

TV Bioenergy Coppice

SRC Establishment

Land preparation is particularly important to the successful establishment of SRC. If this is carried out well, the crop will be able to successfully compete with weeds during the first year, reducing the herbicide requirements after establishment and encouraging greater yields in the long-term. Weed control should be carried out during the autumn prior to planting and just before the crop is planted in the spring. The site should be sub-soiled if necessary, ploughed and immediately before planting it should be power harrowed.

Short rotation coppice is planted in the spring preferably during March-April when the soil moisture is still high and weed growth is slow.

The planting material is supplied as planting rods (pictured below) by the planting contractor. The planting stock includes a mixture of around 5 willow varieties that have been specifically bred for high yields and approved by the Forestry Commission for bioenergy production. By using a mixture of varieties, rather than a monoculture, the plantation has a greater pool of genetic material to protect against diseases and pests. It also benefits the crop visually by adding a mixture of textures and colours.



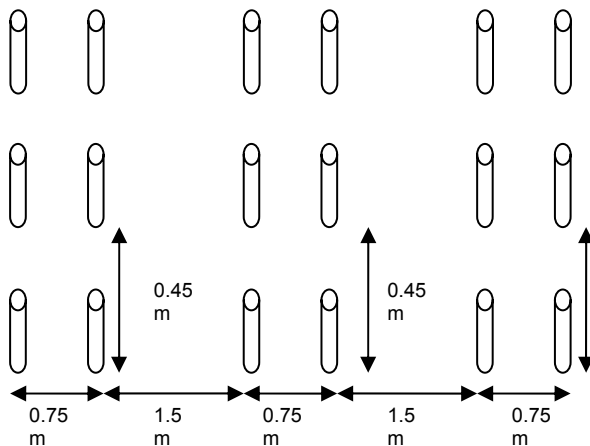
The 'step planter' is used for planting willow rods (see below). The machine creates an opening in the soil, it pushes the rod into the opening, then cuts the rod off at 18-20cm. Wheels behind the cutter close the soil and make sure the cutting and soil are in close contact. The planter is able to plant 4 rows at a time and only one operator is needed to keep the machine supplied with rods. Following planting, the site is rolled to further improve the contact between the soil and the cuttings.



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The standard planting density is 15,000 cuttings per hectare since this density has been found to provide the best balance between yields and establishment costs. The cuttings are planted in a double row configuration as shown in the diagram below. In this arrangement tractor and trailer wheels can run between the double rows without damage to the tyres or the crop.



During the first year, one or two buds on each cutting will develop and the saplings will reach a height of around 1 meter. Weed control may be required during this time since the crop will not be sufficiently developed to compete successfully against weeds. Weed control is more difficult at this stage, because application of herbicide also risks damaging the crop. So it is at this stage where effective pre-planting site preparation can really help to reduce costs and ensure a healthy crop