



Monarch Larva Monitoring Project

MEASURING MILKWEED DENSITY

TIMING

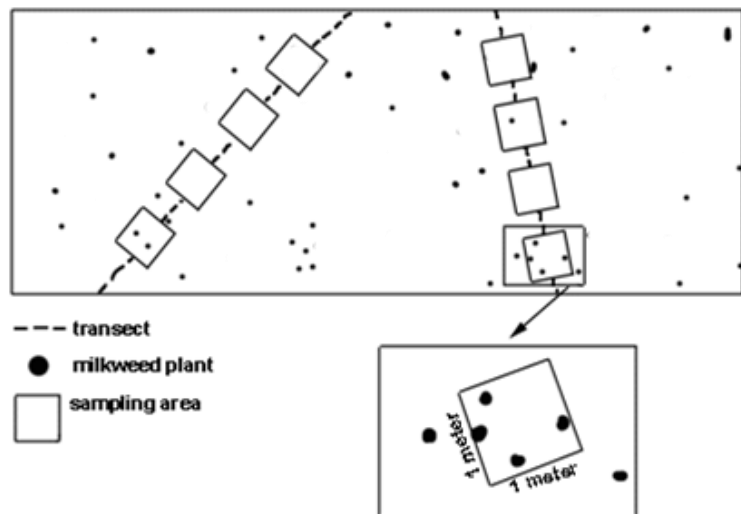
Complete the “Milkweed Density Datasheet” once per year. Since the milkweed may not all be above ground at the beginning of the season, wait to do the density measurements until the middle of the season.

PROCEDURE

If you can easily count all of the milkweed plants at your site, record the actual number of milkweeds at the site and the size of your site.

If your site is too large to easily count all of the milkweed plants, you will randomly sample points to obtain plant density data, counting the number of milkweed plants in several 1 meter squares. Follow these steps:

1. Start at any side of your site, randomly choose a direction, and walk one or more transects, or paths, through the site. On a transect, stop every 5-10 paces, and use a meter stick to delineate a square that is 1 meter on each side. The appropriate number of paces will vary with the size of your site (more paces for larger sites), but must be consistent for all of your samples. Use a consistent method for delineating each meter square plot, i.e. the square is always directly to the right and in front of your right foot when you stop.
2. Count all of the milkweed plants within that 1 meter square, and record the data on the Datasheet.
3. When you reach the edge of your site while walking a transect, randomly choose a new direction that takes you back into the site, and continue walking and recording data from the 1 square meter plots. It is possible that some transects will cross each other, but very unlikely that actual sampling plots will overlap, so don't worry about intersecting transects.
4. Continue with this method until you have sampled up to 100 squares (the more squares you sample the more accurate your density estimate will be, but more than 100 is not necessary).



Sampling transects. Note that the sampling plots will be farther apart than shown here.

Tip: A good way to randomly select a direction is by throwing a pencil or ruler into the air. Walk in the direction that it is pointing. The goal is to sample randomly and obtain data that are representative of the whole site. It is important not to let the presence or absence of milkweed influence your choice of samples.

MILKWEED DENSITY DATASHEET

Year: _____ **Observers:** _____ **Site Name:** _____ **City, State:** _____

You only need to do this activity once during the season (at middle of season)

If you can count all of the milkweed plants at your site, record the number of milkweed plants and area of your site (you can record the area in square meters, square feet, or acres).

Number of milkweed plants: _____ **Area of site:** _____

If your site has too many milkweed plants to count, use the sampling procedure described above and complete the table below.

Point #	# of milkweed plants in 1x1 meter square	Point #	# of milkweed plants in 1x1 meter square	Point #	# of milkweed plants in 1x1 meter square	Point #	# of milkweed plants in 1x1 meter square
1		26		51		76	
2		27		52		77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14		39		64		89	
15		40		65		90	
16		41		66		91	
17		42		67		92	
18		43		68		93	
19		44		69		94	
20		45		70		95	
21		46		71		96	
22		47		72		97	
23		48		73		98	
24		49		74		99	
25		50		75		100	