lane 1 and 3 were eluted from the gel and sequenced. Resulting data showed that the introns were precisely spliced out. The 700bp fragments of lane 1 and 3 were eluted from the agarose gel and sequenced.

6.3 Molecular Basis of bt2-7503

The 700bp PCR amplified DNAs from bt2-7503 genomic DNA and bt2-7503 first strand cDNA were sequenced with the strategy shown in Figure 22,A. A Bt2 genomic clone was isolated and sequenced in this region [Lee, Shaw and Hannah, unpublished]. The sequence of that clone is also presented (Figure 23).

While the sequences of the mRNA and genomic DNA of bt2-7503 were identical, both were composed of two populations from nucleotide #900 to #90039 (Figure 23). Sequencing data revealed two successive unspliced introns in bt2-7503 mRNA at nucleotide between #720 and #721 and between #900 and #901 (Figure 22,A). The sequences of bt2-7503 mRNA including 123bp intron between #720 and #721 and 314bp intron between #900 and #901 are displayed in Figure 23. The sequences of two unspliced introns perfectly match the intron sequences of PCR amplified DNA from bt2-7503 genomic DNA in the same region.

A significant feature of the structure is that the sequences of two unspliced introns in bt2-7503 are different from those of Bt2. The sequences of the two introns in the corresponding region of Bt2 genomic clone are displayed in