Evaluating Constraints FacedbyFarmers inthe AdoptionofParamparagat Krishi Vikas Yojana in Rajasthan state of India

ABSTRACT

Among all the states of India, Madhya Pradesh has covered largest area under organic certification, followed by Rajasthan and Maharashtra. Rajasthan state of India is well known for its rainfed areas in which agriculture is a gambler of Indian monsoon and it can act as a potential zone for PKVY. In Rajasthan, organic farming is also named as "*Baderaan ki kheti*" which locally means as the type of farming done by their ancestors, but actually it is a traditional approach of farming with modern and scientific way. Government of Rajasthan has also taken an initiative to bring much area under organic farming through Paramparagat Krishi Vikas Yojana (PKVY) in Bikaner District. Hence, in 2015-18 highest numbers of clusters were formed under PKVY. Thus, the study was conducted in Bikaner District of Rajasthan state to delineate….The Bikanerdistrictcompriseseight*tehsils*. Outofthesetothree*tehsils,* namelyNokha,SridungarhgarhandBikaner, wereselected purposelyforthepresent investigationbased onthehighestnumberof registered farmers underPKVY. One village from each selected *tehsil* constituted the sample of the study and PKVY beneficiary farmers were selected purposely using proportionate random sampling method and the non-beneficiary farmers were randomly selected from the same villages to constitute the other half of the sample size. Thus, 180respondents, *i.e.*,90beneficiaryand90non-beneficiaryrespondentswereincludedinthepresent investigation. Thedata were gathered from 180 respondents through an interview schedule. It was found that the main constraints faced by the farmers in the adoption of PKVY were 'time consuming process', 'lack of literacy among farmers', 'low yield during transition period', 'lack of knowledge about geo-tagging' and 'incentive is too low.This may be because farmers in the study area were not aware about the complete procedure involved in the adoption of PKVY and required more exposure through various extension activities like awareness programmes, trainings, workshops and interactive sessions.Progressive organic farmers whohaveadoptedallthepracticesof organic farming and have advanced knowledge should be used asreferentextensionperson for increasing the rate of adoption of PKVY.

Keywords: PKVY, Organic Farming, Farmers, Adoption, Constraints.

INTRODUCTION

Indiaisasecondmostpopulouscountryintheworldinwhichagriculture and allied activities are the major source of livelihood. After the independence, feeding this huge population was a difficult task and for solvingthis "Green Revolution" came into existence in which emphasis wasgiven to high production with the help of high yielding varieties and chemicals,.. .but However, as time passed, as time passed,excessive use of chemicals had negative impact on was done which led to verybad impacton the on ecosystem comprising soil, environment andas well as human health. It is now discerniblethatwiththeinjudicioususeofchemicals,soilbecomeslessfertile,productivity decreases and the presence of chemical residues in the crop,which is eaten by the humans gets transferred to human body resulting in differentsomany diseases.After realizing these consequences of excessive use of chemicals likefertilizers, insecticides and pesticides organic farming came into existence.Organic farming can be defined as the crop production, animal rearing andotherproductswithoutusingthesyntheticchemicalfertilizers,herbicide,insecticide-pesticides, transgenic species or antibiotics and growth-enhancingsteroids, or other chemicals. Hence, organic farming is in a nascent stage in India, about 2.78 million hectare of farmland was under organic cultivation as of March 2020, according to the Union Ministry of Agriculture and Farmers' Welfare.

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This is two per cent of the 140.1 million ha net sown area in the country. India's top three states namely Madhya Pradesh, Rajasthan and Maharashtra account for almost half of the area under organic cultivation. Even the top three states with the largest area under organic cultivation are Madhya Pradesh, Rajasthan and Maharashtra, *i.e.* 4.9, 2.0 and 1.6 per cent of their net sown area under organic farming**(Khurana and Kumar, 2020).**

