Report of visit of Dr. M. Dutta, National Consultant (Oilseeds) to Jharkhand w.e.f 11-14 January, 2016

A visit was undertaken to Jharkhand state w.e.f 11-14 January, 2016 to monitor the implementation of the Cluster Front Line Demonstrations (CFLDs) being implemented by ICAR-ATARIs through KVKs and NMOOP/NFSM programmes in the state.

On 11 January, 2016 a brief meeting was held with the Director, SAMETI, Jharkhand in which he briefed about the agricultural scenario in the state and ongoing NFSM and NMOOP programmes being implemented by the Agriculture Department.

CFLDs conducted by Divyayan KVK, Ranchi:

A visit was made to Divyayan Krishi Vigyan Kendra under the jurisdiction of Ramakrishna Mission Ashram, Morabadi, Ranchi. After a brief introductory meeting with the Head Swamiji, Divyayan visit to farmers' fields was undertaken. The farmers who have conducted CFLDs were Pancha Oraon, Puran Lal Munda and others. During the visit, Scientists from Divyayan KVK, ICAR-ATARI, Zone-II and State Department officials were present and following observations were made:

- A total of 15.0 ha area was under CFLD on chickpea of which 4.0 ha area was with variety GNG 1581 at Paharsingh village in Angara block. The crop was grown as rainfed with broadcast method but seed treatment with *Rhizobium* was followed.

- In a few early sown fields the crop was at flowering stage however, in most of the fields the crop was at early seedling stage. The delay in sowing was attributed to the late harvest of kharif paddy.

- Selling of fresh chickpea plants with immature pods was the general practice by the farmers as this fetches better returns (Rs.15.00 per kg of fresh plant) as compared to the mature chickpea crop (Rs. 25-30.00 per kg of dry seed).

- In a few plots, wheat variety HD 2967 was grown after paddy. As informed the paddy crop suffered heavy damage due to hailstorm at maturity stage which was reflected in the huge number of rice seedlings in the wheat field.

- The limited water available through lift irrigation was supplied to wheat crop only, hence, it was suggested to grow alternative low water requiring crops with micro-irrigation (rain guns/sprinklers etc.) system in order to efficiently utilize the available water and also for raising crops in a larger area.

CFLDs conducted by KVK, Lohardaga:

On 12 January, 2016 visit was made to the BAU-KVK at Lohardaga district. On the way to Lohardaga large fields of mustard crop were seen adjacent to villages where limited irrigation facility was available. The mustard crop was grown as a relay crop with peas. In a few cases, mustard was grown along with wheat crop as well.

A meeting was organized by the KVK scientists at Hudu, a tribal village in Kairo block in which besides the KVK scientists, representative of the State Department of Agriculture, scientist from ICAR-ATARI, Zone-II and scientist from BAU, Ranchi were present. Large number of tribal farmers (about 100) including more than 50% women farmers, participated in the meeting. The major issues raised in the meeting were:

- More support is required under seed component along with early supply of seed for timely sowing of crop utilizing residual soil moisture from the previous crop.
- Support for farm mechanization like introduction of power tillers and micro-irrigation system was requested along with support for lift irrigation from nearby rivulet for providing life saving irrigation.
- It was informed by the Programme Coordinator, KVK that CFLDs consisting of 24.0 ha area covered with chickpea variety JK 9218, 10.0 ha with pea variety Malaviya, 10.0 ha with mustard variety Pusa Mehak and 15.0 ha under linseed variety Azad Linseed 1 have been conducted.

After the meeting, an exhibition organized by the students in the nearby school on the occasion of the National Youth Day to celebrate the birthday of Swami Vivekananda highlighting the importance of local plants in daily lives of tribal people was visited.

Thereafter, field visit was undertaken to CFLDs conducted by the farmers during which following observations were made:

- The growth of mustard crop under relay cropping with peas was excellent free from any disease/pest infestation, but growth of chickpea was not as good.
- Lentil variety K 75 was also grown as a relay/ intercrop with peas.
- An interesting practice of use of linseed as a trap crop around chickpea and lentil crops was observed.

A brief meeting with the Krishi Karman Awardee farmer Shri Akhilesh Kr. Singh was held near his house in recognition of his outstanding work. In the evening a brief meeting was held with the Director, SAMETI at Ranchi.

Cluster Demonstration conducted by State Department:

On 13 January, 2016 village Banhara near Kanke was visited along with State Department officials where following observations were made:

- Demonstration of chickpea variety JK 9218 was undertaken in about 20.0 ha area involving 50 beneficiaries. The variety was in flowering in early sown plots however, in majority of the plots the crop was at initial seedling stage. This is due to late duration of preceding kharif paddy crop. It may be explored whether early varieties of paddy could be introduced.
- Some fields were sown with local Toria crop which was at pod filling stage. The growth of the crop was excellent suggesting the scope of introducing improved Toria varieties.

During interaction with the farmers in a nearby village it was informed that establishment of brick kilns with deep tube well in nearby area is seriously impacting the water bodies including ground water level. Representative of an NGO, Nimitta working in the fields of tribal education and health including the village Pradhan, Shri Etwa Oraon informed that scarcity of water is the single most important factor limiting successful crop

cultivation in the area. A few tribal like Sanju Mahalli was seen to be pursuing traditional profession of drum making used during tribal dance apparently without any external support.

Next visit was made to Malhan Bhuyadih village on Ranchi-Jamshedpur road in Tamar block. During the field visit the following observations were made:

- Chickpea variety JK 9218 was grown as a rainfed crop in about 50.0 ha area through broadcast method after harvest of paddy crop. Seed was treated with *Rhizobium* and PSB before sowing.
- Although chickpea plant population in most of the plots was low, crop growth was very good without any incidence of disease or insect. Line sowing of seeds in the furrows was suggested for better germination and optimum plant population.
- Nipping of the chickpea plants was practiced by the farmers to encourage vegetative growth as well as for use as fresh leafy vegetable. Selling of freshly podded plants was the general practice as it provides better returns in comparison to the seed crop.
- Farmers requested for providing support for plant protection measures if the crop is to be grown up to maturity as wilt disease occurs during late stages.
- In a few chickpea fields, linseed was used as a trap crop with about 4-5 rows of linseed around the chickpea crop. Linseed is not taken as a sole crop as it is supposed to exhaust nutrients from the field.
- Lentil crop was taken as a relay crop with tomato after which cucumber and broad bean will be taken as succeeding crops.
- Pigeon pea variety UPAS 21 was grown on bunds of paddy fields and the crop was at flowering stage. This practice may be encouraged further to utilize field bunds effectively.

Meeting with State Govt. Officials

On 14 January, 2016 a meeting was held with the Director Agriculture, Jharkhand and other officials of the State Department in which Director Extension Education, BAU was also present. During the meeting following major issues were raised:

- The average rainfall since October, 2015 is 80.921% less than the normal ranging from -20.81% in Simdega to -100% in Giridih and Jamtara. This is a serious cause of concern and has resulted in large areas remaining fallow forcing the state to reduce target area for rabi.
- The standing rainfed rabi crop is under severe moisture stress as there was no significant rainfall upto middle of January, 2016.
- The support under seed component may be enhanced with relaxation of age limit of varieties up to 15 years since <10 year old varieties are not easily available in the seed chain.
- NSC is the major supplier of seeds as well as minikits. Except for district Saraikela supply of minikit by NSC was satisfactory. Recently, NSC has been given a 75.0 ha farm near Jamshedpur to carryout seed production. The State Seed Corporation is yet to be fully functional.
- There is urgent need of short duration upland paddy varieties for the state to successfully accommodate succeeding pulse/oilseed crops.
- Introduction of soybean crop during kharif season may be explored in some areas of the state.
- Introduction of power tillers in small terraced fields and zero tillage practice through tractors in large plots through custom hiring may expedite farm operations.
- Micro-irrigation systems like sprinkler, rain gun etc. may be introduced for efficient utilization of water.

- It was informed that during summer season more than 7750 ha area is being targeted under sunflower crop.

It emerged during discussions with State Govt. officials/ KVK scientists that interior villages in some districts are still difficult to approach due to problem of left wing extremism.

