TDNN (Time Delay Neural Network):
It is a specialized type of feedforward neural network designed to handle temporal or sequential data such as time-series data. It processes sequential data by considering multiple time steps of input in a sliding window. The advantage of TDNN is that it can model relationships across time and identify patterns spanning multiple time steps. TDNNs are well-suited for 2-D foraging tasks as the patterns in the environment or agent actions are crucial for optimal performance. Based on learned temporal patterns, it can suggest actions to maximize resource collection efficiency.

Environment in which the test was conducted: foraging_env_energy_vv0

Feed forward Neural Network Results:

```
Population's average fitness: -506.17560 stdev: 64.96548
Best fitness: -10.00000 - size: (5, 17) - species 87 - id 71371

Species 58 with 21 members is stagnated: removing it

Species 47 with 25 members is stagnated: removing it
Average adjusted fitness: 0.229
Mean genetic distance 2.999, standard deviation 0.498
```

Time delay Neural Network Results:

```
Population's average fitness: -506.06142 stdev: 82.72439
Best fitness: 285.00000 - size: (6, 19) - species 78 - id 67248

Species 57 with 26 members is stagnated: removing it

Species 29 with 22 members is stagnated: removing it

Species 33 with 37 members is stagnated: removing it

Species 34 with 34 members is stagnated: removing it
Average adjusted fitness: 0.159
Mean genetic distance 3.217, standard deviation 0.623
```

Collected the food: