Super Foods And Its Importance In Our Daily Diet



Editor

Dr. Latika Yadav

Co-Editor

Dr. Madhu

SUPER FOODS AND ITS IMPORTANCE IN OUR DAILY DIET

Editor

Dr. Latika Yadav

Co-Editor

Dr. Madhu

Kripa-Drishti Publications, Pune.

The responsibility for facts stated, opinion expressed, or conclusions reached and plagiarism, if any, in this book is entirely that of the authors(s). Neither the publishers nor the editors will be responsible for them whatever.

Book Title: Super Foods and Its Importance in Our Daily

Diet

Editor: **Dr. Latika Yadav**

Co-Editor: **Dr. Madhu**

Authored by: Dr. Rajabhuvaneswari Ariyamuthu, Priya Singla, Piverjeet

Kaur Dhillon, Chinmayee Parida, Siddhartha Das,

Sudeepta Pattanayak, Dr. Nidhi Singh, Er. Indraveer Singh,

Dr. Vishwanath Kumar, Dr. Mahendra Jadia,

Dr. Neetu Singh, Dr. Ajay Singh, Dr. Neetu Dobhal,

Dr. Astuti Verma, Tyagi Ankita, Tyagi Shweta, Tyagi Kapil,

Dr. Poonam Jethwani, Reena Verma, Gargi Saxena, Pawandeep Kaur, Uttara Singh, Mohita Srivaastava,

Uttam Tripura, Vinay Kumar

Volume - I

Price: 575/-

ISBN: 978-93-90847-73-0



Published: Feb 2022

Publisher:



Kripa-Drishti Publications

A/ 503, Poorva Height, SNO 148/1A/1/1A, Sus Road, Pashan-411021, Pune, Maharashtra, India.

Mob: +91-8007068686

Email: editor@kdpublications.in
Web: https://www.kdpublications.in

© Copyright KRIPA-DRISHTI PUBLICATIONS

All Rights Reserved. No part of this publication can be stored in any retrieval system or reproduced in any form or by any means without the prior written permission of the publisher. Any person who does any unauthorized act in relation to this publication may be liable to criminal prosecution and civil claims for damages. [The responsibility for the facts stated, conclusions reached, etc., is entirely that of the author. The publisher is not responsible for them, whatsoever.]

CONTENT

1. Super Foods for Diabetes - Dr. Rajabhuvaneswari Ariyamuthu	1
1.1 Introduction:	1
1.1.1 Whole Grains [4,5,7]:	
1.1.2 Beans:	
1.1.3 Dark Green Leafy Vegetables [1,2,3]:	
1.1.4 Low-Fat Milk and Yogurt:	
1.1.5 Nuts:	
1.1.6 Sweet Potatoes:	
1.1.7 Fish [4.6.7]:	
1.1.8 Citrus Fruits and Berries:	
1.1.9 Broccoli:	
1.1.10 Lettuce [4]:	
1.1.11 Soy:	
1.1.12 Tea:[8]	
1.1.13 Dark Chocolate:	
1.1.14 The Avocado [4,5]:	7
1.1.15 Seeds of Chia [5]:	
1.1.16 Wine and Grapes [9]:	8
1.2 Super Foods and Diabetes [15]:	9
1.2.1 Types of Diabetes:	9
1.3 Supplements with Superfoods:	12
1.4 Side Effects and Risks:	12
1.5 Benefits of superfoods:	13
1.6 References:	13
2. Pumpkin Seeds: A Wonder Food - Priya Singla, Piverjeet Kaur Dhillon	
2.1 Introduction:	
2.2 Production:	
2.3 Processing:	
2.3.1 Methods of Processing:	
2.3.2 Extraction of oil (Redrouthu et al., 2020):	
2.3.3 Soxhelet Procedure:	
2.3.4 Purification Process (Redrouthu Et Al., 2020):	
2.4 Nutritional Composition:	
2.4.1 Nutritional Properties of Processed Pumpkin Seeds	
2.4.2 Medicinal and Health Benefits:	
2.5 Summary:	26

