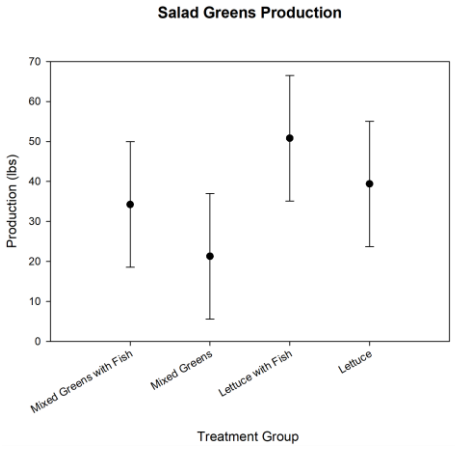
The Soil and Crop side of our grant.

Pairing Aquaculture with Agriculture;

sustainable fish, vermiculture, and insect rearing at Forestdale Farm to improve revenue, yields, and soil health.

Crop yields



- **Leafy green production was consistently higher for each variety (Arugula, Mizuna, and lettuce) when watered from tanks containing fish.**



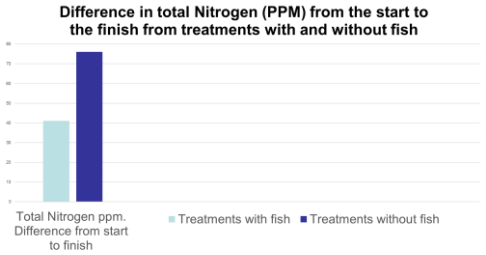


An overview of the catfish pond and experimental beds on the farm



Worm bins used in the trails to produce red wiggler worms to feed fish

Soil Health



The treatments watered from tanks without fish had significantly greater nitrogen loss, almost 50 percent, than treatments with fish. Plants in treatments irrigated with fish water do not have to use up as much of the nitrogen in the soil, which leads to healthier soil and healthier plants

Worm bins and Red Wigglers

- **We used worm bins with red wigglers to feed the fish. The compost and compost tea from these bins serves as a fertilizer for crops on the farm.**

WESTERN SARE
Sustainable Agriculture Research & Education

FORESTDALE FARM
FLAGSTAFF ARIZONA