Considering the existing potential and future demand of organically produced food products, which is now a sunrise sector, Government of India is also making immense efforts. Therefore, to promote organic farming, a centrally sponsored scheme was initiated by the government in the year 2015 all over the country. This scheme is called as Paramparagat Krishi Vikas Yojana (PKVY), it is a sub-component of Soil Health Management Scheme (SHM) under the National Mission of Sustainable Agriculture (NMSA), which aims at supporting and promoting organic farming, in turn resulting in improvement of soil health. Under PKVY, hilly areas and rainfed areas were selected as the remote sensing areas due to less uses of chemicals. The funding pattern under the scheme is in the ratio of 60:40 by the Central and State Governments, respectively. In the case of North Eastern and the Himalayan States, Central Assistance is provided in the ratio of 90:10 (Centre: State). At the State level, the State Department of Agriculture and Cooperation has been implementing the scheme with the involvement of Regional Councils that are registered under the PGS- India Certification Programmes. Thus, realizing the importance of *Paramparagat Krishi* in the field of agriculture, the present study was conducted with the objective to delineate theconstraints being faced by farmers in adopting theParamparagat Krishi Vikas Yojana in the state of Rajasthan.

METHODOLOGY

The present study was conducted in Bikaner district of Rajasthan state which was purposely selected for the present investigation on the basis oflargest number of clusters formed under PKVY during 2015-18. Three *tehsils* namely Nokha, Sridungarhgarh and Bikaner were purposely selected for the present investigation on the basis ofhighest number of registered farmers under PKVY. ~~For selection of respondents, a comprehensive village wise list of farmers who were having registration in PKVY was procured from the *Panchayat Samiti*, Bikaner, Rajasthan for the present investigation.~~ *Selection of respondents was based on proportionate random sampling from a comprehensive village list of farmers registered as PKVY beneficiaries*from the *Panchayat Samiti*, Bikaner, Rajasthan.~~The proportionate random sampling method was used to select the respondents who were having registration in PKVY and they were called as beneficiary of PKVY.~~ To constitute the other half of sample size same number of farmers were also selected randomly from the same villages who have not registered in PKVY to act as control sample.~~and they were called as non-beneficiary respondents~~. Thus, a totalof 180 respondents *i.e.* 90 beneficiary and 90 non-beneficiary respondents were included in the present investigation. An interview schedule was used~~designed~~ for data collection.~~ng the data.~~ The pre-testing of the interview schedule was carried out with 25 non-sampled respondents who were not included in the study. The personal interview technique was adopted for the collection of data. Analysis of the data was done with the help of different statistical tools like mean percent score, rank correlation and t-test.

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RESULTS AND DISCUSSION

The dictionary meanings of constraints are 'confinement', the exerciseto determine or 'confine action', 'bound' and 'faltered condition', restriction ofliberty or of free action. To measure the constraints responsible for hinderingtheadoptionofPKVY bytherespondents,a~~suitable~~schedulewas developed.~~Inthissection,itwastriedtofind-outtheconstraints being faced by the respondents in the adoption of PKVY~~. For the present investigation, allthe possible constraints being faced by the beneficiary and non-beneficiaryfarmers were grouped into five major categories *viz*. general, socio–personal& psychological, production, marketing and financial constraints. In order tostudy various types of constraints, the respondents were asked to give theirsresponse on three point continuum. Based on ~~After that on the basis of~~ scores in eachcategoryofconstraintmeanpercentscorewascalculatedforeachdimension.

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A. GeneralConstraints

The data in Table 1 reveals that general constraints *viz.* 'time consuming process' (82.59 MPS) was ranked first by the beneficiary respondents, followed by 'less affordability' (71.85), 'previously used chemicals affect soil very badly' (70.37 MPS), 'lack of institutional support' and 'non-availability of agriculture supervisor, AAO, AO' (62.22 MPS) ranked second, third, fourth and fifth, respectively.Whereas,incaseofnon-beneficiaryfarmersthefirstrankwasassigned for 'time consuming process' (87.40 MPS), followed by 'previouslyusedchemicalsaffectthesoilbadly' (80.74MPS), 'lackofinstitutionalsupport' (65.18 MPS), 'less affordability' (64.44 MPS) and 'non-availability ofagriculturesupervisor,AAO,AO'(37.77MPS) wererankedsecond,third,fourth,andfifth,respectively.Foroverallrespondents'timeconsumingprocess' got first rank with 84.99 MPS, followed by 'previously used chemicalsaffectthesoilbadly' (75.55MPS), 'lessaffordability'(68.14 MPS), 'lackofinstitutionalsupport'(63.70 MPS),'non-availabilityofagriculture supervisor, AAO, AO' (36.29 MPS) were ranked second, third, fourth and fifth,respectively.