2.5.1 Future Research Perspective:	26
2.6 References:	
3. Nutraceutical Properties of Indian Black Rice and its Wide Impact on	Indian
Agriculture - Chinmayee Parida, Siddhartha Das, Sudeepta Pattanayak	
Agriculture - Chinmayee Fartaa, Staanarina Das, Staeepia Fattanayak	30
3.1 Introduction:	31
3.2 Role of Black Rice in Health and Diseases:	
3.2.1 Antioxidant's Property of Black Rice:	32
3.2.2 Anti-Inflammatory Property of Black Rice:	
3.2.3 Weight Management through Black Rice:	
3.2.4 Heart Condition Maintenance:	
3.2.5 Cancer Prevention by Black Rice:	34
3.2.6 Liver and Kidney Health Management through Black Rice:	
3.2.7 Diabetes Mellitus (Type 2) Control by Black Rice:	
3.2.8 Brain Function Improvement and Maintenance through Black	
3.3 Impact of Black Rice on Indian Economy:	35
3.4 Conclusion and Future Direction:	
3.5 References:	36
4. Nutritional Value of Oyster Mushroom - Dr. Nidhi Singh, Er. Indraveer	_
Dr. Vishwanath Kumar, Dr. Mahendra Jadia	39
4.1 Introduction:	39
4.2 Nutrients Constituents of Oyster Mushroom:	
4.2.1 Carbohydrate:	
4.2.2 Protein:	
4.2.3 Fats:	
4.2.4 Vitamins:	
4.3 Medicinal Value of Oyster Mushroom:	
4.3.1 Anti-Oxidative Value:	
4.3.2 Antibiotic Effect:	
4.3.3 Antiviral Effect:	
4.3.4 Anti-Inflammatory:	
4.4 Conclusion:	
4.5 Reference:	
5. Seaweed: Super Food for Modern Life - Dr. Neetu Singh	46
5.1 Introduction:	46
5.2 Seaweed Oil:	
5.2.1 Production:	
5.2.2 Processing of Seaweed:	
5.2.3 Popular Types of Edible Seaweed:	
5.2.4 Benefits:	
5.3 Nutrient Content:	

