

Feed and Fodder Production in Different Agro-Climatic Zones and its Utilizations for the Livestock of Odisha

PERFORMANCE REPORT ON DEMONSTRATION OF NEW VARIETIES OF FODDER CROPS

Dec 2017 to July 2018



Implemented by:

International Livestock Research Institute (ILRI), New Delhi

In Collaboration with:

Directorate of Animal Husbandry & Veterinary Services
(DAH & VS), Odisha Cuttack

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Submitted to:

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1. Introduction

In the sub-activity 2.1 and 2.2 of approved action plan of the project “*Feed and Fodder Production in different Agro-Climatic Zones and its Utilization for Livestock of Odisha*” and 2.1.5 in article 2 in MoU, it is responsible for International Livestock Research Institute (ILRI) to demonstrate the new and improved varieties of fodder crops developed by ICAR institutes and other institutes in India at farmer’s field and department fodder farms. The main reason behind for demonstration is to examine suitability of particular fodder varieties for Odisha.

Based on the availability of irrigation facilities, following fodder varieties can be grown to enhance the fodder availability in the State and thereby help to increase livestock productivity.

Table 1: Suitable fodder variety for irrigated and non-irrigated conditions

Sl. No	Type of fodder	Details of fodder	
		Irrigated (Rain-fall over 1000 mm)	Rain fed (Rain-fall less than 1000 mm)
1	Perennial Fodder Grass	<ul style="list-style-type: none">Hybrid Napier BajraVariety: Co-3, Co-4 or Co-5 Or Sampoorana	<ul style="list-style-type: none">Perennial Jowar (Sorghum)Variety : COFS-29 or 31
2	Annual/Seasonal Fodder	<ul style="list-style-type: none">Maize (Variety: CSH24 MF)Multi-cut Bajra (BAIF Bajra-1 variety)Sorghum Sudan Grass	<ul style="list-style-type: none">Multi-cut Bajra (BAIF Bajra-1 variety)Sorghum Sudan Grass
3	Legume Crop	<ul style="list-style-type: none">Lucerne or Cowpea	<ul style="list-style-type: none">Stylo or Hedge Lucerne
4	For Orchards (Inter Space Utilization to increase fodder availability)	<ul style="list-style-type: none">Guinea Grass (Variety: DGG-1)	<ul style="list-style-type: none">Guinea Grass - to be sown at the start of monsoon season (Variety: DGG-1)
5	Fodder Tree	<ul style="list-style-type: none">SesbaniaMelia (Sheep & Goat)	<ul style="list-style-type: none">Sesbania- to be sown or seedlings transplanted at the start of monsoon seasonMelia (for Sheep & Goat)- seedlings to be transplanted at the start of monsoon season

Before implementing the demonstration, ILRI has screened different new varieties of fodder crops developed and released by National Research Institutes and International Research Organizations with consultation of Senior Scientist (Agronomist) from ICAR-NIANP, Bangalore and other experts. Out of different perennial varieties, four varieties e.g. Hybrid Napier Bajra (CO-5 and Sampoorana) and Perennial Sorghum (COFS-29 and COFS-31) were selected for demonstration at department fodder farms and farmers' field in different agro-climatic zones of Odisha. Among seasonal/annual crop, sorghum sudan grass, CSH24MF and Berseem, in case of fodder tree agasti (*sesbenia grandiflora*) and hedge Lucerne were chosen to demonstrate in different agro-climatic zones. Among dual purpose crops maize –NK6240, NK30, OMH 14-27 and P-3401 were chosen to demonstrate.

2. Performance of Perennial Fodder Crops

2.1 Perennial Sorghum (COFS- 29)

As per the research varietal trial guideline, there needs rigorous study for at least three years to know the exact performance and growth status of these perennial varieties, and it helps to recommend suitable varieties scientifically. However, in this case we are reporting based on eight months data and field observations, which is very difficult to recommend suitability of particular fodder varieties scientifically.

