Commenter M

Nitrogen Management Project Protocol
Minimum Data Standard Public Comment Period

Reserve Technical Questions 6:

In my experience, non-growing season emissions are affected by how much the soil freezes (i.e. how much below ~0°C the soil temperature in the surface layer drops). Degree of freezing is affected by air temperature but also snow depth and amount of crop residue on the surface. Soil nitrogen levels as affected by management practices (what happens in the previous fall or summer, i.e. inorganic fertilizer, residue addition, or other organic amendments) also influence the magnitude of emissions during soil thaw)…Averaged over several years, we have observed that non-growing season emissions are ~50% of the total annual emissions for annual crops, but there is large variability from year-to-year. So, certainly non-growing season emissions should be monitored if possible. I would not recommend measuring only 1-year of 'typical' weather conditions, as it may be difficult to define that (and actually obtain it!). I think using data from comparable experiments may be feasible, but care must be taken to consider all influencing factors.

Reserve Technical Questions 17:

Soil temperature for winter conditions (keeping in mind that typically soils freeze when T is somewhat below zero; e.g. -2°C, depending on soil type) and snow depth on the ground are better indicators then just winter precipitation.