

CONTENTS

SECTION I : SUMMARY AND RESEARCH RECOMMENDATIONS	1
1. Objectives and Research Recommendations	3
2. Factors Affecting Protein Supply and Demand	12
3. Common Issues in the Development and Utilization of Protein Resources	19
4. Status and Potential of Specific Resources	24
SECTION II : COMMON ISSUES AND PROBLEMS IN PROTEIN RESOURCE DEVELOPMENT	45
5. United States and World Protein Production and Consumption	47
6. Energy Constraints in Protein Production	86
7. Legal and Regulatory Barriers to the Introduction of Novel Protein Foods	90
8. The Politics of New Protein: Obstacles and Opportunities Facing Research and Development	97
9. The Marketing Factor for Nonconventional-Protein Products	111
10. Nutritional Evaluation of Proteins and Protein Requirements	136
11. Toxicological Aspects of Protein Production and Processing	174
12. Basic Food Science and Technology Problems Affecting the Properties and Processing of Protein Resources	184
13. The Constraints on Improving Protein Quality in Plants by Genetic Means	195
14. Research on Nitrogen and Carbon Input to Increase Domestic Crop Protein Production	204
SECTION III : A REVIEW OF SPECIFIC PROTEIN RESOURCES	237
15. Grain Crops	239
16. Cereal Proteins from Grain Processing	256
17. Oilseed Proteins	278
18. Food Legumes as a Protein Source	302
19. Livestock Animal Production	318
20. Proteins from Dairy Products	348
21. Animal Protein from Meal, Poultry and Eggs	389
22. Aquatic Proteins	427
23. Potatoes	485
24. Nonphotosynthetic Single-cell Protein	502
25. Photosynthetic Single-cell Protein	522
26. Leaf Protein in Relation to Forage Crop Production and Utilization	543
27. Chemical synthesis of Nutrients	569
INDEX	585