

Stakeholders' Opinion Regarding Design of Agricultural Insurance in Punjab

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ABSTRACT

Agricultural Insurance is one of the mechanisms to stabilize and protect the farm economy. It can be used as an important instrument of social and economic policy for the protection of farmers against unforeseen losses, to adapt to the effects of climate change and support the diversification of agriculture by encouraging the growing of more risky crops. Agricultural Insurance schemes such as *Pradhan Mantri Fasal Bima Yojana* (PMFBY) aim to improve the productivity and earnings of farmers while Weather Based Crop Insurance Scheme (WBCIS) aims to mitigate the hardship of the insured farmers against the likelihood of financial loss on account of anticipated crop loss resulting from adverse weather conditions. In the present study the opinion of the scientists and extensionists were studied. There was a significant difference in opinion of scientists and extensionists regarding the coverage of food crops, insurance unit and coverage of losses under PMFBY. The focus of appropriating the index is to minimize the basis risk i.e. for PMFBY the insurance unit is affixed as the village panchayat, coverage of post-harvest losses and trigger yield, whereas for the WBCIS it is the density of weather station, coverage of parametric weather exigencies and correlation between weather index and yield of the crop. In case of WBCIS, both the scientists and extensionists significantly differed in their opinion regarding coverage of crops since; these were less risky crops for farmers of Punjab. The insurance product planned for Punjab state needs to be designed based on strong agronomic principles.

Keywords: Agricultural insurance, Index, Opinion, PMFBY, WBCIS

INTRODUCTION

Crop insurance is one alternative to manage risk of yield loss by the farmers. It helps in stabilization of farm production and income of the farming community. The National Agricultural Insurance Scheme (NAIS) implemented in India during 1999 insured risk of millions of farmers whose livelihood depend on the pattern and distribution of monsoon rain in India. However, the penetration of it was found to be very less (Soni and Trivedi, 2013). The crop insurance schemes should be made applicable to all the cultivators compulsorily which

can provide protection by guaranteeing 80 to 90 per cent of yield in different tehsils according to the degree of risk (Patil, 1993) or it can be adapted through the wide network of cooperative model where the farmers will have their annual insurance procedures completed through these cooperative societies at village level (Gulcubuk and Gunes, 2010; Mohapatra *et al.*, 2010). The coverage and indemnity pay outs of NAIS has benefitted many regions and crops and the programme was favourably placed in terms of equity i.e. in terms of proportionate coverage and benefits accrued by small and marginal farmers. And the problem of adverse

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selection common in many agriculture insurance policies worldwide has significantly reduced (James and Nair, 2009). In the developed and developing countries the crop insurance is designed for covering of single as well as multi-peril coverage (Alam *et al.*, 2011; Mahul and Stutley, 2010). And even in Bangladesh the micro-flood insurance was implemented based on the severity and frequency of losses from floods. The partner agent model was viable for long term sustainability of micro-flood insurance programme (Akter *et al.*, 2007). In India, coverage is taken as a percentage of the long-term average alone, but it would be better to arrive at the coverage level based on cost of cultivation and price per unit of output in addition to the long-term average yield. Agricultural insurance has complete scope in bringing out diversification of agriculture since the farmers has to be assured of risk causing loss in production. In the state of Punjab crops grown like maize, sugarcane, potato and cotton bear higher instability in yield if compared to wheat and rice. The small and marginal farms are experiencing greater variability in crop yield as compared to medium and large farms. Hence insurance for such crops can provide a good scope for bringing out diversification in agriculture (Mohapatra *et al.*, 2009). Weather Based Crop Insurance Scheme (WBCIS) that was launched during *kharif* 2008 uses weather parameters as proxy for crop yield in compensating the cultivators for deemed crop losses (Singh, 2010). *Pradhan Mantra Fasal Bima Yojana* (PMFBY) is a marked improvement over the earlier schemes on several counts and comprehensive risk coverage from pre-sowing to post-harvest losses has been provided under its ambit but farmers awareness level regarding the agricultural insurance schemes was found at lowest ebb in terms of its components and sub components (Nain *et al.*, 2017). The PMFBY is compulsory for loanee farmers who are availing crop loans for notified crops in notified areas and voluntary for non-loanee farmers. The designing of an agricultural insurance is largely dependent on the “index” which designates the actual farm level losses faced. The opinion of the scientists and the extensionists who are the main stakeholders needs to be studied which will help to improve the crop insurance product and services available.

