

Guidelines for Cover Crop Implementation of Sunn Hemp (Crotolaria juncea), Buckwheat (Fagopyrum esculentum), or Oats (Avena sativa)

Cover Crop Treatment Goals or Objectives:

- Improve soil quality (increase soil organic matter and biological activity, increase phosphorus availability, produce in-field source or nitrogen)
- Reduce soil erosion and sedimentation into streams and near shore water bodies
- Pest management for control of weeds and soil borne diseases
- Attraction of beneficial insects (insect pest natural enemies, honeybees)
- Reduction of costs (fertilizer, pesticides, fuel)

Site Preparation: Prepare field by removing any weeds and disking, or by some other means, clear the area to be planted to the selected cover crop(s). Herbicides, such as glyphosate products, can be used to clean field of weeds prior to planting the cover crops. Cover crops should not be planted within 7 days after herbicide application otherwise, damage or death of emerging seedling may occur.

Seeding Rates: Sunn Hemp seeding rate: 40 lb/acre
Buckwheat seeding rate: 60 lb/acre
Oats seeding rate: 70 lb/acre

Planting Seeds: For small fields or if intercropping, seed can be broadcast either by hand or manual broadcast fertilizer/seed spreaders. For larger fields mechanical seed spreading (with tractor mounted fertilizer/seed spreaders) and /or seed drilling may be more economical.

Incorporation: It is essential that there is adequate soil to seed contact so it is best to incorporate seeds very soon after spreading. In small fields or rows, this can be accomplished using a piece of chain link fence dragged behind a four wheeler (All terrain Vehicle—ATV) or by raking soil over the seeds. In larger fields a light harrow to no more than 1 inch deep is recommended.

Timing & Irrigation requirements: If seeds are planted just before the rainy season (mid-October through mid-April), no irrigation is necessary for any of the above cover crops. In the dry summer months irrigation is needed. Note: when sunn hemp is planted between the months of September and December it will flower quickly (generally within 6 weeks of planting). For seed production this is desirable. Additionally, sunn hemp plants will be shorter during the Sep-Dec time frame because of the flowering response. Sunn hemp planted between January and August will become tall (5 feet +) which increases its utility as a windbreak. Buckwheat and oats are not, generally, impacted by time of year plantings.

Germination & Establishment: Time to establishment is approximately 7-10 days for all 3 types of cover crop after the first rain of more than 0.5 inches occurs. Sunn hemp

will sprout within 24 hours. Buckwheat and oats will sprout within 72 hours of receiving moisture.

Management: Generally not much is done with respect to management. Once the crop is planted and moisture is received the best approach is to leave the cover crops alone. No fertilizer, no irrigation, and no pest control efforts are made. Minimizing the cover crop management minimizes cost associated with the practice thus making it more attractive to growers.



Buckwheat cover



Buckwheat seed



Oats cover



Oat seed



Sunn Hemp between papaya rows



Sunn Hemp seed