2.1.1 Characteristics and Cultivation Practices

These two fodder varieties were released by the Department of Forage Crops, Tamil Nadu Agricultural University (TNU), Coimbatore, Tamil Nadu. COFS-29, being multi-cut variety, by interspecific hybridization followed by pedigree method of selection (TNS 30 × *S. sudanense*).

- ❖ This is a drought tolerant and high yielding perennial varieties of fodder Sorghum. Once sown, can be maintained minimum for 3 years.

- ❖ Under the rain-fed condition, 3 cuts can be taken per year, if sown at the beginning of monsoon season (1st June to 31st July), and annual green fodder yield will be around 30-35 tons per acre.
- ❖ This seed shouldn't be sown during the period when day temperature below 18 degree (specially between Nov to January)
- ❖ With irrigation, 6 to 7 cuts can be taken per year and annual green fodder yield will be over 65 to 70 tons per acre of COFS-29.
- ❖ 2.5 to 3.0 kg of seed required for covering one acre of land with spacing 30 cm between rows and 15 cm between plants for production and 60 cm between rows and 15 cm between plants for seed production.
- ❖ Though the size of the seed is very small, it is necessary to mix sand with seed before sowing.
- ❖ 8 tons of FYM need to be applied before sowing. NPK (Nitrogen, Phosphorous, and Potash) dosage is 35-15-15 kg per acre need to apply as basal dose. After each harvest, 18 kg of nitrogen needs to be applied per acre.
- ❖ Generally there is no need to apply pesticide. If shoot fly is noticed, spray Endosulphan 35 EC 500 ml/ha or Dimethoate 30 EC 500 ml/ha in 250 litres of water. Plant protection sprays may be stopped one month before harvest of green fodder.
- ❖ Intercropping of fodder cowpea with this perennial sorghum in 1:1 ratio will provide more nutritious fodder to the livestock, especially dairy cattle.
- ❖ First harvest is 65-70 days after sowing and thereafter, the ratoon crop may be harvested at 50 to 55 days interval. It is recommended to feed animals after 50 to 55 days of harvesting.
- ❖ If a farmer wants to produce seeds, the crop shouldn't be cut for green fodder and allowed to grow till maturity of grains/seed.
- ❖ These two fodder varieties contain about 9% of crude protein.

2.1.2 Performance at Department Fodder Farm

Different steps have been followed to implement fodder demonstration at department fodder farm. With reference to the letter No. IX-20/17 19421 (19)/Vet. Date 20.11.17 of Directorate, AH & VS, Odisha ILRI has demonstrated COFS-29 in eight department fodder farms covering six agro-climatic zones (North Central Plateau, East & South Eastern Coastal Plain, North Eastern Ghat, Eastern Ghat High Land, Western Undulating Zone and Western Central Table Land) and COFS-31 at three fodder farms (Table 1). On 6th December, 2017, ILRI has demonstrated these new varieties at Pipil fodder farms. Due to administrative problem, lack of irrigation facilities and weather problem, fodder demonstration in other fodder farms couldn't implemented December, 2017. In the month of January and February, 2018 we have could in following department fodder farms (Kathpal, Barpali, Rondapali, Bhanjanagar, Tarboad and Chiplima).

During this period, it was observed that the plant growth was very good and have given 9-13 tillers per plant. The fodder yield varies from 12 kg to 15 kg per square meter in each cut. If we convert into acres, the yield rates is around 480 quintal to 600 quintal per acre in each cut. In Pipil fodder farm, COFS-29 has harvested five times while COFS-31 harvested four times. It is important to note that after 7 days water logging this variety has survived in Pipil. It could be argued that this variety has water resistant power. It is recommended that this variety may be promoted in different areas of the State. However, it is important to keep in mind during monsoon and winter season, seed shouldn't be shown. There is chance of germination failure due to low temperature and continuous rainfall during this period.

