Clinical signs of atrophic rhinitis (AR) in swine severely affected by the disease are easily detectable. However, in pigs, these symptoms are not always clear. DOWE (1977) and BERCOVICH & JONG (1976) suggested that brachygnavthic Superior (BS) may be used as a tool for AR diagnosis in young pigs. The authors claimed success in AR control by the elimination of pigs which had BS. This condition was defined as a congenital defect by DOWE (1977) and HUNTON (1978). The defect is observed more frequently among Large-White (LW) and Landrace (L) sires. These different levels of disease among different breeds may be associated with an increased incidence of AR. Thus, the objective of the present work was to evaluate BS as a tool in the AR diagnosis.

Material and Methods:
Animals: From 4 herds, 1216 swines (320, 160) and crossbred LWX (311) were examined for BS and AR lesions.

Clinical examination: At the age of 8 weeks, each pig was examined for clinical signs of AR. BS and other signs were recorded according to BERCOVICH & JONG (1976). Evaluation of turbinate atrophy: Pigs were evaluated for AR lesions when they weighed 90 to 100 kg. Turbinate atrophy was examined after cross-sectioning of the nose at level of the first premolar tooth (SWITZER & PARRINGTON 1975).

Statistical analysis: Chi-square test was used to compare data from the occurrence of lesions and the association between BS and turbinate atrophy.

Results and discussion:
Table 1 summarizes the results of BS and turbinate atrophy lesions. There were no associations between AR lesions and BS in the crossbred examinations. However, this association was observed with the crossbred LWX breeding. Data, therefore, these crossbred animals were to determine the sensitivity and specificity of the BS in the diagnosis of AR. Sensitivity (1) is defined as the chance that the test will be positive when applied to someone known to have the disease. Specificity (1) is defined as the chance that the test will be negative when applied to someone known to be disease-free. The minimum criterion for a screening test to be acceptable as a test for a disease is that it detects disease better than chance alone. Although BS passed through this test (1-1), the prevalence of diseased pigs among those which were BS positive was 0.38. This result is not enough to indicate BS as a screening test for the chance of a diseased pig given a positive test was less than half (ROGAN and GLADEN, 1978). Thus, BS cannot be used as screening test for AR diagnosis.

Table 1 summarizes the results of AR lesions among LWX and crossbred LWX breedings. Data pointed out that the incidence of the disease was higher among LWX swines. DOWE (1977) reported that BS in LW swines is the result of selective breeding having as its objective the shortening of the LW head. In the same paper, the author cited that shortening the nasal passages is a prerequisite factor in the development of chronic atrophic rhinitis and the selection of further lines to explain why there was a higher incidence of AR among LW breeding.