

Research Sample Plots (RSP)

Research Sample Plots (RSP) contain forestry research trials established for developing scientific information for knowledge creation and to develop methods or guidelines to assist sustainable forest management in Alberta. Many of the RSP are established as part of the provincial tree improvement program to develop superior varieties of trees to enhance growth and yield of future forests and to evaluate genetic stock for adapting reforestation to climate change. Each RSP is protected with either a Disposition Reservation (DRS) or a Protective Notation (PNT).

The RSP site locations are chosen to be representative of forest and site conditions found in various natural subregions of Alberta. The selected sites are established either on newly harvested sites or on specially cleared sites. Site preparation may include disking and cultivation. Most sites are invariably fenced and identified by a sign.

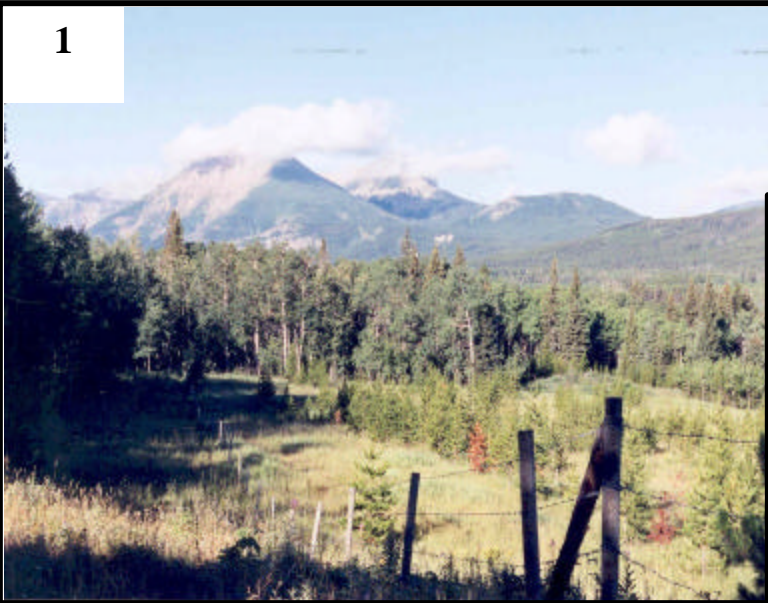
Each RSP may vary in size from 1-15 hectare and may have some additional surround area as buffer. RSP may contain one or more field trials of the same or different tree species. The species being tested are mostly native Alberta tree species (white spruce, lodgepole pine, black spruce, tamarack, jack pine, Douglas-fir and poplars). Some sites also contain research trials of selected non-native species (Siberian larch, ponderosa pine, Scots pine, Siberian pine, etc.) that may prove to be promising for adapting to climate change in Alberta. No RSP contains field trials of GMO (genetically modified organism) trees.

Trees in RSP field trials are planted in rows as part of a specialized scientific design. Each tree is mapped and documented in a technical report. The trees are also recorded in an electronic database. The field trials are long term in nature (30 year plus duration) and are assessed periodically for survival, growth, pests/climatic injury and special traits such as wood quality. The collected information or data is maintained in long-term databases. The data is analyzed to draw scientific conclusions for problem solving and forest management prescriptions. Special measurements (e.g. insect/disease, climatic injury in a bad year) or partial trial measurements (e.g. specific provenances) may be carried out as necessary. Valuable information is being developed on natural variation of tree species and populations, genetic diversity of natural populations, superior seed sources and genetic stock, relationship between regional climate and growth and survival of tree species. This information is needed for sustainable forest management in Alberta.

RSP involve a substantial investment. Their value increases with time and, in most cases, they are irreplaceable. Care needs to be taken to protect these research plots from damage and encroachment. Following pictures illustrate some of the Research Sample Plots.

RsP Sites with various fencing styles

1



2



3



4



Picture:

- 1 – Barbed Wire Fence
- 2 – Game Fence
- 3 – Chain Link Fence
- 4 – No Fence



Photos A & B:

Research Sample Plots are periodically measured for the assessment of survival, growth, climatic and pest damage. Special measurements (e.g. insect/disease, climatic injury in a bad year) or partial trial measurements (e.g. specific provenances) may also be carried out as necessary.

Trials are measured using specialized equipment and regulated procedures and may require many days to complete. Measurements are frequently conducted in spring and autumn while tree growth is not taking place.