Table 2: Demonstration of Perennial Sorghum (COFS-29, 31) in different department fodder farms

Sl. no	ACZ Name	District	Name of Fodder Farm	Variety	Land in Acres	Month of Sowing
1	North Central Plateau	Mayurbhanj	Kathapal	COFS-29	0.15	January-18
2	East & South Eastern Coastal	Puri	Pipili	COFS-29	0.03	December-17

	Plain					
3	East & South Eastern Coastal Plain	Puri	Pipili	COFS-31	0.05	December-17
4	East & South Eastern Coastal Plain	Khordha	VOTI	COFS-29	0.05	July-18
5	East & South Eastern Coastal Plain	Khordha	VOTI	COFS-31	0.05	July-18
6	North Eastern Ghat	Ganjam	Bhanjanagar	COFS-29	0.75	February-18
7	Eastern Ghat High Land	Koraput	Randapalli	COFS-29	0.4	January-18
8	Western Undulating Zone	Nuapada	Taraboadd	COFS-29	0.5	March-18
9	Western Central Table Land	Bargarh	Barpali	COFS-29	0.5	January-18
10	Western Central Table Land	Sambalpur	Chiplima	COFS-29	0.35	June-18
11	Western Central Table Land	Sambalpur	Chiplima	COFS-31	0.8	June-18
	Total				2.25	

2.1.3 Demonstration at Farmer's field

To examine the performance of COFS-29 and 31 at farmer's level, these varieties have been demonstrated among 199 farmer's field. It is important to note here that as farmer's are not interested and also practiced to grow green fodder, it was very difficult to convince farmers for growing these new varieties. Following steps have been followed to demonstrate at farmer's field.

Step 1: Field coordinators of ILRI have gone through training on cultivation and management practices of these new varieties.

Step 2: Field coordinators visit different project villages rigorously to select the interested farmers having dairy animals to grow green fodder.

Steps 3: After selection of farmers, field coordinators orient farmers about the benefits and cultivation practices of growing these new varieties fodder crops. Once

farmer agrees to grow these new varieties, he was asked by field coordinators to prepare land (ploughing, leveling and etc.)

Step 4: After land preparation, field coordinators visit farmer's field to demonstrate the sowing process of these varieties. After each 20 days showing field staffs visit to farmer's field to check the germination status. In every 20 to 30 days interval these staffs visit field to check growth status.

From December 2017 to July, 2018 these varieties have been demonstrated among 230 farmers, however due to heavy winter and rainfall seed couldn't germinate properly. Here we are performance from 199 farmers.

Germination status

It was observed the overall germination status was more than 75 per cent in all over the districts, however due to heavy winter (***day temperature is below 18%***) in Koraput and Nabarangpur, germination was very poor (less than 30%). On the other hand, due to continuous rainfall in the costal, there was very low germination among some of the farmers due to water logging in the farmer's field. Therefore it is recommended that seed should be sown before winter season (Oct to 15th Nov) and before Monsson (March to Jun).

Crop growth status

As the size of the seed is very small, it takes around 8 to 10 days to germinate properly and takes 30 days for proper establishment of the crop. After 30 days of sowing, the growth was around 1 feet height. Plant growth was very fast after application of basal dose especially nitrogen. Farmers those didn't apply any chemical fertilizer, plant growth was slow. It was observed 65-70 days after sowing, the plant height was around 5 to feet.

Tillers: From farmer's field it is observed that each plant gives around 8-10 tillers. It is observed that after first cut/harvest the plants gave more tillers.

Fodder Yield: As per the field observation, it was found that average fodder yield varies from 5 kg to 12 kg per square meter. The lower fodder yield is observed from Koraput, while the highest fodder yield observed from Khorda district. The difference in yield is due to variation in climate, management practice of farmer and soil type.

