

ESTABLISHMENT TRIALS ON DIEBACK SITES : GLENEAGLE

By S. J. Quain

The following results were obtained from trials conducted at Gleneagle in 1963/64 to determine survival of seedlings on 'dieback' sites.

Site

Dieback areas adjacent to the Gleneagle settlement, with typical lateritic gravel profile on slopes running into greyish-yellow sandy profile in the flats.

Preparation

Complete clearing with ploughing and cultivation.

Fertilizer

Two ounces of blood-and-bone and two ounces of Potato-E manure, well mixed with soil in each planting hole.

Planted

Hand planting in the first week of July, 1963.

Weather Conditions

An extremely wet winter resulting in waterlogged conditions in the lower part of the trial area and then followed by a very dry summer.

Species Layout

Species ran across the contour so that each species sampled both the gravel slopes and the waterlogged flats.

Survival Results to 7th April, 1964 (over 1 inch rain previous week)

<u>Species</u>	<u>Alive</u>	<u>Dead</u>	<u>Remarks</u>
E. bosistoana	81	6	Growth and survival good
E. laevopinea	59	25	Growth variable, deaths mainly in waterlogged section
E. delegatensis	61	23	Growth and survival poor
E. sieberiana	65	21	Death confined to waterlogged section

<u>Species</u>	<u>Alive</u>	<u>Dead</u>	<u>Remarks</u>
<i>E. pilularis</i>	53	34	Deaths mainly in waterlogged section
<i>E. fastigata</i>	63	26	do.
<i>E. globulus</i>	80	8	Growth and survival excellent
<i>E. botryoides</i>	87	2	Growth and survival excellent
<i>E. baxteri</i>	57	27	Deaths confined to waterlogged section
<i>E. Gardneri</i>	66	7	Survival good, growth moderate
<i>E. redunca</i> var. <i>elata</i>	69	33	Deaths mainly in waterlogged section
<i>E. gigantea</i>	59	25	Deaths mainly in waterlogged section
<i>E. cladocalyx</i>	83	3	Growth and survival excellent
<i>E. microcorys</i>	69	17	Survival good but growth poor on drier sites
<i>E. obliqua</i>	75	12	Deaths mainly on wetter sites but growth good
<i>E. scabra</i>	62	24	Deaths confined to wet areas, survival good on drier sites
<i>E. muelleriana</i>	49	37	Growth and survival poor
<i>E. Robertsoni</i>	55	33	Growth poor, deaths mainly in waterlogged section
<i>E. sideroxylon</i>	74	15	Growth and survival good.
<i>E. macrorrhyncha</i>	61	21	Growth and survival fair on drier sites but very poor in waterlogged section

(For Botanists only) . . . There are two names for the one species in this trial, but, rather than fathom out the botanical differences, I planted them as received from the nursery - e.g. *E. delegatensis* and *E. gigantea* are one and the same tree ! !

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