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Table1: RankingofItemsunderGeneralConstraints

S. No.	GeneralConstraints	Respondents					
		BeneficiaryRespondents(n=90)		Non-beneficiaryRespondents(n=90)		OverallRespondents (N=180)	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Timeconsumingprocess	82.59	I	87.40	I	84.99	I
2.	Previously used chemicalsaffectsoilverybadly	70.37	III	80.74	II	75.55	II
3.	Lackofinstitutionalsupport	62.22	IV	65.18	III	63.70	IV
4.	Lessaffordability	71.85	II	64.44	IV	68.14	III

5.	Non-availabilityof Agricultural supervisor,AAO, AO	34.81	V	37.77	V	36.29	V
	Pooled	64.36		67.10		65.73	

r_s=RankCorrelation
MPS=MeanPercent Score
NS= NonSignificant

r_s=0.70
$t = 1.73^{NS}$

The value of calculated rank correlation (r_s) was 0.70 which was non-significant, leading to conclusion that there was a similarity in rank assignmentpatternofgeneral constraintsofbeneficiaryandnon-beneficiaryfarmersin adopting PKVY,thoughtherewasadifferenceinthemagnitudeofMPS ofbeneficiary and non-beneficiary farmers. Thus, from the above findings it maybe concluded that majority of the respondents reported that 'time consumingprocess' and 'previously used chemicals affect the soil very badly' were themajorconstraints facedby therespondents.Thisprobably happenedbecause farmers in the study area lacked knowledge on PGS certification process. The findings are in line with the findings of Sihare (2015) and Sahani*et al.* (2020) who concluded that major constraints faced by the farmers wereorganicfarmingistimeconsumingprocessand infrastructuralconstraint.

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B. Socio-personalandPsychologicalConstraints

ThedatainTable2depictsthatmajorconstraintsfacedbybeneficiary farmers were 'lack of awareness about PKVY' (80.75 MPS) whichwasrankedfirst, followedby 'lackofliteracy among farmers'(78.15MPS),'lack of interest in organic farming (68.15 MPS) was ranked second and third, respectively,'lackofencouragement'(64.81MPS)wasrankedfourthand'lackofsupportfromfamilymembers' (50.00MPS)was at lastposition.

Table2:RankingofItemsunderSocio-personalandPsychologicalConstraints

S. No.	Socio-personalandPsychological Constraints	Respondents					
		BeneficiaryRespondents (n=90)		Non-beneficiaryRespondents (n=90)		OverallRespondents (N=180)	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Lack of awareness aboutPKVY	80.75	I	86.29	III	83.51	II
2.	Lackofencouragement	64.81	IV	66.66	IV	65.73	IV
3.	Lack of literacy amongfarmers	78.15	II	91.11	I	84.63	I
4.	Lackofinterestinorganicfarming	68.15	III	88.89	II	78.52	III
5.	Lack of supportfromfamily members	50.00	V	39.25	V	44.62	V
	Pooled	68.37		74.44		71.40	

r_s=rankcorrelationr_s=0.70
MPS=MeanPercent Score t =1.73^{NS}
NS= Non Significant

