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Constraints and suggestions of beneficiaries under Mini Kamdhenu Dairy Scheme (MKDS) in Lucknow *Mandal* of Uttar Pradesh

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Abstract
The study was conducted over 93 beneficiaries in Lucknow *Mandal* of Uttar Pradesh under Mini Kamdhenu Dairy Scheme (MKDS) to find out constraints and suggestions faced by the beneficiaries. The constraints were categorised as economic constraints, infrastructural, technical and production constraints. The constraints were measured with the help of pre-tested interview schedule on three point continuum *viz.,* Not serious, Serious, Most Serious with 1, 2 and 3 assigned score given respectively. After that total score, and mean score was calculated, on the basis of mean score constraints were ranked. Suggestions given by MKDS beneficiaries on open-ended interview schedule were recorded and then frequency, percentage were calculated from the documented suggestions. 48.38 per cent beneficiaries of MKDS said low price of milk was most serious constraint under the head of economic constraints, poor supply of quality semen (53.76%), lack of knowledge on improved practices (66.67%) beneficiaries were considered as most serious constraints.

Keywords: Constraints, suggestions, Mini Kamdhenu Dairy Scheme (MKDS), Lucknow

Introduction
Government of Uttar Pradesh launched Mini Kamdhenu Dairy Scheme to produce good quality milk for human consumption. It is a popular and capital intensive scheme which includes establishing units of cows of only either cross-bred Jersey, or cross-bred H.F. or Shahiwal breed and buffaloes of Murrah breed. Beneficiaries decide whether the unit would be of cows only or buffaloes only or a mix of the two with limited to 50 numbers. With the help of this dairy scheme government tried to generate new employment opportunities for youth of the state and also speed up agricultural growth. In this dairy scheme government motivate the beneficiaries of dairy scheme for utilization of modern and scientific techniques, so that next White Revaluation came in the state. The beneficiaries of this dairy scheme perceived some constraints, which leads to major losses to dairy units. The factors like low productivity of Indigenous breeds, inadequate knowledge about advance technologies and low conception rate through AI (Surve, 2007) [5] were major constraints in the dairy operation. To overcame from these losses beneficiaries gave some suggestions to make the MKDS unit economically sustainable dairy unit.

Research Methodology
A descriptive and exploratory research design was applied to investigate the Mini Kamdhenu Dairy Scheme, which has been implemented in whole Uttar Pradesh since 2013-14. The present study was carried out in the state of Uttar Pradesh which comprises 75 districts and 18 *mandals*. Out of these, the present study was purposively carried out in Lucknow *Mandal* because its highest number of dairy animals (54.56 lakhs) possession (SDAH, 2015). From each of the six selected districts, an exhaustive list of beneficiaries was prepared under the Mini Kamdhenu Dairy Scheme with the help of competent authority. From these listed beneficiaries, all beneficiaries who had established MKDS unit till December 2015 were selected from each district. In Lucknow *mandal*, there are six districts, which have 133 MKDS units but after applying the above criteria for selection of respondents, the sample size became 93. The respondents were interviewed on various identified parameters through an interview schedule, which was developed in accordance of the specific objectives of the study. Interview schedule was pretested apart from the research area.

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Perceived constraints related to MKDS unit refers as the problems faced by the beneficiaries in the operation of MKDS unit. Constrains were studied under different headings *viz.,* economical, infrastructural, technical, production constraints. Suggestions regarding MKDS and dairy farming were operationalized as suggestions given by MKDS beneficiaries on open-ended interview schedule. Frequency and percentage were calculated from the documented suggestions.

Result and Discussion
MKDS was comparatively new dairy scheme launched by government of Uttar Pradesh in 2013-14. The selected beneficiaries possessed less experience in organised dairy farming and hence they faced constraints in keeping organised MKDS dairy farm. The constraints were categorised as economic constraints, infrastructural, technical and production constraints. These constraints were discussed as below.

