

## Point-Step Analysis to Determine Pasture Botanical Composition

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There are several methods commonly used to determine Pasture Botanical Composition, but the most practical of these approaches is called “Point-Step Analysis” (also sometimes called Step-Point Analysis).

The Point-Step Analysis is done by taking a random walk across the pasture similar to how soil samples are taken. A mark is put on the tip of your boot, and after a certain number of steps the plant touching the mark is written down. Each point is written down on a score sheet using a tally mark, with at least 100 points measured. The total number of points is not critical (as long as you are over 100 points) and should cover the entire pasture.

To start, a preliminary look at the area to be measured will determine what the major species are that you might expect to find. In many situations there will be 1 to 4 species present that make up the majority of plants. In other very diverse pastures there may be many species that contribute substantially to the sward. On your score sheet write along the top those major species, including both major desirable and major undesirable (weed) species. In the additional blocks there should also be a category of “other” desirable species, “other” undesirable species, and Bare Ground. If there is substantial area that is not bare, but that is covered by dead thatch instead of growing plants, then have a category for that too. Additionally, notes should be made on the sheet as to other observations made on the walk including signs of other species that may be present but not actively growing. An example tally sheet is shown below:

**Figure 1. Point Step Worksheet**

Pasture #	Tall Fescue	Orchard -grass	White Clover	Buttercup	Other Desirable	Other Undesirable	Bare Ground	Total
1*	IIII IIII IIII IIII 34	III	IIII IIII	IIII IIII IIII II	IIII	IIII	IIII IIII IIII IIII IIII IIII IIII 29	100
2								

\* Pasture 1 shows signs of heavy horsenettle and dog fennel population.

Once the walk of pastures to be assessed is complete, total up the number of tally marks for each species and determine the % of the total points represented by each species.

To successfully assess the pasture you need to be able to identify the major species and should study to make sure you can easily and quickly recognize those plants. For minor species you don’t have to know every one, but you usually will be able to judge if it is desirable or undesirable based on the characteristics of the plant. Is it leafy and green? Then it is probably desirable. If it is not leafy, if it is coarse and if it appears unpalatable for other reasons, then it is probably undesirable.

The information can be recorded on any piece of paper, but it is useful to use a form that has been made for this purpose, similar to what is on the back of this handout.

