

# Willow Growing and Utilization in the Suir Valley.

By J. C. KEARNEY

FRAGMENTS of willow rods found embedded in the plaster of an archway of Waterford's 1,000 year old Reginald's Tower, while on a visit there recently, prompted me to investigate the growing of willows along the Suir.

There is no record as to when or how willow cultivation started in the area but it is said that the Ormondes were responsible for its development during the sixteenth century when their efforts to establish a ship-yard below Carrick-on-Suir were thwarted by the continuous silting up of the river.

At the turn of the last century willow growing and basket-making was a booming industry which provided a good living for a large number of workers, male and female. The greatest outlet from then to World War I was for railway hampers, large crates for agricultural produce, baskets and to a lesser degree hurdles for horticultural uses.

In the 1920's the industry suffered a setback from which it has never recovered. Then, the development of machinery which made box-making and cardboard container manufacturing a more economic proposition really sounded its death knell.

At the present time James Shanaghan of Carrick-on-Suir carries on the family business of willow growing and weaving which has been operating for generations. I paid a worth-while visit to his yard and accompanied him on a tour of some of his willow beds.

There are approximately 200 acres under willows along the Suir and Clodugh rivers in the Carrick-on-Suir-Portlaw-Waterford area. These lands are held by some 70 landowners in lots of from  $\frac{1}{4}$  acre to 35 acres. The river is tidal to Carrick-on-Suir and the willow beds are partly covered at high tides and are completely submerged at spring tides and during periods after heavy rains. The high fertility of this deep alluvial soil can be seen from the following soil analysis of the three principal beds in use to-day.

Location	Depth	pH	Ca	K	P
Carrick-on-Suir Bed	0"—4"	7.0	7,000	56	4 $\frac{1}{2}$
	4"—8"	6.6	6,000—	30	2
	8"—12"	6.5	6,000—	26	1 $\frac{1}{2}$
Tinhalla Bed	0"—4"	7.8	20,000+	69	8
	4"—8"	7.9	20,000+	52	4 $\frac{1}{2}$
	8"—12"	7.8	16,000—	20	3
Fiddown Island Bed	0"—4"	7.6	8,000+	30	5 $\frac{1}{2}$
	4"—8"	7.3	10,000+	20	1 $\frac{1}{2}$
	8"—12"	7.2	7,000+	25	1 $\frac{1}{2}$

Generally speaking these areas are overgrown and are in dire need of draining and restocking. The age of a number of stocks has been estimated to be at least 70 years. Despite these adverse conditions, growths of over 7' have been noted in a six month period, and between three and four tons of green rods per acre are cut annually.

#### *Species.*

The common willow (*Salix viminalis*) is the species which has been mainly used. There are occasional groups of almond willow (*Salix triandra*) and black sally (*Salix purpurea*).

*S. viminalis* produces a rather strong rod, suitable mainly for large hamper making while the other two tend to develop a more slender rod which is more lissom to handle. The latter type of rod is naturally more in demand to-day because it is cheaper to work and is more suitable for the manufacture of the smaller type basket.

#### *Preparation of Ground and Planting.*

Preparation of the ground for willow growing must be thorough. Stumps of old willow scrub must be removed and the ground ploughed and harrowed. Where stagnation of water is evident drainage is essential.

The method used here has been to raise ridges  $3\frac{1}{2}$  ft.—4 ft. wide by cutting drains 18 ins.—24 ins. wide and using the spoil from the drain to build up the ridge. This work is usually done in late summer and autumn when the river is at its lowest level.

Three lines of 20 ins. cuttings from 3 year old rods are inserted 14 ins. apart each way. Plantings are made from November to March as flood conditions permit. The actual planting is done by pushing the cutting into the bed, leaving about one quarter of its entire length over ground level.

Hoeing and weeding are necessary during the ensuing summer in order to keep down weeds. A certain amount of care is necessary to ensure that the tender shoots are not broken off the stocks during the operation.

In the second year the rods are well above any weed growth and in any case are sufficiently developed to kill out any weeds. No further maintenance is required except for drainage repairs and replanting where cuttings have not struck.