Economic constraints of MKDS beneficiaries
Constraint *viz.,* low price of milk, high cost of treatment, wages paid to workers and high cost feed were taken for study and ranked on the basis of total weighted mean score.
Table 1 reveals that nearly half (48.38%) of the MKDS beneficiaries were considering low price of milk as most serious constraint followed by high cost feed, high cost of treatment and wages paid to workers. Similar finding were obtained by Reddy *et al.,* (2013) [2] through his study on the constraints faced by the farmers rearing Jersey × Sahiwal cows in Chitttoor district of Andhra Pradesh found that low price paid by the procurement agencies per litre milk, high cost and non-availability of feed ingredients were most serious constraints. Rathod *et.al* (2011) [4] also revealed that majority (82.00%) of the farmers complained about low price for milk

Infrastructural constraints of MKDS beneficiaries
Constraints *viz.,* unavailability of prompt veterinary services, distant location of veterinary dispensary, lack of organized market and unavailability of quality bulls for natural service and poor supply of quality semen, were studied and ranked

based on total weighted mean score.
Table 1 reveals that majority (53.76%) of MKDS beneficiaries were considering poor supply of quality semen as most serious constraints followed by unavailability of quality bulls for natural service (48.38%), unavailability of prompt veterinary services (44.08%), lack of organized market (36.55%) and distant location of veterinary dispensary (26.88%) in the order of severity. Similar finding was obtained by Akila and Senthilvel (2012) [1] and through their study on the status of dairy farming in Karur district of Tamil Nadu, reported that lack of veterinary services and absence of veterinary dispensary as major infrastructural constraints. Yadav *et al.* (2013) [3] also find near about similar condition related to infrastructure and service delivery.

Technical constraints of MKDS beneficiaries
Constraints *viz.,* unavailability of improved technology, lack of knowledge on improved practices, not participated in any training programme, difficulty in getting extension advisory services and poor mass media exposure were ranked based on total weighted mean score.
Table 1 reveals that majority (66.67%) of MKDS beneficiaries considered lack of knowledge on improved practices as most serious constraint, while running an organised dairy unit followed by unavailability of improved technology (48.70%), unavailability of extension advisory services (36.55%), poor mass media exposure (27.95%) and non-participation in training programme (22.70%) as most serious constraints, respectively in the order of severity.

Production constraints of MKDS beneficiaries
Constraints *viz.,* disease incidence, poor milk production of dairy animal, repeat breeding in dairy animal and uncertainty in milk price, which ranked on the basis of total weighted mean score.
Table 1 indicates that majority (47.31%) of MKDS beneficiaries considered poor milk productivity uncertainty in milk price as most serious constraint, while keeping an organized dairy farm followed by repeat breeding (35.48%) and disease incidence (25.80%), respectively in the order of severity.

Table 1: Distribution of MKDS beneficiaries according to their constraints faced in organized dairy farming (N= 93)

S. No	Constraints	NS	S	MS	TS	MS	Rank
A	Economic constraints						
1	Low price of milk	12 (12.90)	36 (38.71)	45 (48.38)	219	2.35	I
2	High cost of treatment	19 (20.43)	31 (33.33)	43 (46.23)	210	2.26	III
3	Wages paid to workers	33 (35.48)	37 (39.78)	23 (24.73)	176	1.89	IV
4	High cost of feed	11 (11.83)	39 (41.94)	43 (46.23)	218	2.34	II
B	Infrastructural constraints						
1	Unavailability of prompt veterinary services	22 (23.66)	30 (32.26)	41 (44.08)	205	2.20	III
2	Distant location of veterinary dispensary	26 (27.96)	42 (45.16)	25 (26.88)	185	1.99	V
3	Lack of organized market	18 (19.35)	41 (44.09)	34 (36.55)	202	2.17	IV
4	Unavailability of quality bulls for natural service	16 (17.20)	32 (34.41)	45 (48.38)	215	2.31	II
5	Poor supply of quality semen	5 (5.38)	38 (40.86)	50 (53.76)	231	2.48	I
C	Technical constraints						
1	Unavailability of improved technology	14 (15.05)	43 (46.24)	36 (38.70)	208	2.24	III
2	Lack of knowledge on improved practices	18 (19.35)	13 (13.98)	62 (66.67)	230	2.47	I
3	Not participated in any training programme	11 (11.83)	56 (60.22)	26 (27.95)	201	2.16	IV
4	Difficulty in getting extension advisory services	11 (11.83)	48 (51.61)	34 (36.55)	209	2.25	II
5	Poor mass media exposure	15 (16.13)	52 (55.91)	26 (27.95)	197	2.12	V
D	Production constraints						
1	Disease incidence	23 (24.730	46 (49.46)	24 (25.80)	187	2.01	IV
2	Poor milk productivity	24 (25.81)	25 (26.88)	44 (47.31)	206	2.22	III
3	Repeat breeding	5 (5.38)	55 (59.14)	33 (35.48)	214	2.30	II