METHODOLOGY

The study on opinion of scientist and extensionist was carried out in Punjab Agricultural University (PAU), Ludhiana through survey method. The selection of the scientists was done from Punjab Agricultural University (PAU), Ludhiana. A total of 60 scientists were randomly selected as respondents of the study. A random sample of 30 extensionists was also selected from the list of trainees who obtained training from Punjab Agricultural Management and Extension Training Institute (PAMETI), Ludhiana in the training calendar of 2017-2018. Thus, in total a sample size of 90 respondents were selected for the study. The opinion of scientists and extensionists was studied in terms of their judgement regarding the various factors related to designing of PMFBY and WBCIS in Punjab. Since rating scales have been considered as popular method for psychological measurement which depends upon human judgement (Guilford, 2008) therefore this scale has been used in the study to measure opinion. The factors related to the designing of the agricultural insurance schemes were considered as various items or the declarative statements against which a set of responses were sought from the respondents. The responses were sought on a 5-point continuum. A structured interview schedule was constructed for gathering information from the respondents. The data were analysed with the help of descriptive statistics which were found to be appropriate to the nature of data and for the purpose of the study. Frequency, percentages, range method and Z-test were carried out using SPSS Statistics version 23.0 to assess the statistical significance. The difference in the opinion of both the stakeholders indicates the factors which need to be considered for the reframing of agricultural insurance policy.

RESULTS AND DISCUSSION

Opinion of scientists and extensionists on factors related to designing of Pradhan Mantri Fasal Bima Yojana (PMFBY)

The designing of an agricultural insurance is largely dependent on the “index” which designates the actual farm level losses. In the current study, both the

agricultural insurance scheme; PMFBY and WBCIS were based on two different types of index *viz.* yield index and weather index. The focus of appropriating the index was to minimize the basis risk i.e. for PMFBY the insurance unit is affixed as the village panchayat, coverage of post-harvest losses and trigger yield, whereas for the WBCIS it is the density of weather station, coverage of parametric weather exigencies and correlation between weather index and yield of the crop. The parameters are the improvements over the existing National Agricultural Insurance Scheme and WBCIS. The restructuring of both the schemes were done and were implemented by Government of India, but the state of Punjab did not participate in it. Here arises to understand the designing of both PMFBY and WBCIS, from view point of scientists and extensionists who play a major role in the framing and implementation of the policy. The data set in Table 1 reveals that the scheme feature regarding the coverage of farmers in the opinion

of the scientists is appropriate with mean score of 3.92 whereas extensionists could not decide its appropriateness with mean score of 3.47. It can also be observed that both scientists and extensionists differ significantly in their opinion. Since the farmers of Punjab are different with respect to size of land holding, irrigation facilities etc. This feature of compulsory coverage of farmers can be modified to optional selection of insurance by the farmers. The aspects of coverage of crops were appropriate in opinion of scientists as well as the extensionists. The mean scores for coverage of food crops, oilseeds, and horticultural crops for the scientists' opinion as enumerated in Table 2 are 4.17, 4.15 and 4.02, respectively, whereas for the extensionists' opinion it was 3.67, 3.73 and 3.67. There was a significant difference in the opinion of the scientists and extensionists regarding the coverage of food crops since these are less risky crops for the farmers of Punjab whereas there was no significant difference in the

Table 1: Distribution of scientists and extensionists according to their opinion on factors related to designing of PMFBY

S. No.	Aspects	Scientists (n=60) (MS)	Extensionists (n=30) (MS)	Z-value
1.	Coverage of farmers: All farmers including sharecroppers and tenant farmers	3.92	3.47	2.10**
2.	Coverage of crops			
a.	Food crops (Cereals, Millets and Pulses)	4.17	3.67	2.06**
b.	Oilseeds	4.15	3.73	1.67
c.	Commercial / Horticultural Crops	4.02	3.67	1.44
3.	Risk coverage			
I.	Delayed Sowing / Planting Risk			
a.	Deficit rainfall	3.92	3.43	2.02**
b.	Adverse seasonal conditions	3.97	3.37	2.63**
II.	Standing Crops			
a.	Drought	4.07	3.43	2.65**
b.	Dry spells	3.88	3.37	2.38**
c.	Flood	4.02	3.50	2.04**
d.	Pests & Diseases	4.07	3.53	2.05**
e.	Fire/ Lightning	3.85	3.27	2.24**
f.	Storm/ Hailstorm	3.97	3.37	2.15**
III.	Localized Calamities			
a.	Hailstorm	3.90	3.27	2.48**
b.	Landslide	3.82	3.13	2.77**
c.	Floods	4.07	3.50	2.54**

Table 1 contd...