Further,examinationoftheTable2revealsthatthemajorconstraintsperceivedbythenon-beneficiaryrespondentswere'lackofliteracy among farmers' (91.11 MPS) which was ranked first, followed by 'lack ofinterestinorganicfarming(88.89MPS)wasrankedsecond,'lackofawarenessaboutPKVY'(86.29MPS)rankedthird,'lackofencouragement' (66.66 MPS) ranked fourth and 'lack of support fromfamilymembers' (39.25 MPS)wasrankedfifth, respectively.If we look at the data in Table 2 irrespective of beneficiary and non-beneficiary respondents, data reveals that major constraints perceived by theoverallrespondentswere'lackofliteracyamongfarmers' (84.63MPS), followed by 'lack of awareness about PKVY' (83.51 MPS) ranked firstand second, respectively. While, 'lack of interest in organic farming' (78.52MPS) was ranked third and lack of encouragement' (65.73 MPS) was rankedfourth,respectively.Theconstraint*viz.*'lackofsupportoffamilymembers' (44.62MPS)wasperceivedleastimportantbytheoverallrespondentsinthestudyareaastheyhadassignedlastranktothisconstraint. Here, the value of calculated rank correlation (r_s) was 0.70 whichwas non-significant, leading to conclusion that there was a similarity in rankassignmentpatternofsocio-personalandpsychologicalconstraintsfaced by beneficiaryandnon-beneficiary respondents in adopting PKVY, though there was a difference in themagnitude ofMPS of beneficiary and non-beneficiary farmers. The findingsareinaccordancewiththefindingsofNaik(2016),Barik(2018),Modak(2019) and Kumar & Keerthana (2020) who reported major constraints facedby the organic farmers were lack of support from family members, lack ofknowledge regarding organic farming practices, no knowledge about organicscheme andlackofinformationregardingorganicfarming.

C. ProductionConstraints

~~Thedatain~~Table3illustrates thatmajorconstraintsfacedbybeneficiary farmers were 'low yield during transition period (85.18 MPS) whichwas ranked first, followed by 'weed problem because no chemical is used'(80.74MPS),'non-availabilityoflabour'(50.00MPS), 'non-availabilityofraw material for organic farming' (47.77 MPS) ranked second, third and fourth,respectively and non-availability oforganic seeds (33.70 MPS) was rankedfifth atlastposition.Further,Table3revealsthatthemajorconstraintsperceivedbythenon-beneficiaryrespondentswere'lowyieldduringtransitionperiod'(89.62MPS)which wasrankedfirst, followedby'weedproblem because no chemical is used' (82.22 MPS), 'non-availability of rawmaterial for organic farming' (50.75 MPS), 'non-availability of labour' (49.62MPS) ranked second, third and fourth, respectively and non-availability oforganicseeds(37.03MPS)was rankedfifthatlastposition.

Table3:RankingofItemsunderProductionConstraints

S. No.	ProductionConstraints	Respondents					
		BeneficiaryRespondents(n= 90)		Non-beneficiaryRespondents (n=90)		OverallRespondents(N= 180)	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Non-availability of organicseeds	33.70	V	37.03	V	35.36	V
2.	Weed problems becausenochemical isused	80.74	II	82.22	II	81.48	II
3.	Non-availabilityoflabour	50.00	III	49.62	IV	49.81	III
4.	Non-availability of rawmaterialfororganicfarming	47.77	IV	50.75	III	48.51	IV
5.	Lowyieldduringtransitionperiod	85.18	I	89.62	I	87.40	I
	Pooled	59.47		61.84		60.51	

r_s=rankcorrelation r_s= 0.90
MPS=MeanPercent Score t=3.55**
**Significantat0.01levelofprobability

If we look at the data in Table 3 irrespective of beneficiary and non-beneficiary respondents, data presents that major constraints perceived by theoverall respondents were 'low yield during transition period' (87.40 MPS) whichwas ranked first, followed by 'weed problem because no chemical is used'(81.48MPS),'non-availabilityoflabour'(49.81MPS), 'non-availabilityofrawmaterialfororganicfarming' (48.51MPS)wasrankedsecond, thirdandfourth, respectively and non-availability of organic seeds (35.36 MPS) wasrankedfifthatlastposition.Thevalueofcalculatedrankcorrelation(r_s)was0.90 which was positive and significant at one per cent level of significance,leading to conclusion that there was a similarity in rank assignment pattern of production constraints of beneficiary and non-beneficiary farmers in adopting PKVY,although there was a difference in the values of MPS of beneficiary and non-beneficiary respondents. Thus, form the above findings it may be concludedthatmajorityoftherespondentsreportedthat'lowyieldduringtransitionperiod' and'weedproblemsbecausenochemicalisused' werethemajorconstraints. The findings are in line with the findings of Sasidharan (2015),Chandawat*etal.*(2019) andGurung&Choubey (2021) whofoundthatless yieldininitialyears wasthemajorconstraintperceivedbyorganicfarmers.The findings arecontradictory withthefindingsofPriyanka*etal.*(2018) who revealed that the major constraint faced by the cent per centof the organic growers was labour problem. Oluwatosinand Ogunkanam (2020) alsodepicted that very few respondents reported low yield after using organicmanure.