| 4 | Uncertainty in milk price | 12 (12.90) | 37 (39.78) | 44 (47.31) | 218 | 2.34 | I |

Figures in parenthesis indicates percentage
NS=Not serious, S=Serious, MS= Most Serious, TS=Total Score, MS= Mean Score

Table 2: Distribution of beneficiaries based on the suggestions for the betterment of MKDS

S. No	Suggestions	Frequency	Percentage
1.	Government subsidy	93	100.0
2.	Sale of dairy animals from established MKDS units	69	74.20
3.	Biogas plant installation	88	94.60
4.	Credit availability	19	20.40
5.	Loan repayment flexibility	15	16.10
6.	Protection from natural disaster	35	37.60
7.	Cold storage and processing plant facility	73	78.50
8.	Availability of high quality semen straws	45	48.40
9.	Robust extension service	55	59.10
10.	Prompt veterinary health services	73	78.50
11.	Distribution of feed and fodder seeds	77	82.80
12.	Demand and supply estimation	6	6.50
13.	Minimum procurement price for milk	89	95.70

Suggestions given by MKDS beneficiaries

- **Government subsidy:** MKDS units can't be run profitability with the existing procurement price. Therefore appropriate subsidy should be given by government to make the Mini Kamdhenu Dairy Scheme units self-subsistent.

- **Sale of dairy animals from established MKDS units:** Quality dairy animals have been produced from Mini Kamdhenu Dairy Scheme. Therefore, new beneficiaries of the scheme should purchase animal from existing MKDS units of the state besides purchasing quality dairy animals from out of the state.

- **Biogas plant installation:** Biogas production, as a renewable energy source, may be encouraged.

- **Credit availability:** Beneficiaries of Mini Kamdhenu Dairy scheme may be provided with hassle-free loan without processing fee and hidden cost.

- **Loan repayment flexibility**: Flexibility in repayment should be farmer-centric and ease the farmers to repay.

- **Protection from natural disaster:** Disaster such as drought and flood may be considered for giving compensation to comfort the beneficiaries.

- **Cold storage and processing plant facilities:** Government may take necessary steps to increase the milk procurement price and establish cold storage and processing plant at district level.

- **Availability of high quality semen straws:** Government may take prompt steps to ensure availability of good quality semen from genetically sound bull to increase the productivity of dairy animals.

- **Robust extension service:** Public extension system may disseminate the information on utility of the agricultural by-products and improved, high-yielding and perennial fodders like Desmanthus, Stylosanthes *etc.*

- **Prompt veterinary health services:** Animal health delivery system may be strengthened to deliver prompt veterinary service at farm gate besides veterinary institutions.

- **Distribution of feed and fodder seeds and slips:** Government may distribute animal feed and fodder seeds at cheaper rates through SDAH.

- **Demand and supply estimation:** Market research may be conducted to confront the seasonal and unexpected fluctuations in demand and supply of milk in order to maintain equilibrium between demand and supply.

- **Minimum procurement price for milk:** Government may assure remunerative minimum procurement price for milk considering the actual cost required to produce milk from MKDS unit.

Conclusion
The majority of MKDS beneficiaries considered low price of milk, poor supply of quality semen, lack of knowledge on improved practices and uncertainty in milk price as most serious constraints in the operation of dairy units which leads to major losses in MKDS units. To overcome from these losses, certain suggestions were given by MKDS beneficiaries. By applying these suggestions in Mini Kamdhenu Dairy Scheme, the condition of MKDS units may improve which will lead to make the scheme successful.

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