

1. Record Nr.	UNINA9910857784503321
Autore	Zencirci Nusret
Titolo	Advances in Wheat Breeding : Towards Climate Resilience and Nutrient Security
Pubbl/distr/stampa	Singapore : , : Springer Singapore Pte. Limited, , 2024 ©2024
ISBN	981-9994-78-0
Edizione	[1st ed.]
Descrizione fisica	1 online resource (783 pages)
Altri autori (Persone)	AltayFahri BalochFaheem S NadeemMuhammad Azhar LudidiNdiko
Disciplina	633.112
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Foreword -- Preface -- Contents -- About the Editors -- 1: Wheat Production Trends and Research Priorities: A Global Perspective -- 1.1 Introduction -- 1.1.1 Global Wheat Production Trends -- 1.1.2 Global Wheat Research Priorities -- 1.1.2.1 Increasing Yield Potential with Agronomy -- 1.1.2.2 Increasing Yield Potential with Plant Breeding -- 1.1.2.3 Increasing Sustainability with Fertility Management -- 1.1.2.4 Protecting Yield from Disease Threats -- 1.1.2.5 Achieving Consistent Wheat Quality -- 1.2 Conclusion -- References -- 2: Winter Wheat Research in Türkiye -- 2.1 General Introduction -- 2.2 Wheat Growing Regions of Türkiye -- 2.3 Winter Wheat Research in Türkiye -- 2.3.1 Eskiehir Seed Improvement Station (Islah- Buzur) -- 2.3.2 Research on Agronomic Techniques -- 2.3.2.1 Fallow Soil Preparation Trials -- 2.3.2.2 Fallow Tillage Time and Depth -- 2.3.2.3 Studies Carried Out by Rfat Gerek in Eskiehir After Ali Numan Kraç -- 2.3.2.4 Studies After the Start of the National Project -- 2.3.3 Yeilkoy Seed Improvement and Experiment Station -- 2.3.4 Ankara Seed Breeding and Experiment Station -- 2.3.5 Period of Wheat Research and Training Project -- 2.3.6 Field Crops Central Research Institute -- 2.3.6.1 History (Introduction) -- 2.3.6.2 Wheat Breeding -- Wheat

Breeding Studies Before the National Wheat Research and Training Project -- Wheat Breeding Studies During the Project Period -- Bread Wheat Breeding -- Bread Wheat Breeding During the Project Period -- Durum Wheat Breeding -- Events After 1940 -- Project Period of Durum Wheat Breeding -- 2.3.6.3 Biotechnology Studies -- 2.3.6.4 Techniques Applied in Breeding -- 2.3.7 Wheat Production and Breeding Studies in the Transitional Zone Agricultural Research Institute -- 2.3.7.1 Introduction -- 2.3.7.2 Wheat Production in the Western Transitional Zone.

2.3.7.3 Soil and Climate Characteristics of the Western Transitional Zone Region -- 2.3.7.4 Wheat Breeding Studies in the Transitional Zone Research Institute -- 2.3.7.5 Wheat Production Problems in the Transitional Zone -- Cultural Practices -- Multipart Agricultural Lands -- Precipitation Anomalies -- Diseases and Pests -- 2.3.8 Wheat Production and Improvement Studies in the Thrace Region -- 2.3.8.1 History (Introduction) -- 2.3.8.2 Wheat Production in the Thrace Region -- 2.3.8.3 Soil and Climate Characteristics of the Thrace Region -- 2.3.8.4 Establishment Purpose and Activities of the Institute -- 2.3.8.5 Wheat Breeding Studies in the Thrace Region -- 2.3.8.6 Major Diseases of Bread Wheat in the Thrace Region -- 2.3.8.7 Cereal Pests Common in the Thrace Region -- 2.3.8.8 Quality Analysis Research Carried Out in the Institute -- 2.3.8.9 Studies on Cultural Practices at the Institute -- 2.3.9 Eastern Anatolia Region Wheat Research (Eastern Anatolia Agricultural Research Institute) -- 2.3.9.1 History (Introduction) -- 2.3.9.2 Wheat Production in Erzurum -- 2.3.9.3 Soil and Climate Characteristics of Erzurum Province -- 2.3.9.4 Establishment Purpose and Activities of the Institute -- 2.3.9.5 Wheat Breeding Studies Carried Out at the Institute -- 2.3.9.6 Studies on Diseases and Breeding for Disease Resistance at the Institute -- 2.3.9.7 Cold Hardiness Studies Carried Out at the Institute -- 2.3.10 Bahri Dada International Agricultural Research Institute -- 2.3.10.1 History (Introduction) -- 2.3.10.2 Wheat Production in Konya -- 2.3.10.3 Soil and Climate Characteristics of the Konya Basin -- 2.3.10.4 Establishment Purpose and Activities of the Institute -- 2.3.10.5 Wheat Breeding Studies Carried Out at the Institute -- 2.3.10.6 Research on Plant Diseases and Breeding for Disease Resistance Carried Out in the Institute.