5.3.1 Generally, 1 Cup (15 Grams) of Seaweed provides you with:	50
5.3.2 Thyroid Health:	51
5.3.3 Heart Health:	51
5.3.4 Controlling Blood Sugar Levels:	51
5.3.5 Controlling Your Weight:	
5.3.6 Immune System Function:	
5.3.7 Healthy Digestion:	52
5.3.8 Cancer Threat:	
5.3.9 Additional Advantages to Consider:	52
5.4 Seaweed Recipes That Aren't Too Difficult To Make:	52
5.4.1 Salad of Seaweeds:	
5.4.2 Dashi:	53
5.4.3 Tsukudan:	53
5.4.4 Smoothie Made With Seaweed:	53
5.4.5 Is it Possible to Eat Seaweed without Becoming Sick?	53
5.4.6 Contains Heavy Metal:	53
5.4.7 Disorders of the Immune System:	53
5.5 Conclusion:	
5.6 References:	54
6. Turmeric: Processing and Medicinal Value - <i>Dr. Mahendra Jadia, Vishwanath Kumar, Dr. Nidhi Singh, Dr. Ajay Singh</i>	
6.1 Introduction:	
6.2 Different Species of Turmeric:	56
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition:	56 56
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric):	56 56 56
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing:	56 56 56
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes:	56 56 57
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric:	56 56 57 57
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion:	56 56 57 57 58
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric:	56 56 57 57 58
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion:	56 56 57 57 58 59
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference:	56 56 57 57 58 59
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference: 7. Nuts and Seeds: The Super Foods - Dr. Neetu Dobhal.	56 56 57 57 58 59 59
 6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference: 7. Nuts and Seeds: The Super Foods - Dr. Neetu Dobhal. 7.1 What Are Nuts and Seeds? 7.2 Nutritional Composition of Nuts and Seeds: 	56 56 57 57 58 59 59
 6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference: 7. Nuts and Seeds: The Super Foods - Dr. Neetu Dobhal. 7.1 What Are Nuts and Seeds? 7.2 Nutritional Composition of Nuts and Seeds: 7.2.1 Almonds (Prunus Amygdalus): 	56 56 57 57 59 59 62 63
 6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference: 7. Nuts and Seeds: The Super Foods - Dr. Neetu Dobhal. 7.1 What Are Nuts and Seeds? 7.2 Nutritional Composition of Nuts and Seeds: 	56 56 57 57 59 59 62 62 64
 6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference: 7. Nuts and Seeds: The Super Foods - Dr. Neetu Dobhal. 7.1 What Are Nuts and Seeds? 7.2 Nutritional Composition of Nuts and Seeds: 7.2.1 Almonds (Prunus Amygdalus): 7.2.2 Cashewnut (Anacardium Occidentale): 	56565757595962636464
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference: 7. Nuts and Seeds: The Super Foods - Dr. Neetu Dobhal. 7.1 What Are Nuts and Seeds? 7.2 Nutritional Composition of Nuts and Seeds: 7.2.1 Almonds (Prunus Amygdalus): 7.2.2 Cashewnut (Anacardium Occidentale): 7.2.3 Walnuts (Juglans Regia): 7.2.4 Peanuts (Arachis Hypogaea): 7.2.5 Pistachios (Pistacia Vera):	5656575759626264646466
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference: 7. Nuts and Seeds: The Super Foods - Dr. Neetu Dobhal. 7.1 What Are Nuts and Seeds? 7.2 Nutritional Composition of Nuts and Seeds: 7.2.1 Almonds (Prunus Amygdalus): 7.2.2 Cashewnut (Anacardium Occidentale): 7.2.3 Walnuts (Juglans Regia): 7.2.4 Peanuts (Arachis Hypogaea):	5656575759626264646466
6.2 Different Species of Turmeric: 6.2.1 Chemical Composition: 6.2.2 Processing (Preparation of Ripe Turmeric from Raw Turmeric): 6.2.3 Polishing: 6.2.4 Storage of Rhizomes: 6.2.5 Medicinal Value of Turmeric: 6.3 Conclusion: 6.4 Reference: 7. Nuts and Seeds: The Super Foods - Dr. Neetu Dobhal. 7.1 What Are Nuts and Seeds? 7.2 Nutritional Composition of Nuts and Seeds: 7.2.1 Almonds (Prunus Amygdalus): 7.2.2 Cashewnut (Anacardium Occidentale): 7.2.3 Walnuts (Juglans Regia): 7.2.4 Peanuts (Arachis Hypogaea): 7.2.5 Pistachios (Pistacia Vera):	565657575962636464666868

7.2.9 Chia Seeds (Salvia Hispanica L.):	71
7.2.10 Hemp Seeds (Cannabis Sativa L.):	
7.2.11 Sesame Seeds (Sesamum Indicum):	
7.3 Conclusion	
7.4 References:	
8. Dragon Fruit: An Exotic Super Fruit in India - Dr. Astuti Verma	76
	7.
8.1 Introduction:	
8.2 Production:	
8.3 Processing and Usage:	
8.4 Nutritional Properties:	
8.5 Health Benefits:	
8.6 Conclusion:	
8.7 References:	80
9. Cinnamon - Tyagi Ankita, Tyagi Shweta, Tyagi Kapil	81
9.1 Introductions:	81
9.2 General Composition of Cinnamon:	
9.3 Cinnamon Cultivation:	
9.3.1 Soil:	
9.3.2 Propagation:	
9.3.3 Fertilizers:	
9.3.4 Weed Control:	
9.3.5 Water:	
9.3.6 Pruning:	
9.3.7 Harvesting:	
9.4 Processing:	
9.4.1 Stages of Processing:	
9.5 Medicinal Properties of Cinnamon:	
9.5.1 Uses of Cinnamon oil:	
9.5.2 Uses of Cinnamon Powder:	
9.5.3 Uses of Cinnamon Bark:	
9.6 Health Benefits of Cinnamon:	
9.7 Conclusion:	87
9.8 References:	
10. Chio Cooda. A Cunon Food with High Nutritional and Thomasoutia	Volue
10. Chia Seeds: A Super Food with High Nutritional and Therapeutic Dr. Poonam Jethwani	
	00
10.1 Introduction:	
10.2 History:	
10.3 Chia Plant Description:	
10.3.1 Chia seeds Description:	
10.3.2 Nutritional Properties of Chia Seeds:	
10.4 Medicinal Properties and Health Benefits of Chia Seeds:	92

