-1$	$bs\sum_i(\bar{y}_{i\cdot\cdot} - \bar{y}_{\cdots})^2$	MSTrt	$\sigma^2_\delta + s\sigma^2_\varepsilon + bs\sum_i \alpha_i^2/(k-1)$
Plot Error	$(k-1)(b-1)$	$s\sum_i\sum_j(\bar{y}_{ij\cdot} - \bar{y}_{i\cdot\cdot} - \bar{y}_{\cdot j\cdot} + \bar{y}_{\cdots})^2$	MSPE	$\sigma^2_\delta + s\sigma^2_\varepsilon$
Subsampling Error	$kb(s-1)$	$\sum_i\sum_j\sum_l(y_{ijl} - \bar{y}_{ij\cdot})^2$	MSSSE	σ^2_δ
Total	$kbs-1$	$\sum_i\sum_j\sum_l(y_{ijl} - \bar{y}_{\cdots})^2$		

`R` syntax for this design, using the `lme4` package: make sure that plots are interpreted as being nested within blocks (or treatments), such that if several plots have the same label, they are still allowed to have different effects.

```
lmer( response ~ block + treatment + (1 | block:plot) )
```