S. No.	Aspects	Scientists (n=60) (MS)	Extensionists (n=30) (MS)	Z-value
4.	Post-harvest losses: Two weeks from harvest	3.80	3.30	2.11**
a.	Dry in cut and spread condition	3.62	3.27	1.61
b.	Losses due to cyclone / unseasonal rain	4.03	3.37	2.68**
5.	Exclusion: Losses arising out of war and nuclear risks, malicious damage and other preventable risks shall be excluded.	3.38	3.03	1.38
6.	Insurance unit: Village Panchayat or the major growing crop unit.	3.75	3.27	2.27**
7.	Assessment of crop damage: Due to post-harvest losses and localized risks will be made on individual farm basis.	4.02	3.47	2.37**
8.	Sum insured (SI)			
i.	Sum insured is same for loanee and non-loanee farmers	3.70	3.37	1.35
ii.	The SI will be equal to the scale of finance as decided by District Level Technical Committee (DLTC) or cost of unit.	3.72	3.53	0.84
iii.	Sum insured is distributed among the critical phases of the crop.	3.90	3.17	2.97**
9.	Premium rate			
a.	Kharif: All food grain and Oilseeds crop – 2.0% of Sum Insured or Actuarial rate, whichever is less.	3.85	3.53	1.27
b.	Rabi: All food grain and Oilseeds crop – 1.5% of Sum Insured or Actuarial rate, whichever is less.	3.80	3.47	1.29
c.	Kharif and Rabi: Annual Commercial / Annual Horticultural crops – 5% of Sum Insured or Actuarial rate, whichever is less.	3.57	3.50	0.27
10.	Premium subsidy			
i.	The premium subsidy shall be shared equally by centre and states.	3.98	3.17	3.28**
ii.	Additional subsidy shall be entirely borne by the state.	3.42	3.23	0.78
11.	The claims will be processed and paid within 45 days from the end of risk period.	4.00	3.53	2.10**
12.	Crop loan through KCC are covered under compulsory coverage	3.82	3.57	1.06
13.	The sowing certificate for the crop insured is issued by agriculture officer of the block.	4.00	3.33	2.80**
14.	Mobile App are used for reporting incidents of localized risks	4.18	3.60	2.45**

**Significant at 0.05 level, MS=Mean Score

opinion for the coverage of oilseeds and horticultural crops. A further perusal of data put in the Table 2 relating coverage of risks i.e. delay in sowing or planting of crops due to deficit rainfall is appropriate in the opinion of scientists with mean score of 3.92 whereas the extensionists could not decide and there is a significant difference in their opinion. The probable reason behind this varied opinion might be due to the assured irrigation facility with individual farmers and the deficit in rainfall cannot be assessed at village panchayat level. In the opinion of the scientists regarding the risk

coverage on standing crops due to drought, dry spell, flood, pests and diseases, hailstorm are appropriate with mean scores 4.07, 3.88, 4.02, 4.07, 3.85 and 3.97, respectively whereas the extensionists were unable to decide with mean score 3.43, 3.37, 3.50, 3.53, 3.27 and 3.37, respectively. Both the scientists and extensionist differed significantly in their opinion, since the insurance unit designated for the scheme is village panchayat and such risk coverage cannot be assessed at this level under current infrastructural facility. Similar trends can be also seen for the localized calamities viz; hailstorms, landslide

and flood with mean score of 3.90, 3.82 and 4.07, respectively for scientists and 3.27, 3.13 and 3.50 for extensionists. The coverage of post-harvest losses up to two weeks in cut and spread condition and losses due to cyclone and unseasonal rains was also opined to be lying in the continuum of undecided by the extensionists with mean score of 3.30, 3.27 and 3.37, respectively whereas scientists opined these features to be appropriate with mean scores of 3.80, 3.62 and 4.03. Moreover, they differed significantly in their opinion. This may be due to the type of crops cultivated in Punjab State. The food crops grown are paddy and wheat in which there is mechanized harvesting and such condition of losses arising due to unseasonal rain or two-week slot are not found, as the harvested crop is immediately transferred to mandi with well-structured infrastructure. Whereas for dry in cut and spread condition, the scientists and extensionists did not differ significantly, since such conditions are generally not found in the state. While losses arising out of war and nuclear risks, malicious damage and other preventable risks shall be excluded under this scheme, as opined by the scientists and extensionists is undecided with mean score of 3.38 and 3.03, respectively and they did not differ significantly. The village panchayat selected as insurance unit under this scheme, as opined by both the scientists and extensionists is undecided with mean score of 3.75 and 3.27, respectively and they differ significantly. This feature refers to the designing of the scheme so as the geographic basis risk is large and not homogeneous in terms of agricultural production level. It is very interesting to note that the loss assessment will be done on individual farm basis for post-harvest losses and localized risk. The data pertaining to this aspect in Table 2 reveals that the scientists consider it to be appropriate with mean score of 4.02 whereas the extensionists could not decide, with mean score of 3.47. Both scientists and extensionists vary significantly in their opinion.

