**EXPERIMENT PP2:**

**5 g amounts of PPNM3 soil into 15 ml falcon tubes**

**will use to test WPS2, AS11, AD5 with qPCR**

Make 0.1% (10 mg in 10 ml) solutions of the following:

1. L leucine + L-valine + L-isoleucine (10 mg each)

2. casamino acids + proteose peptone (10 mg each)

3. casein amicase digest

4. L-glycine, L-cysteine, L-proline (10 mg each)

5. N acetyl glucosamine + N acetyl muramic acid (10 mg each)

6. control (water only) (3 reps)

6B. control (dry, no water, to see if water addition itself affects) (3 reps)

7. xylan (18 mg) /xylose (2 mg)/ myo-inositol (2 mg)

8. chitin (10 mg)/ chitosan (10 mg)

9. cellulose (18 mg) / cellobiose (2 mg) / carboxymethylcellulose (2 mg)

10. mannan (18 mg) /mannose (2 mg)

11. yeast extract

12. ground pine needles (20 mg) use a mortar and pestle to make a powder of the fresher needles

13. betaine

14. citronellol

15. b-1-3 glycan, detrose 10 mg each

16. citronellol (10 mg) + casein amicase (10 mg)

17. mixed protein and carbohydrate polymers (casein amicase 10 mg; proteose peptone 10 mg; cellulose 10 mg; xylan 10 mg; mannan 10 mg; chitosan 10 mg; b1-3 glycan 10 mg; betaine 10 mg)

**duplicates of each except triplicates of control 6 and 6B**

**= 34 bottles**

**add 0.5 ml of the solutions to the soil, drip in to distribute well**12. L-glycine, L-cysteine, L-proline