***(Q1) How biomass and leaf traits shift with the addition of water and nutrients?***

**Total Biomass**

For the fixers species plant total bioamss increased significally to the addition of water, nutrients and both (F and pvalues). The addition of water increased X fold the total biomass compared to the ambient treatment while the additionof nutrients increased the total biomass in X fold and the addition of both, water and nutrients, increased the total biomss biomass in X fold compared to the ambient rain treatment.

For non fixers species only the nutrients and the nutrients plus water treatments increased signifiacally the total biomass. In the case of the nutrients treatment, this treatment increased X Fold the total biomass while the addition of both increased X fold. The addition of water had no effect signifacant effect on total biomass.

**Biomass partition: Above and belowground biomass**

Aboveground biomass for fixers increased signically when nutrients and nutrients plus water were added compared to the ambient rain treatment. Aboveground biomass increased X fold when nutrients were added and X fold when nutrients plus water were added. For non fixers, aboveground biomass only increased significally compared to the ambient rain in the nutrients plus water treatment. We found that belowground for fixers and non fixers did not responded to the addition of water and/or nutrients (Fig).

**Biomass partition: root, stem and leaf biomass**

Fixer’s root mass responded significally to all treatments. Nutrient addition increased root mass X fold compared to the ambient rain treatment while water increased X fold and nutrients plus water increased it X fold. For non fixers, only the addition of nutrients increased signifiaclly root biomass in X fold.

Stem mass for fixers increased significally X fold in the plus nutrients treatment and X fold in the nutrients plus water treatment. Non fixer’s stem mass did not change significally in any of the treatments.

Leaf mass increased significally for fixers and non fixers in the nutrient and nutrients plus water treatment when compared to the ambient rain treatment. For fixers, the addition of nutrients increased X fold l and the addition of nutrients plus water increased X % leaf mass. For non fixers the addition of nutrients increased X fold leaf mass whils the addition of water and nutrients increased it X fold.

**Biomass partition: root, stem and leaf mass fractions**