Determining the set of all optimal solutions of a linear program with interval data is one of the main problems discussed in interval optimization. We review two methods based on duality in linear programming, which are used to approximate the optimal set. Additionally, another decomposition method based on complementary slackness is proposed. This method provides the exact description of the optimal set for problems with a fixed coefficient matrix. The second part of the thesis is focused on studying the topological and geometric properties of the optimal set. We examine sufficient conditions for closedness, boundedness, connectedness and convexity. We also prove that testing boundedness is co-NP-hard for inequality-constrained problems with free variables. Stronger results are derived for some special classes of interval linear programs, such as problems with a fixed coefficient matrix. Furthermore, we study the effect of transformations commonly used in linear programming on interval problems, which allows for a direct generalization of some results to different types of interval linear programs.