

Table S1 Reviews on *Vigna* sp. from 2017 to 2022.

| Objective of Review | Key Aspects Captured | References |
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| Analysing and valorising <i>Vigna unguiculata</i> , <i>Vigna subterranea</i> and <i>Vigna vexillata</i> by considering the perspective of human activity and what effects it exerts. | Origin of species and time and place of domestication; the wild-type genome hides a valuable gene pool, and the process of species domestication will result in the loss of gene diversity. | Panzeri et al., 2022[1] |
| The opportunity for Bambara peanuts (<i>Vigna subterranea</i>) to address food insecurity and its benefits to local farmers in Africa. | Bambara peanuts's potential impact on global food production; Advances in next generation sequencing (NGS) technology improve peanut yields. | Olanrewaju et al., 2022[2] |
| The potential ability of mung bean (<i>Vigna radiata</i>) polyphenols to prevent Alzheimer's disease. | The effective dose and mechanism of mung bean polyphenols in the rodent model of Alzheimer's disease; Changes of neuroprotective phenolics in mung bean after germination. Mung bean is rich in nutrients; The potential health benefits of mung beans; Mung bean has prebiotic and nutraceutical properties; Functions of mung bean in cosmetics and land reclamation. | Xu et al., 2021[3] |
| The nutritional composition, antinutritional components and health benefits of green gram (<i>Vigna radiata</i>). | The role of various begomoviruses, its genomic components, and vector whiteflies; Information about the genetics of YMD in both mungbean and blackgram crops is comprehensively presented; Implications of various management strategies; The prospects of employing various powerful emerging tools. Useful characteristics of wild cowpeas; Interspecific crosses and backcross breeding in cowpea; Development of populations with introgressions from CWRs; Characterization and evaluation of populations with introgressions from CWRs. | Mekkara et al., 2021[4] |
| Current status of Yellow Mosaic Disease (YMD) in mung beans (<i>Vigna radiata</i>) and management opportunities. | Closing the food supply gap through improved production of Bambara groundnut; Closing the nutrient gap through enhanced utilization of Bambara groundnut. | Mishra et al., 2020[5] |
| Introduction, breeding and germplasm evaluation of cowpea (<i>Vigna unguiculata</i>). | Background information and uses of Bambara groundnut; Description of the antimicrobial properties of Bambara groundnut. | Boukar et al.,2020[6] |
| The potential role of Bambara groundnut (<i>Vigna subterranean</i>) in diversifying agri-food systems and contributing to enhanced dietary and planetary sustainability. | Sources of information and methodology of rice bean; Origin, distribution, taxonomy, morphology and composition of rice bean; Genetic, genomic resources and crop improvement of rice bean. | Tan et al 2020[7] |
| Describe the beneficial potential of Bambara groundnut (<i>Vigna subterranean</i>) to protect and promote its cultivation as a food and medicine. | | Udeh et al., 2020[8] |
| Comprehensive evaluation of species information, nutritional composition and genetic breeding of rice beans (<i>Vigna umbellata</i>). | | Pattanayak et al., 2019[9] |

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| A comprehensive assessment of biotic stresses, abiotic stresses, and effective genetic improvement in mung bean (<i>Vigna radiata</i>). | The major diseases of mung bean; Key abiotic stresses affecting mung bean production; The challenges in genetic improvement. | Nair et al., 2019[10] |
| A comprehensive evaluation of mung bean (<i>Vigna radiata</i>) polyphenols, polysaccharides, peptides and health benefits. | Description of bioactive substances such as polyphenols, polysaccharides and peptides; health benefits of mung bean bioactive substances. | Hou et al., 2019[11] |
| Evaluate the potential for Bambara peanuts (<i>Vigna subterranean</i>) to be used to make a greater contribution to agriculture in preparation for climate change. | Evaluation of important traits of Bambara groundnut; Germplasm resources of Bambara groundnut for future breeding. | Mayes et al., 2019[12] |
| Description of the nutritional facts and health benefits of cowpeas (<i>Vigna unguiculata</i>). | Nutritional and functional compounds of cowpeas; Effect of processing on functional compounds in cowpea; Functional properties of cowpeas. | Jayathilake et al., 2018[13] |
| Discussions on different traits in mung bean (<i>Vigna radiata</i>) involved in defense against bruchids and their utility in pest management. | Bruchids infesting mung bean and their control; Sources of bruchid resistance in mung bean; Physical, biochemical and biochemical basis of resistance; Breeding constraints for developing bruchid-resistant mung bean. | War et al., 2017[14] |
| An overview of different aspects of cowpea, with a special emphasis on the molecular markers for assessing genetic diversity, as well as on biochemical and transcriptomic data with respect to evaluating cowpea drought stress tolerance. | Classification and description; Origin, domestication and distribution; evaluation of genetic diversity; Tolerance to drought stress on biochemical and transcriptomic data. | Carvalho et al., 2017[15] |

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