The parameters of the Sum Insured (SI) aspect which should be same for loanee and non-loanee farmers and the SI be equal to the scale of finance as decided by DLTC was opined to be appropriate by the scientists with mean score of 3.70 and 3.72, respectively, while it was opined appropriate by the extensionists with

mean score of 3.37 and 3.53, respectively which did not differ significantly. The Sum Insured is distributed among the critical phase of the crop is opined to be appropriate by the scientists and extensionists with mean score of 3.90 and 3.17 respectively, which differed significantly in their opinion. In the opinion of the scientists regarding the three parameters of the premium rate aspect *viz.* for *kharif* crop all food grains and oilseeds crop (2.0%) of sum insured or actuarial rate whichever less, for *rabi* crop all food grains and oilseeds crop (1.5%) of sum insured or actuarial rate whichever less and for both of them annual commercial/ annual horticultural crop (5%) of sum insured or actuarial rate whichever less were considered to be appropriate by the scientists with mean score of 3.85, 3.80 and 3.57, respectively, whereas the extensionists were unable to decide with mean score of 3.53, 3.47 and 3.50 respectively. Both the scientists and extensionists did not significantly vary in their opinion.

The claim processing and payment period is within 45 days from the end of the risk period was opined to be appropriate by both scientists' and extensionist vary significantly with mean score of 4.00 and 3.53, respectively. The sowing certificate for the crop insured is issued by agriculture officer of the block as opined by both scientists and extensionists vary significantly with mean score of 4.00 and 3.33, respectively. The genuineness of the sowing of the crop guaranteed through sowing certificate issued by Agricultural Officer for the whole block is a tedious work, if only carried out by the Agriculture line department. The extensionist suggested further that this can be done in collaboration with field personal of the revenue department. The use of mobile apps for reporting incidents of localized risks, the scientists and extensionists with mean score of 4.18 and 3.60, respectively, both of them vary significantly in their opinion.

Opinion of scientists and extensionists on factors related to designing of Weather Based Crop Insurance Scheme (WBCIS)

The data set in Table 2 reveals that the scheme feature regarding the coverage of farmers in the opinion of the scientists is appropriate with mean score of 3.92 whereas extensionists could not decide its appropri-

Table 2: Distribution of scientists and extensionists according to their opinion on factors related to designing of WBCIS

S. No.	Aspects	Scientists (n=60) (MS)	Extensionists (n=30) (MS)	Z-value
1.	Coverage of farmers: All farmers including sharecroppers and tenant farmers.	3.92	3.47	2.10**
2.	Coverage of crops:			
a.	Food crops (Cereals, Millets and Pulses)	4.17	3.67	2.06**
b.	Oilseeds	4.15	3.73	1.67
c.	Commercial / Horticultural Crops	4.02	3.67	1.44
3.	Weather perils covered			
I.	Normal coverage			
a.	Rainfall			
i.	Deficit	4.17	3.40	3.45**
ii.	Excess	4.12	3.40	3.08**
iii.	Unseasonal	3.98	3.23	3.21**
iv.	Dry spell	3.90	3.37	2.27**
v.	Dry days	3.83	3.27	2.25**
b.	Temperature			
i.	High	3.93	3.50	1.91
ii.	Low	3.85	3.43	1.96**
II.	Add on index plus			
i.	Hail storms	4.03	3.50	2.18**
ii.	Cloud bursts	4.02	3.47	2.23**
4.	Risk period is from sowing to maturity of crop.	3.80	3.27	2.22**
5.	Notification of the scheme: The issuance is one month prior to commencement of crop season or risk period.	3.72	3.37	1.49
b.	The notification contains the following details			
i.	Crops & Reference Unit Areas (RUA)	3.88	3.47	1.86
ii.	Sum Insured (SI)	3.98	3.47	2.20**
iii.	Premium rate	3.97	3.60	1.50
iv.	Subsidy	3.83	3.47	1.47
v.	Reference Weather station	3.82	3.47	1.37
6.	Sum insured (SI)			
i.	Sum insured is same for loanee and non-loanee farmers.	3.70	3.37	1.35
ii.	The SI will be equal to the scale of finance as divided by District Level Technical Committee (DLTC) or cost of unit.	3.72	3.53	0.84
iii.	Sum insured is distributed among the critical phases of the crop.	3.90	3.17	2.97**
7.	Premium rate			
a.	Kharif: All food grain and Oilseeds crop – 2.0% of Sum Insured or Actuarial rate, whichever is less.	3.85	3.53	1.27
b.	Rabi: All food grain and Oilseeds crop – 1.5% of Sum Insured or Actuarial rate, whichever is less.	3.80	3.47	1.29
c.	Kharif and Rabi: Annual Commercial / Annual Horticultural crops – 5% of Sum Insured or Actuarial rate, whichever is less.	3.57	3.50	0.27