Suggestions/ Action Points

- Introduction of farm mechanization like power tillers/zero seed drill and micro-irrigation system like sprinkler, rain gun etc. may be initiated along with lift irrigation from nearby rivulets for providing life saving irrigation. Necessary support may be availed from various Centrally Sponsored Schemes (Action: State Govt.)
- Support under seed component needs enhancement along with early supply of seed for timely sowing of crop utilizing residual soil moisture of the previous crop. (State Govt./ICAR-ATARI & DAC&FW)
- Considering the non-availability of <10 year old varieties, request for age relaxation of varieties up to 15 years may be submitted. (Action: State Govt., ICAR-ATARI)
- Some area in chickpea plots may be left aside for seed production by some farmers to avoid supply of fresh seed every season. Training on seed production and storage may be imparted to the farmers for skill development. (Action: ICAR-ATARI & State Govt.)
- Line sowing of chickpea seeds in the furrows of plough may be ensured for better germination and optimum plant population. (Action: ICAR-ATARI & State Govt.)
- Suitable relay cropping system for mustard, chickpea and lentil may be standardized. (Action: SAU/ ICAR)

- Growing pigeon pea crops on rice bunds should be encouraged further for utilizing area under field bunds. (Action: State Govt.)
- Short duration upland paddy varieties for the state may be developed urgently to successfully accommodate succeeding pulse/oilseed crops. (Action: ICAR & SAU)
- Introduction of soybean crop during kharif season may be explored in some areas of the state. (Action: State Govt. & ICAR/SAU)
- Short duration Toria has shown good performance, hence area under improved varieties of Toria may be increased along with mustard which has shown excellent potential. Area under minor oilseeds (linseed, summer sesame and sunflower) and pulses (lentil, field pea and Lathyrus) should also be increased (Action: State Govt. & ICAR-ATARI)
- Since the crops were grown with almost no fertilizer and agro-chemicals possibility may be explored of value addition of the produce through organic certification along with promotion of organic farming in the state. (Action: State Govt.)

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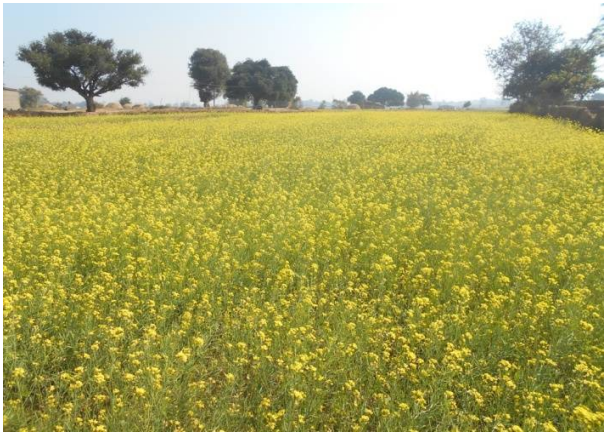
CFLD on Chickpea at Angara block



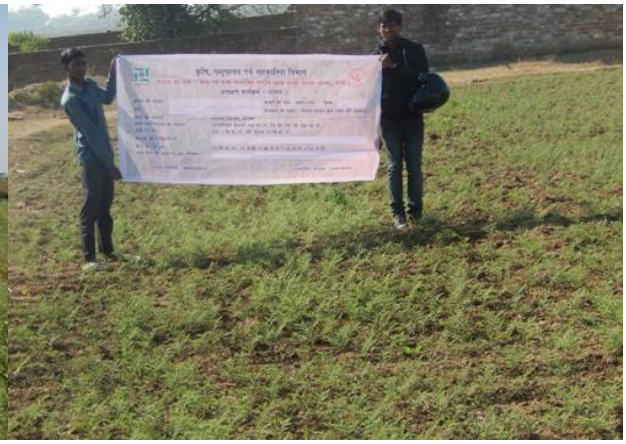

Cluster Frontline Demonstration on mustard and field pea at Chandlaso block


CFLD on Chickpea at Tamar block **Cluster demonstration on Toria at Kanke block**