10.4.1 Cardio-Protective Effects:	92
10.4.2 Control of Diabetes:	93
10.4.3 Anti Proliferative Effect:	93
10.5 Effect of Chia on Immune System:	94
10.5.1 Chia oil as Skin Curative:	95
10.6 Conclusion:	95
10.7 References:	95
11. Chicory Roots: An Overview - Reena Verma, Gargi Saxena	99
11.1 Introduction:	99
11.2 Cultivation of Chicory:	
11.2.1 Nutritional Properties of Chicory:	103
11.2.2 Phytochemical Constituents of Chicory:	
11.2.3 Traditional Medicinal Uses of Chicory:	104
11.2.4 Sustainable Use of Chicory:	105
11.2.5 Health Benefits of Chicory:	106
11.3 Antimicrobial Activity:	106
11.4 Conclusion:	109
11.5 References:	110
12. Green Tea: Importance and Health Benefits - Pawandeep Kaur, U	_
12.1 Introduction:	113
12.1.1 History:	
12.1.2 Cultivation of Green Tea:	
12.1.3 Production of Green Tea Globally:	
12.2 Nutritional Profile of Green Tea:	
12.2.1 Amino Acids and Other Nitrogenous Compounds:	
12.2.2 Health Benefits:	116
12.2.3 Consumption of green tea as mouth wash:	116
12.2.4 Effect of green tea on liver:	
12.2.5 Green tea in preventing obesity:	117
12.2.6 Catechin in the prevention of breast cancer:	117
12.2.7 For maintaining Blood Pressure:	
12.2.8 Antiviral Properties:	
12.2.9 Antibacterial Properties:	
12.2.10 Enhances Insulin Sensitivity:	
12.2.11 Stress and Theanine:	
12.3 Conclusion:	
12.4 References:	119

13. Seaweed A Functional Food for Healthy Lifestyle - Dr. Gargi Saxena, F. Verma	
verma	. 141
13.1 Introduction:	. 121
13.2 Nutritional Profile of Seaweeds:	. 124
13.2.1 Protein and Amino Acids:	. 124
13.2.2 Lipid and Fatty Acids:	. 124
13.3 Carbohydrates and Dietary Fibre:	. 124
13.3.1 Minerals:	. 124
13.3.2 Vitamins:	. 125
13.3.3 Antioxidants:	. 125
13.4 Health Benefits of Seaweeds:	. 125
13.4.1 Protect Against Inflammation:	. 125
13.4.2 Reduces Risk of Osteoporosis:	
13.4.3 Prevents Cancer:	. 126
13.4.4 Promotes Heart Health:	. 126
13.4.5 Supports Weight Loss:	. 126
13.4.6 Protects against microorganisms:	. 127
13.4.7 Allergies:	. 127
13.4.8 Adverse Effects:	. 127
13.4.9 Seaweed uses:	. 128
13.5 Conclusion:	. 128
13.6 References:	. 128
14. Nutritional Properties and Health Benefits of Broccoli - Mohita Srivaas	
Uttam Tripura, Vinay Kumar	. 131
14.1 Introduction:	131
14.2 Varieties of Broccoli:	
14.2.1 Nutritional Importance of Broccoli:	
14.2.2 Medicinal Properties of Broccoli:	
14.3 Health Promoting Compound:	
14.4 Conclusion:	
14.5 Reference:	

ABOUT BOOK:

Super foods have grown in popularity over the previous decade, becoming a hot topic of discussion in the community's health and wellness. During the COVID-19 pandemics, the concept of super food gained prominence. Super food is a marketing term for foods that claim health benefits due to their high nutrient density. Between 2011 and 2021, the number of food and beverage products on the market that contain the terms "super food," "super fruit," or "super grain" more than doubled. Super foods might be a good entry into healthy eating, and understanding the nutritional value of your food can be enlightening. There is no specific description of what constitutes a "super food". On the other hand, Super foods are said to be nutritious powerhouses that include high levels of antioxidants, phytochemicals, vitamins, and minerals. Super foods high vitamin and mineral content can help your body fight against diseases and keep you healthier. By editing this book, we hope that we can educate people about many super foods, their nutritional and medicinal characteristics, production, processing, and health advantages in our everyday diets as our lifestyles change. Our primary objective is to disseminate accurate information on super foods. We believe that this attempt will benefit students, researchers, academicians, and the general public.

ABOUT EDITOR



Dr. Latika Yadav is currently working as Assistant Professor and Head in the Department of Home Science, Government Degree College, Punwarka, Saharanpur, Uttar Pradesh. She completed her B.Sc. Home Science from Acharya Narendra Deva University of Agriculture and Technology, Ayodhya, U.P, M.Sc (Foods and Nutrition) from Banaras Hindu University, Varanasi, U.P; Ph.D in Foods and Nutrition from Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan and B.Ed in Home Science from Dr. Bhim Rao Ambedkar University, Agra, U.P. She earned a University Gold Medal in B.Sc. and was the department topper in M.Sc. She was awarded a Ph.D. scholarship by the UGC, the NFOBC-JRF. She has qualified ICAR JRF (2008), UGC-NET (2010, 2013, 2014), ASRB NET (2018) and Rajasthan SET (2013). She cleared various competitive

examinations UPSESSB (PGT), DSSSB-PGT, UKPSC (GDC) and UPPSC (GDC). She has a teaching experience of about 5 years and research experience of 9 years. She has published more than 23 research and review papers in national and international journals, 12 articles and 5 chapters in Book. She got Young Scientist Award for outstanding contribution in Food and Nutrition at ATDS-2018. She awarded 2 times best poster presentation award in International conference (2014) and First UP Agriculture Science Congress (2013). She has presented more than 12 papers and posters in national and international seminars/conferences and has also attended many workshops. She is the Life time Members of Indian Dietetic Association and Home Science Association of India.

ABOUT CO-EDITOR



Dr. Madhu is Assistant professor in Deptt of Home science, Kashi Naresh Govt. PG College, Gyanpur, Bhadohi, U.P. She holds a Doctorate degree in Food and Nutrition from Punjab Agricultural University in 2014. She was awarded UGC-NET(2011), ICAR-SRF (2010), ASRB-NET (2018) as well as UGC- Junior research fellowship(2011) in Ph.D. besides that she was also awarded with ICAR- Junior research fellowship(2008) with rank Second and she completed her M.Sc from Acharya NG Ranga Agricultural University and done dissertation from National Institute of Nutrition(NIN), in Deptt of Microbiology, HYDERABAD with highest OGPA. She has completed B.Sc from Narendra Dev University of Agriculture and technology Ayodhya, U.P. throughout merit scholarship. She has associated with various academic and research experience specially in UNICEF sponsored

project in DRPCAU, PUSA, Samastipur, Bihar. She has a teaching experience of more than 2 years and research experience of more than 5 years. She has also more than 1 year of experience in teaching as PGT lecturer in Home Science in Sanatan Dharam kanya Inter College, SADAR, Meerut. She has qualified different competitive examination like UPSESSB (PGT), and UPPSC (GDC). She has published more than 16 research and review papers in national and international journals, 5 articles. She awarded 5 times best poster presentation award in International conference (2012) and First UP Agriculture Science Congress (2013) and Second UP Agriculture Science Congress (2014). She has presented 14 posters and 2 papers in national and international seminars/ conferences and has also attended many workshops/symposium. She is the Life time Members of Indian Dietetic Association and Nutrition Society of India.



Kripa-Drishti Publications A-503 Poorva Heights, Pashan-Sus Road, Near Sai Chowk, Pune – 411021, Maharashtra, India.

Mob: +91 8007068686

Email: editor@kdpublications.in Web: https://www.kdpublications.in

ISBN: 978-93-90847-73-0



Price: ₹575