Constructing and Operating a Bicycle-Powered Seed Pelletizing Machine for Use in Gardening and Ecological Restoration Projects
Ashlee Simpson, Marci Caballero-Reynolds, Elise S. Gornish

Seed balls are an ancient method of sowing seed, especially in areas with compacted or dry soils. This method encapsulates seed in a substrate that will potentially reduce predation by insects and rodents while allowing for increased water retention and seed-soil contact. Seed balls often combine three components: seed, clay, and nutrient-rich organic matter such as compost or humus. Seed balls are strewn in the desired location and remain inactive until heavy rains arrive, washing away the clay and allowing the seeds to germinate. This method of sowing seeds does not require any tilling or soil preparation, desirable aspects for restoration work, urban planting and sustainable farming practices. It is also cheap and relies on a few simple components which can be attained just about anywhere in the world. However, making seed balls by hand is extremely time consuming and often requires a large group of volunteers. To make large amounts of seed balls in a reasonable amount of time, we constructed a bicycle-powered seed pelletizing machine that effectively coats seed in clay and compost materials. The bicycle spins a barrel containing the seeds and coating materials while the operators periodically mist the contents with water. The result is coated seed balls that can be used in a desired area. This poster details how to make and operate the seed pelletizing machine for use in gardening or revegetation projects.

**PLEASE NOTE THAT WE WOULD LIKE TO BRING IN THE BIKE FOR DEMONSTRATION IF POSSIBLE.**