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D. MarketingConstraints

The data in Table 4 depicts that major constraints perceived by

thebeneficiaryrespondentsundermarketingconstraintscategorywere'lackof knowledge about geo-tagging' (84.07 MPS) ranked first, followed by 'lack ofawareness about PGS certification (80.74 MPS) second, 'non-availability ofnearbymarket'(69.26MPS)rankedthirdand'lackoftransportationfacility' (63.70)rankedfourth,'lackofconsumeravailability'(54.07MPS)rankedfifth and'lackofstoragefacility'(49.25MPS)rankedsixth,respectively.The data in Table 4 also presents that major constraints perceivedbythenon-beneficiaryrespondentswere'lackofawarenessaboutPGScertification' (91.48 MPS) ranked first, followed by 'lack of knowledge aboutgeo-tagging'(90.37MPS)rankedsecond,'non-availabilityofnearbymarket'(75.55 MPS) ranked third, 'lack of consumer availability' (65.56 MPS) rankedfourth, 'lack of transportation facility' (62.96 MPS) ranked fifth and 'lack ofstoragefacility' (58.51MPS)rankedsixth,respectively.

Table4: RankingofItemsunderMarketingConstraints

S. No.	MarketingConstraints	Respondents					
		BeneficiaryRespondents (n=90)		Non-beneficiaryRespondents (n=90)		OverallRespondents (N=180)	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Non-availability ofnearbymarket	69.26	III	75.55	III	72.40	III
2.	Lackoftransportationfacility	63.70	IV	62.96	V	63.33	IV
3.	Lack ofstoragefacility	49.25	VI	58.51	VI	53.88	VI
4.	Lack of consumeravailability	54.07	V	65.56	IV	59.81	V
5.	Lack of knowledge aboutgeo-tagging	84.07	I	90.37	II	87.22	I
6.	Lack of awarenessabout PGScertification	80.74	II	91.48	I	86.11	II
	Pooled	66.85		74.07		70.46	

r_s=rankcorrelationr_s=0.89
MPS=MeanPercent Score t=4.04**
**Significantat0.01levelofprobability

Further, Table 4 also depicts that major constraints faced by the overallrespondents were 'lack of knowledge about geo-tagging' (87.22 MPS) rankedfirst, followedby'lackofawarenessaboutPGScertification (86.11MPS)second, 'non-availability of nearby market' (72.40 MPS) ranked third and 'lackoftransportationfacility' (63.33MPS)rankedfourth,'lackofconsumeravailability' (59.81 MPS) ranked fifth, respectively. The constraint which wasperceived least important by the overall respondents was 'lack of storagefacility'(53.88MPS)astheyhadassignedlastranktothisconstraint.Here,the value of calculated

rank correlation (r_s) was 0.89 which was positive andsignificant at one per cent level ofsignificance, leading to conclusion thatthere was a similarity in rank assignment pattern of marketing constraints ofbeneficiaryandnon-beneficiaryfarmers in adopting PKVY,thoughtherewasadifferenceinthemagnitudeofMPSofbeneficiaryandnon-beneficiaryfarmers.

The findings are supported by the findings of Sasidharan (2015), Chandawat*et al.* (2019) andSaran & Sharma (2020) who concluded thatcertificationfacilityandlackoftransportationfacilitywerethemajor constraints faced by theorganic farmers butthe findings arecontradictorywith the findings of Sihare (2015) who reported that lack of awarenessaboutPGS certification was the major constraint experienced by the organic farmers in theadoptionoforganicfarming.