Table 2 contd...

S. No.	Aspects	Scientists (n=60) (MS)	Extensionists (n=30) (MS)	Z-value
8.	Premium subsidy:			
i.	The premium subsidy shall be shared equally by centre and states.	3.98	3.17	3.28**
ii.	Additional subsidy shall be entirely borne by the state.	3.42	3.23	0.78
9.	Claims shall be assessed on the basis of weather data recorded by Reference Weather Station.	3.93	3.17	3.51**
10.	The claims will be processed and paid within 45 days from the end of risk period.	4.00	3.53	2.10**

**Significant at 0.05 level, MS=Mean Score

ateness with mean score of 3.47. It can also be observed that both scientists and extensionists differ significantly in their opinion. The desirable coverage to be opted may be optional selection by the farmers. The aspect of coverage of crops was appropriate in opinion of scientists as well as the extensionists. The mean scores for coverage of food crops, oilseeds, and horticultural crops for the scientists opinion as enumerated in Table 3 are 4.17, 4.15 and 4.02, respectively, whereas for the extensionists' opinion it was 3.67, 3.73 and 3.67. There is a significant difference in the opinion of the scientists and extensionists regarding the coverage of food crops since these are less risky crops for the farmers of Punjab whereas there was no significant difference in the opinion for the coverage of oilseeds and horticultural crops. The features related to coverage of farmers and crops were opined on same lines for both the agricultural insurance schemes viz; PMFBY and WBCIS. This suggests that agricultural insurance policy for Punjab needs to be framed with risky crops like kinnow and potato which involves price and market risk. A study on the risk perceived by farmers of Punjab in different crops by Mohapatra *et al.* (2016) also revealed that the farmers have perceived production risk in the crops at lower ends as compared to market and price risk.

In the opinion of the scientists regarding the weather perils covered on normal coverage or rainfall due to deficit, excess, unseasonal, dry spell, dry days are appropriate with mean scores 4.17, 4.12, 3.98, 3.90 and 3.83 respectively whereas the extensionists were unable to decide with mean score 3.40, 3.23, 3.37 and 3.27 respectively. Both of them varied in their opinion

significantly. The mean scores for the opinion regarding coverage of risk of high and low temperature for the scientist as enumerated in Table 3 are 3.93 and 3.85 respectively, whereas for the extensionist's opinion it was 3.50 and 3.43. There was a significant difference in the opinion of scientists and extensionists, regarding the low temperature as opined to be appropriate with mean score of 3.85 and 3.43, respectively. The weather perils surmounting to damage in crops due to rainfall and temperature variation are considered to be appropriate by the scientists whereas the extensionists consider it to be inappropriate and they vary significantly in their opinion. This suggests for rethinking the "basis risk" for weather-based crop insurance. These parameters may not have recorded losses to crops in long term data basis but erratic trends have been observed in data by scientists and also at farm level by farmers. The perception of the farmers regarding exposure and sensitivity of crops towards weather variability is considered to be a gradual process. (Deepika *et al.*, 2008). Similar trends can also be seen for add on index plus. The ideal risk period is from sowing to maturity of crop with mean score of 3.80 for scientists and 3.27 for extensionists respectively; both of the respondents differed significantly. The feature of risk coverage period from sowing to maturity of crop significantly differed in the opinion of scientists and extensionists with mean score of 3.80 for scientists and 3.27 for extensionists, respectively, both of the respondents differed significantly. The notification of the scheme is one month prior to commencement of crop season or risk period was opined as appropriate by the extensionists with mean score of 3.37 whereas scientists opined it to be appropriate with mean score 3.72. The

details of notification about crops & reference unit areas, premium rate, subsidy, reference weather station was opined to be appropriate by the scientists with mean score of 3.88, 3.97, 3.83 and 3.82, respectively, whereas extensionists opined these features to be appropriate with mean score of 3.47, 3.60, 3.47 and 3.47, respectively which did not differ significantly, whereas for sum insured by the scientists and extensionists with mean score of 3.98 and 3.47 respectively which differed significantly in their opinion. This suggests that these features are desirable and should be retained if WBCIS is designed for Punjab.