#### *Harvesting.*

Normally, the rods are cut annually, after leaf-fall. Two to three year old rods are required only rarely, being used for the framework of heavy hampers, hurdling, chairmaking and of course for replanting stocks. Cutting is done by gathering a number of the rods under the arm and drawing a *carrick* type bill hook across their butt ends in an

upward cut. They are then tied in bundles of about one cwt. with a willow lash and transported to the yard by boat or cart.

#### *Grading and Storage.*

The next operation is grading. This is done by placing the green rods in low barrels or tubs and selecting them according to length and quality into the following classes.

Grade I	Overbarrel	9 ft.—10 ft. long.
Grade II	Light barrel	8 ft.—9 ft. long.
Grade III	Half barrel	5 ft.—6 ft. long.
Grade IV	Firkin	4 ft.—5 ft. long.
Grade V	Cags	3 ft.—4 ft. long.

It is interesting to note the origin of these grade names. An example is where a rod was found to be strong enough to produce a split hoop to suit a half barrel it was classed as "half barrel" etc. "Cag" is probably a derogation of "Keg".

In order to keep the rods in their fresh green state until they can be further processed they are placed horizontally in low damp pits and covered with old peelings, soil or any available refuse. When space does not permit they are placed upright in the pits to a depth of 2 ft.—4 ft. according to size and left until required.

#### *Peeling and Boiling.*

The rods are peeled and dried in the sun and wind to bring out their natural shining white colour. On completion of this stage they will take any dye or may be painted as required.

Great care has to be taken in peeling to ensure that the rods are not shattered or scratched deeply. This operation is carried out by pushing and then drawing the rods between two hinged steel bars which are pressed together as tightly as required with the worker's hand.

To obtain a buff colour the rods are boiled for at least four hours after which time the bark comes off quite easily. This process gives a natural reddish brown colour to the rods due, no doubt, to the actions of the tannins and other properties in the bark. Boiling is also said to have a preserving effect.

In the large boiling tank at Carrick seven ton lots can be boiled each time. The tank is an oblong open top metal container in which the bundles of rods are placed closely together. The water is then poured in. The bundles are weighted down and allowed to boil for the required length of time.

#### *Uses.*

A considerable quantity of the rods is purchased by handicraft guilds in various parts but most of them are used locally in basket-, chair- and hurdle-making. The standard of workmanship is high and

one can seldom pass through the locality without seeing some evidence of this ancient industry which is holding its own against modern packeting methods.

#### *Future Use.*

What does the future hold for the industry? In this area it would appear that 30 acres of properly managed willow beds would supply the present-day requirements for weaving and sales.

To what use should the remainder of these lands be put? One is tempted to suggest poplar growing and indeed the soil is most suitable for this species but the high water table will make it a risky undertaking. The same holds for the conifers.

The willow seems to be the best tree to use on this ground and the problem really is to find an outlet for the produce.

Enquiries into the sportsgoods and artificial limb manufacturing trades have elicited the startling information that the few hundred cubic feet of bat willow (*Salix alba* var *coerulea*) which they use each year is imported due to the fact that suitable home grown material is not available.

The growing of bat willow could be tried on a modified scale or at least in pilot plots which would seem to be the best means of trying out the many varieties of willow.

Willow is said to be eminently suitable for the manufacture of wallboard but is not used for this purpose in this country. The supply of other soft timbers is sufficient to meet the demand.

It is inevitable that the wood pulp industry will develop on a large scale in this country and willow will find its place in the raw material. It would be well to recognise that fact now and plan accordingly.

Local growers estimate that they could produce  $2\frac{1}{2}$  tons of pulpwood per acre per annum on a 10 year rotation. With good management there seems to be no reason why this increment could not be exceeded by finding the optimum rotation which is likely to be shorter than 10 years.

#### *Conclusion.*

To sum up, the willow is still worthy of our attention and interest. It has proved itself to be one of our most useful and versatile timbers from the first day when its twigs were used to fashion the salmon traps on the estuaries of our larger rivers and to reinforce the mud walls of ancient dwellings to its present-day suitability as a pulp producing tree.

Experimentation on the pilot plot system backed by a co-operative association of growers on a nation-wide scale seems to be the answer.

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