E. FinancialConstraints

The data in Table 5 reveals that major constraints perceived by thebeneficiary respondents were 'incentive is too low' (82.96 MPS) which was ranked first,followed by 'high labour charges' (66.29 MPS) second, 'no subsidy on organicfertilizerorpesticides' (65.18 MPS) rankedthirdand'slowpaymentundercontract' (62.96MPS) ranked fourth,'nospecial provision for PKVY undercrop loan' (56.29 MPS) ranked fifth and 'lack of credit facility' (35.56 MPS)ranked sixth,respectively.The data in Table 5 also indicates that major constraints faced by the non-beneficiary respondents were 'incentive is too low' (87.40 MPS)rankedfirst, followed by 'no subsidy on organic fertilizer orpesticides'(81.48 MPS) ranked second, 'no special provision for PKVY undercroploan'(80.00MPS) rankedthird, 'highlabour charges' (68.14MPS)ranked fourth, 'slow payment under contract' (66.67) ranked fifth and 'lack ofcreditfacility' (38.51 MPS)ranked sixth,respectively.

Table5:RankingofItemsunderFinancial Constraints

S. No.	FinancialConstraints	Respondents					
		BeneficiaryRespondents (n=90)		Non-beneficiaryRespondents (n=90)		OverallRespondents (N=180)	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Incentiveistoolow	82.96	I	87.40	I	85.18	I
2.	Highlabourcharges	66.29	II	68.14	IV	67.21	IV
3.	Slowpaymentunder contract	62.96	IV	66.67	V	64.81	V
4.	No subsidy on organic fertilizers or pesticides	65.18	III	81.48	II	73.33	II
5.	No special provision forPKVY under crop loan	56.29	V	80.00	III	68.14	III
6.	Lackofcreditfacilities	35.56	VI	38.51	VI	37.03	VI
	Pooled	61.54		70.37		65.95	

r_s=rankcorrelationr_s=0.71
MPS=MeanPercent Score t=2.02*
*=Significant at0.05levelofprobability

Further, Table 5 also depicts that major financial constraints faced by the overallrespondents were 'incentive is too low' (85.18 MPS) which was ranked first, followed by'no subsidy on organic fertilizer or pesticides' (73.33 MPS) ranked second, 'nospecial provision for PKVY under crop loan'(68.14 MPS) ranked third, 'highlabourcharges' (67.21 MPS) ranked fourth, 'slow payment undercontract' (64.81MPS)rankedfifthand 'lackofcredit facility' (37.03 MPS)was perceived least important by the overall respondents in thestudy area as they had assigned last rank to this constraint. Here, the value ofcalculated rank correlation (r_s) was 0.71 which was positive and significant atfive per cent level of significance, leading toconclusionthat therewas asimilarity in rank assignment pattern of financial constraints of beneficiary andnon-beneficiary farmers in adopting PKVY, though there was a difference in themagnitudeofMPSofbeneficiaryandnon-beneficiaryfarmers.Thefindingsare in line with the findings of Sahani *et al.* (2020) and Kumar & Keerthana(2021)whoconcludedthatorganicfarmingismorelaborintensivethanconventional farming. The findings are contradictory with the findings of Barik(2018) and Kaaliranjan& Supriya (2019) who found that lack of credit facilitieswas the major constraint faced by the farmers in the adoption of organicfarmingtechnologies.

Conclusion

The~~In the present~~ study, ~~it was~~concluded found that the most important constraints faced by the respondents in the adoption of PKVY were 'time consuming process', 'lack of literacy among farmers',

'low yield during transition period', 'lack of knowledge about geo-tagging' and 'incentive is too low'. For mitigating these constraints, some distance education programmes on organic farming under PKVY and farmer's field schools for the young &middle aged farmers can be organized by the State Agriculture Department so that they can realize the advantages of organic farming for future reference also. Initialthree years duration is necessary for initiating certified organic farming under PKVY as excessive use of chemicals reduces the organic matter in soil, but if the farmers start growing organic produce on barren land and can somehow increase the organic matter in less time so there should be some provision under PKVY by which farmers can apply for organic certification of their land at early stage. There is a need to felicitate progressive organic farmers at farmer's fairs/events by which other farmers who are unaware about PKVY can become aware and feel motivated for adopting organic farming. Incentives under PKVY may also be increased by the central or state government to increase the rate of adoption of PKVY.