Cluster demonstration on chickpea flanked with mustard in district Lohardaga


Cluster Demonstrations on chick-pea


Cluster Demonstrations on toria **CFLD on mustard**

Relay cropping of lentil with tomato **Cluster Demonstrations on chick-pea**

प्रत्यक्षण खेती में भरपूर पैदावार देख केन्द्र, राज्य के अधिकारियों ने संतोष जताया

किसानों की किस्मत संवरेगी

लोहरदगा | प्रतिनिधि

928 चना की जाकी साठ हेक्टेयर में लगाये गये थे

07 हजार करोड़ रूपये खर्च होते हैं देश को इनके आयात पर

13 जनवरी को केन्द्र सरकार के वैज्ञानिकों ने गांवों का दौरा किया

दलहन-तेलहन की खेती क्षेत्रीय किसानों की किस्मत संवारेगी। हर साल देश को इनके आयात पर करीब सात हजार करोड़ रूपये खर्च करने पड़ते हैं। पैदावार की भरपूर संभावना के बावजूद दलहन-तेलहन को उपेक्षित रखा गया। अब इसकी आर्गेनिक खेती ने किसानों के लिए उम्मीदों के नये द्वार खोल दिये हैं।

केन्द्र सरकार के आर्गेनिक कृषि परामर्शदाता डॉ एन दत्ता, अतारी कोलकाता के निदेशक के दास, राज्य सरकार की सलाहकार डॉ श्रीमन चौबे ने जिले के कृषि वैज्ञानिकों के साथ जिले के उन गांवों का दौरा किया, जहां चना, सरसों, तिसी और मटर की प्रत्यक्षण खेती कराई गई है। इनके साथ केवीके कोआर्डिनेटर डॉ शंकर सिंह, डॉ सुषमा सरोज सुरीन भी मौजूद थीं।

हुदू, कुंदो, हेंदलासो, अरेया, चंदलासो, आनंदपुर, कोयलाटोली और खखपरता के किसानों को कृषि विज्ञान केन्द्र ने उन्नत प्रजाति के बीज मुहैया कराये थे। इनकी पैदावार देख टीम के अधिकारियों के चेहरे खिल गये। चना की जाकी 928, सरसों की पूसा महक, तिसी के आजाद अलसी वन और मटर के मालवीय वेरायटी के बीज करीब साठ हेक्टेयर में लगाये गये थे। कम पानी-खाद के उपयोग में अच्छी पैदावार हुई है। डॉ सिंह ने बताया कि जिले में वैज्ञानिक तरीके से मूंग की खेती को भी बढ़ावा दिया जाएगा। पिछले तीन दशक हजार सालों में सबसे गर्म रहे हैं। इस परिस्थिति में वैज्ञानिक तकनीक और चुनी हुई वेरायटी के बीज किसानों के लिए नई उम्मीद बन गये हैं।

बुधवार को लोहरदगा के हुदू गांव में सरसों की आर्गेनिक खेती का मुआयना करते केन्द्र व राज्य के अधिकारी। • हिन्दुस्तान

List of participants during meeting with Director, SAMETI, Jharkhand on 11.01.2016

Sl. No.	Name	Designation
1	Dr. Ajay Kumar Singh	Director, SAMETI, Jharkhand
2	Dr. M. Dutta	National Consultant, Oilseeds, Govt. of India
3	Dr. S. Choubey	State Consultant, Pulses, Govt. of Jharkhand
4	Sri. Anirudh Kumar	Dy. Director, Farms and Officer-in-charge, BGREI & NMOOP

List of participants during meeting at Ramakrishna Mission Ashram, Divyayan, KVK, Morabadi, Ranchi on 11.01.2016

1	Swami Bhabeshanandaji	Secretary, Rama Krishna Mission Ashram, Ranchi
2	Dr. M. Dutta	National Consultant, Oilseeds, Govt. of India
3	Dr. S. Choubey	State Consultant, Pulses, Govt. of Jharkhand
4	Dr. Kalyan Sundar Das	Sr. Scientist, ICAR-ATARI, Zone II, Kolkata
5	Sri. Anirudh Kumar	Dy. Director, Farms and Officer-in-charge, BGREI & NMOOP
6	Sri. Manoj Kumar Singh	Scientist, Agronomy KVK, Ranchi

