Contents

1. Introduction 1

2. Review of Literature 2
2.1. The effect of breed-group and age of lambs on the live body weight 2
2.1.1. Effect of breed-group of lambs 2
2.1.2. Effect of age of lambs 6
2.2. The effect of breed-group, age of lambs and feed consumption on daily gain 9
2.3.Feed consumption and feed conversion 13
2.3.1. Effect of breed-group 13
2.3.2. Effect of age of lambs 16
2.4. Effect of breed-group and age of lamb on body dimensions 18
2.4.1. Body length 19
2.4.2. Height at wither 20
2.4.3. Heart girth 21
2.4.4. Chest depth 22
2.4.5. Chest width 23
2.5. Carcass traits 23
2.5.1. Fasting weight (slaughter weight) 23
2.5.2.Carcass weight 24
2.5.3. Dressing percentage 28
2.5.4. Carcass cuts percentages (Prime and second cuts%) 37
2.5.5. Total prime cuts percentages 39
2.5.6. Carcass physical composition 41
2.5.7. Eye muscle (Longissimus dorsi) characteristics 46
2.5.8. Chemical composition of mutton 50
2.5.9. Weight and percentage of body offals and internal organs 53
2.6. Carcass dimensions 57
2.7. Prediction of some carcass cut weights of sheep from some body dimension just before slaughtering 58

3. MATERILAS AND METHODS 59
3.1. Management of experimental animals 59
3.2. Carcass studies 60
3.3. Traits studied 63
3.4. Statistical analysis 64

4. RESULTS AND DISCUSSION 66
4.1. The effect of breed-groups and age of lambs on 66
4.1.1. Body weights and daily gain, from 3 months to yearling, of lambs subjected to 3 periods of fattening 66
4.1.2. Feed consumption and feed conversion 70
4.1.3. Body dimensions just before slaughtering 74
4.2. Carcass traits 79
4.2.1. Fasting weight (slaughter weight) 79
4.2.2. Carcass dimensions and scores 80
4.2.3. Hot carcass 83

4.2.4. Dressing percentages..... 85
4.2.5. Prime and second cuts..... 88
4.2.6. Carcass physical composition (Lean, fat and bone percentages in 9,10, 11^{th}ribs) 92
4.2.7. Index and area of Longissumus dorsi..... 95
4.2.8. Chemical composition of lean-meat..... 100
4.2.9. Percentages of body offals and internal organs..... 102
4.2.10. Prediction of some carcass cuts of lambs meat from some body dimension just before slaughtering..... 106

5. SUMMARY..... 108

6. REFRENCES..... 115

7. ARABIC SUMMARY