Comment [DM15]: Good and scientifically useful conclusion

References

Barik,R.AStudyonAdoptionofOrganicFarmingTechniqueinKhurdhaDistrictofOdisha,M.Sc.(Ag.)Thesis(Unpub.),OrissaUniversityofAgricultureandTechnology, Bhubaneswar; 2018.

Chandawat, M. S., Bochalya, B. C., Bhoraniya, M. F. and Kalma, R. P. AdoptionofOrganicFarmingPracticesandConstraintsFacedinAdoptionbytheFarmersofSurendranagarDistrictofSaurashtraRegion in GujaratState.Int. J.ofAgri.Sci.*2019;*11(9):8370-8373.

Gurung,R.andChoubey,M.IntegratingFarmerProducerOrganisationsinSikkimOrganicMission:Opportunities,ChallengesandPolicyMeasures.S.A.J. ofSoc.Stu. andEco*. 2021;*9(1):39-49.

Kaliranjan, V. and Supriya, M. Constraints in the Adoption of OrganicFarming Practices by the Farmers in Krishnagiri District of Tamil Nadu.Int.J.ofInclusiveDev. *2019;*5(1):37-40.

Khurana, A. and Kumar, V. On a Tardy Trail: State of organic farming in India: Area under organic cultivation is 2% of the net sown area in the country. 2020. Accessed 12 march 2021Available: https://www.downtoearth.org.in/blog/agriculture/on-a-tardy-trail-state-of-organic-farming-in-india-73269.

Kumar, P. N. and Keerthana, V. An Economic Analysis of Organic andinOrganicBananaGrowersinCoimbatoreDistrictofTamilNadu. 2020;260-267.Available: https://www.researchgate.net/publication/351081453_Emerging_Trends_in_Business_and_Management_Issues_and_Challenges_i_Emerging_Trends_in_Business_and_Management_Issues_and_Challenges_ii_Acknowledgement?enrichId=rgreq8d16d4c0fd98046d7ba32f37baa52b0dXXX&enrichSource=Y292ZXJQYWdlOzM1MTA4MTQ1MztBUzoxMDE2MDA4MjEwOTM1ODA4QDE2MTkyNDY2NDI4Mzc%3D&el=1_x_3&_esc=publicationCoverPdf.

Modak,S.DiffusionandAdoptionPatternofOrganicProductionTechnologyinTeraiRegionofWestBengal,PhD(Ag.)Thesis(Unpub.), UttarBangaKrishi Viswavidyalaya, WestBengal; 2019.

Naik,M. KnowledgeandAdoption ofOrganicFarming PracticesinRed Gram in Dryland Areas of Karnataka. M.Sc. (Ag.) Thesis (Unpub),JayashankarTelangana StateAgriculturalUniversity, Hyderabad;2016.

Oluwatosin, W. L. and Ogunkanmi, A. Socioeconomics ofOrganicManure Farming: Implication for Soil Fertility Conservation Education.UnilagJournalof Medicine, Scienceand

Technology.*2020;*8(1):207-217.

Priyanka, R., Srivastava, J. P. and Jahanara Adoption Behavior andConstraintsinAdoptionofOrganicFarmingPracticesofCoffeePlantation in Dindigul District of Tamil Nadu. J. of Phar. and Phyto.*2018;*7(3):3575-3577.

Sahani,S.K.,Ray,R.K.andDowarah,B.ProspectsandChallengesofOrganicFarminginIndia.FoodandScientificReports. *2020;*10(1):15-19.

Saran,D.andSharma,M.ConstraintsforOrganicFarmingPracticesin BikanerDistrict ofRajasthan.AgricultureUpdate.*2020;* 15(1&2):21-23.

Sasidharan, A. Adoption of Organic Farming Technologies in BananaandVegetableCropsinKasaragodDistrict.M.Sc.(Ag.)Thesis(Unpub), KeralaAgriculturalUniversity,Thrissur; 2015.

Sihare, A. A Study on Farmers' Knowledge, Attitude and Practicesrelated to Organic Farming in Tikamgarh District of Madhya Pradesh,M.Sc.(Ag.)Thesis(Unpub.),JawaharlalNehruKrishiVishwaVidyalaya, Jabalpur; 2015.

Comment [DM16]: Referencing is well done and corresponds with intext citation. Well done