List of participants during visit to Cluster Front Line Demonstrations conducted by KVKs

Sl. No.	Name	Designation	Crops & Location
KVK, Divyayan, Ranchi on 11.01.2016			
1.	Dr. M.Dutta	National Consultant, Oilseeds, GOI	Crop – Chickpea & Wheat Village – Paharsingh Block – Angara District - Ranchi
2.	Dr. Kalyan Sundar Das	Sr. Scientist, ICAR-ATARI, Kolkata	
3.	Dr. S. Choubey	State Consultant, NFSM	
4.	Sri Anirudh Kumar	Dy. Director, Farms and Officer-in-charge, BGREI & NMOOP	
5.	Sri Manoj Kumar Singh	Scientist, Agronomy, KVK, Ranchi	
6.	Sri Basant Munda	Progressive Farmer	
7.	Sri Upendra Lakra	Progressive Farmer	
8.	Sri Sheo Shankar Munda	Progressive Farmer	
9.	Smt. Sharda Devi	Secretary, Mahila Samiti	
KVK, Lohardaga on 12.01.2016			
1.	Dr. M.Dutta	National Consultant, Oilseeds, GOI	Crop - Chickpea, Field pea, Mustard & Linseed Village- Hudu & Chandlaso Block- Kairo & Kuru District - Lohardaga
2.	Dr. Kalyan Sundar Das	Sr. scientist, ICAR-ATARI, Zone II, Kolkata	
3.	Dr. S. Choubey	State Consultant, NFSM	
4.	Dr. Shankar Kr. Singh	Sr. Scientist & Head, KVK Lohardaga	
5.	Dr. Sushma S. Surin	Scientist, Agronomy, KVK, Lohardaga	
6.	Dr. Hemant Kr. Pandey	Scientist, Animal Science, KVK Lohardaga	
7.	Sri Mukesh Kumar	Programme Assistant, KVK, Lohardaga	
8.	Smt. Smita Sweta	Scientist, Directorate of Extension Edu. BAU, Ranchi	
9.	Sri Swarna Munda	Progressive Farmer, Hudu	
10.	Sri Akhilesh Kr. Singh	Progressive Farmer, Chandlaso	

List of participants during field visit of NFSM-Pulses programme in Ranchi district on 13.01.2016

Sl. No.	Name	Designation	Crops & Location
1.	Dr. M. Dutta	National Consultant, Oilseeds, GOI	Crops- Chickpea & Toria Village- Banhara Block- Kanke Crop- Chickpea & Lentil Village – Bhuiyadih Block- Tamar District- Ranchi
2.	Dr. Kalyan Sundar Das	Sr. Scientist, ICAR- ATARI, Zone II, Kolkata	
3.	Dr. Naresh Prasad	Project Director ATMA, Ranchi	
4.	Dr. S. Choubey	State Consultant, NFSM	
5.	Sri R. K. Thakur	District Consultant, NFSM, Ranchi	
6.	Ms. Sabita Neera Jojo	BTM	
7.	Sri Haldhar Mahto	Progressive Farmer	
8.	Sri Narayan Das	Progressive Farmer	

List of participants during meeting with State Govt. Officials on 14.01.2016			
1.	Sri Jata Shankar Choudhary	Director Agriculture, Jharkhand	Directorate of Agriculture, Jharkhand, Ranchi
2.	Dr. R.P. Singh Ratan	Director, Extension Education, Birsa Agriculture University	
3.	Dr. M. Dutta	National Consultant, Oilseeds, GOI	
4.	Dr. S. Choubey	State Consultant, NFSM	
6.	Dr. Kalyan Sundar Das*	Sr. Scientist, ICAR-ATARI, Zone II, Kolkata	
5.	Sri. Anirudh Kumar	Dy. Director, Farms and Officer- in-charge, BGREI & NMOOP	
7.	Sri. Manoj Kumar Singh*	Scientist, Agronomy, KVK, Ranchi	

*Left early to catch flight