The aspects of the Sum Insured (SI) pertaining to its value which will be equal to scale of finance as decided by District Level Technical Committee (DLTC) was opined to be appropriate by the scientists with mean score of 3.70 and 3.72, respectively, while it was opined inappropriate and undecided by extensionists with a mean score of 3.37 and 3.53 respectively which did not differ significantly. The distribution of Sum Insured (SI) among the critical phases of the crop is opined to be appropriate by the scientists with mean score of 3.90 and inappropriate by extensionists with mean score of 3.17 respectively. And they did not differ significantly in their opinion. The opinion of both the stakeholders varied but since they did not significantly vary; suggest for further understanding this factor while considering it in the designing of WBCIS. In the opinion of the scientists regarding the premium rate which ranged (2-5%) for food crops, oilseeds were opined to be appropriate by the scientists whereas the extensionists were unable to decide. Both the scientists and extensionists did not significantly vary in their opinion. This suggests the premium rate to appropriate as a policy feature.

Regarding the premium subsidy the scientists and extensionists, the premium rate subsidy to be shared equally by centre and states was opined to be appropriate and inappropriate respectively with mean score of 3.98 and 3.17, and the respondents varied significantly. Since additional subsidy shall be entirely borne by the state so considered to be undecided by the scientist and extensionists with mean score of 3.42 and 3.23 respectively, both of them did not differ significantly

in their opinion. Since the claims shall be assessed on the basis of weather data recorded by reference weather station, the scientist opined it to be appropriate with mean score of 3.93 whereas the extensionists opined it to be inappropriate with mean score of 3.17 and their opinion varied significantly. This suggests that the claim settlement is not in apt proportion with losses incurred by farmers. Since the weather data recorded at district level which fails to assess the actual impact of adverse weather condition at farm location which is significantly different from that recorded by Reference Weather Station (RWS). The success of the product as suggested by Mohapatra *et al.* (2014) depends on availability of accurate weather data on a daily basis and without gap. This necessitates the installation of large number of weather station to bring down the basis risk to an acceptable level. This shall also negotiate the cost advantage of index-based weather insurance over traditional insurance for the insurer. The claim assessment to be done will be on the basis of weather data recorded by reference weather station was opined to be appropriate by the scientists with a mean score of 3.93 but the extensionists could not decide its appropriateness. Both of their opinion differed significantly which may be attributed to the inappropriate claim assessment procedure. The weather recorded by Reference Weather Station (RWS) is at district level which does not cover the localized losses caused due to the fluctuation in the weather condition. Under such circumstances the RWS does not reflect the required weather data and sometimes the vice-versa condition coexists. Therefore, the procedure of loss assessment significantly differs. The claim processing and payment period is within 45 days from the end of the risk period which was considered to be appropriate by both scientists and extensionists with mean score of 4.00 and 3.53, respectively in their opinion. The extensionist consider the claim processing period to be longer and suggest it to be a process not more than 30 days from the end of risk period.

CONCLUSION

The factors affecting the designing of agricultural insurance policy (PMFBY) in context of Punjab state are coverage of farmers, crops, risks, insurance unit,

assessment of crop damage and procedure followed in claim processing and compensation payment to the farmers. The index-based insurance policy (WBCIS) which was implemented in the state on pilot basis also has certain aspects which need to be reframed in context of Punjab. The factors which requires reconsideration are coverage of farmers, crops, weather perils covered, claim processing and compensation payment procedure. Comparison of the framework of both the agricultural insurance policy i.e. PMFBY and WBCIS suggests that weather-based insurance is more acceptable than PMFBY for Punjab. But the “basis risk” of WBCIS has to be brought down to an acceptable level which negotiate the cost advantage of index-based weather insurance over the traditional insurance for the insurer. It also suggested that the crops covered under the insurance policy have to be diversified from food crops. And the time taken for claim assessment procedure has to be reduced which is considered to be longer in the opinion of extensionist.

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