2.3.10.7 Research on Agronomic Techniques at the Institute -- 2.3.11 Universities and Private Sector Research Institutions -- 2.3.12 IWWIP in Türkiye -- 2.4 Conclusion -- References -- 3: Spring Wheat -- 3.1 Characteristics of Spring Wheat -- 3.1.1 Introduction -- 3.1.2 Using Spring Wheat -- 3.1.2.1 Bread -- 3.1.2.2 Bakery Products -- 3.1.2.3 Flour Blending -- 3.1.3 Genetics of Spring Wheat -- 3.1.4 Spring Wheat Gene Pools -- 3.1.5 Spring Wheat Varieties -- 3.1.6 Breeding of Spring Wheat -- 3.1.6.1 Grain Yield -- 3.1.6.2 Grain Quality -- 3.1.6.3 Resistance to Biotic Stresses -- 3.1.6.4 Tolerance to Abiotic Stresses -- 3.1.6.5 Winter Hardiness -- 3.1.6.6 Drought Resistance -- 3.1.7 Breeding Methods of Spring Wheat -- 3.1.7.1 Pedigree Method -- 3.1.7.2 Bulk Method -- 3.1.7.3 Modified Bulk Method -- 3.1.7.4 Backcrossing Method -- 3.1.7.5 Single-Seed Descent Method -- 3.1.7.6 Doubled Haploid Method -- 3.1.8 Hybrid Wheat -- 3.2 Spring Wheat Studies in Türkiye -- 3.2.1 Introduction -- 3.2.2 History of Spring Wheat in Türkiye -- 3.2.3 The first effect of the Green Revolution in Türkiye -- 3.2.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars -- 3.2.5 Problems Faced in Spring Wheat Production and Breeding -- 3.2.6 Conclusion -- 3.3 Spring Wheat Studies in the Black Sea Region -- 3.3.1 Introduction -- 3.3.2 Spring Wheat History in the Region -- 3.3.3 The Impact of Green

Revolution on the Region -- 3.3.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars -- 3.3.5 Problems Faced in Spring Wheat Production and Breeding -- 3.3.6 Conclusion -- 3.4 Spring Wheat Studies in the Marmara Region -- 3.4.1 Introduction -- 3.4.2 Spring Wheat History in the Region -- 3.4.3 The Impact of Green Revolution on the Region.

3.4.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars -- 3.4.5 Problems Faced in Spring Wheat Production and Breeding -- 3.4.6 Conclusion -- 3.5 Spring Wheat Studies in the Aegean Region -- 3.5.1 Introduction -- 3.5.2 Spring Wheat History in the Region -- 3.5.3 The Impact of Green Revolution on the Region -- 3.5.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars -- 3.5.5 Problems Faced in Spring Wheat Production and Breeding -- 3.5.6 Conclusion -- 3.6 Spring Wheat Studies in the Western Mediterranean Region -- 3.6.1 Introduction -- 3.6.2 Spring Wheat History in the Region -- 3.6.3 Impact of Green Revolution on the Region -- 3.6.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars -- 3.6.5 Problems Faced in Spring Wheat Production and Breeding -- 3.6.6 Conclusion -- 3.7 Spring Wheat Studies in Eastern Mediterranean Region -- 3.7.1 Introduction -- 3.7.2 History of Spring Wheat in the Region -- 3.7.3 The Impact of Green Revolution on the Region -- 3.7.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars -- 3.7.5 Problems Faced in Spring Wheat Production and Breeding -- 3.7.6 Conclusion -- 3.8 Spring Wheat Studies in Eastern Mediterranean Transitional Region -- 3.8.1 Introduction -- 3.8.2 Spring Wheat History in the Region -- 3.8.3 The Impact of Green Revolution on the Region -- 3.8.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars -- 3.8.5 Problems Faced in Spring Wheat Production and Breeding -- 3.8.6 Conclusion -- 3.9 Spring Wheat Studies in Southeastern Anatolia Region -- 3.9.1 Introduction -- 3.9.2 Spring Wheat History in the Region -- 3.9.3 The Impact of Green Revolution on the Region -- 3.9.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars.

3.9.5 Problem Faced in Spring Wheat Production and Breeding -- 3.9.6 Conclusion -- 3.10 Spring Durum Wheat Studies in the Southeastern Anatolia Region -- 3.10.1 Introduction -- 3.10.2 Spring Wheat History in the Region -- 3.10.3 The Impact of Green Revolution on the Region -- 3.10.4 Historically and Today's Important Spring Wheat Genotypes/Cultivars -- 3.10.5 Problems Faced in Spring Wheat Production and Breeding -- 3.10.6 Conclusion -- References -- 4: Impact of Abiotic Stresses on Wheat Growth and Adaptation -- 4.1 Introduction -- 4.2 Drought Stress -- 4.2.1 Precipitation -- 4.2.1.1 Amount and Distribution of Rainfall -- 4.2.2 Effect of Stored Moisture -- 4.2.2.1 Factors Affecting Stored Moisture -- Fallow -- Conservation Agriculture -- Fallow Efficiency -- Factors Affecting Infiltration of Water -- Stubble Mulch Tillage -- Other Soil Properties Affecting Crop Water Relations -- 4.2.2.2 Effect of Previous Crop on Stored Water -- 4.2.3 Mitigation of Drought Stress -- 4.2.3.1 Management Practices -- Irrigation -- Water Resources of Türkiye -- Problems Related to Irrigation -- Irrigation Efficiency -- Irrigation Systems -- Factors Affecting Efficiency of the Irrigation Systems -- Deficit/Supplemental Irrigation -- Times of Irrigation -- 4.2.4 Drought Adaptation of Wheat -- 4.2.4.1 Factors Affecting Drought Response of Wheat Cultivars -- Early Stand Establishment -- Factors Affecting Early Vigor -- 4.2.4.2 Genotypic Traits Affecting Early Vigor -- Coleoptile Length -- Seed Size and Composition -- 4.2.4.3 Other Traits Related to Drought Adaptation of Wheat Cultivars -- Phenological Traits -- Effect

of Earliness on Drought Adaptation -- 4.2.4.4 Morphological Traits --
Root Growth -- Plant Height -- Lodging Resistance -- 4.2.4.5 Factors
Affecting Lodging Resistance of Wheat -- Management Practices.
Cultivar Traits Affecting Lodging Resistance.