Table 3: Demonstration of COFS-29 at Farmer's field

Zone No.	Agro-Climatic Zone Name	Districts Covered	Number of farmers	Area in Acres	Remarks
1	North Western Plateau	Deogarh Jharsuguda Sambalpur Sundargarh	01	0.4	<ul style="list-style-type: none"> ❖ In this zone, only one farmer has grown COFS-29 from Jharsuguda district. The seed was sown in the month of January and May, 2018. ❖ From field observation, it was observed that the plant growth was very good. ❖ Per square meter the yield was around 8 Kg (323.63 quintal per acre) in first cut. After first cut the yield was around 9 kg per square meter (364 quintal per acre) ❖ For perennial fodder, this variety may be promoted. ❖ It is recommended that the seed shouldn't be sown when the day temperature comes down below 18 degree centigrade. Low temperature will have negative impact on germination status.
2	North Central Plateau	Kendujhar Mayurbhanj	07	2.0	<ul style="list-style-type: none"> ❖ As the farmers were more familiar with CO-3 (Hybrid Napier Bajra), it was very difficult for ILRI field coordinator to convince farmers to grow COFS-29 as demonstration. ❖ During this period (January to July 2018) only two farmers have shown interest to grow COFS-29 as perennial crop. ❖ These farmers were supplied with basal dose of chemical fertilizer. ❖ It was observed that one plant gave around 8 to 9 tillers. ❖ The fodder yield was around 9 kg

					<p>per square meter (364 quintal in each cut).</p> <ul style="list-style-type: none"> ❖ It was observed the growth is very good in irrigated condition. ❖ It is recommended that this variety may be promoted in this zone in upland.
3	North Eastern Coastal Plain	Bhadrak Balasore Jajpur Kendujhar	32	8.92	<ul style="list-style-type: none"> ❖ In this zone, COFS-29 was planted during December, 2017; January, February and March, 2018. ❖ Farmers those have sown between 20th December 2017 to 20th January 2018 germination was poor due low temperature. However, after 20th January, the germination was more than 70 per cent. ❖ The yield rate of COFS-29 in this region varied from 8 kg per square meter to 10 kg. If we convert into acres, yield rate will around 323 quintals per acre to 400 quintals per acre in each cut. ❖ In the 50-55 days of interval, farmers are harvesting the fodder. ❖ This variety may be promoted in this region in upland area.
4	East & South Eastern Coastal Plain	Cuttack, Ganjam Jagatsinghpur Khurdha, Kendrapara, Nayagarh, Puri	71	19.64	<ul style="list-style-type: none"> ❖ The performance of COFS-29 is very good. ❖ Farmers from Raghunathpur Block of Jagatsinghpur block have got very more yield. ❖ The tiller rate varied from 8-14 tillers per plant. ❖ The yield rate is varied from 10.00 kg per square meter (404 quintals per acre) to 16kg per square meter (647 quintals per acre) in each cut. ❖ Farmers in some village have harvested more than four times. ❖ Farmers those have sown during rainy season, germination was very low due to water logging. ❖ Therefore, it is suggested that seed should be sown before June, just before monsoon. So there

					<p>will be space for crop establishment.</p> <ul style="list-style-type: none"> ❖ This crop may be promoted in upland, not in water logging area/low land area.
5	North Eastern Ghat	Boudh Ganjam Gajapati Kandhamal Koraput Rayagada	08	2.90	<ul style="list-style-type: none"> ❖ In this zone, we have not demonstrated COFS-29 in Gajapati, Kandhamla and Rayagada district. ❖ The performance report of this zone was based on the performance in Ganjam, Koraput and Rayagada district. ❖ In this region COFS-29 was demonstrated during January, 2018 and June 2018. ❖ Due to heavy winter (day temperature was below 10 degree) in this zone especially in Koraput during January and February the germination was very low. ❖ However, after winter the growth rate was very good and fast. ❖ The yield rate varies from 7 kg to 10 kg per square meter (283 quintal per acre to 404 quintals in each cut). ❖ This variety may be promoted in this zone as perennial fodder crop.
6	Eastern Ghat High Land	Koraput, Nabarangpur	15	9.05	<ul style="list-style-type: none"> ❖ In this region COFS-29 was demonstrated during January, February and May 2018. ❖ Due to heavy winter in this zone especially in Koraput during January and February (day temperature was less than 10 degree) the germination was very low and also growth. ❖ Seeds sown after February, Germination was good and plant growth was also very good. ❖ The yield rate varies from 5 kg to 8 kg per square feet (200 quintals to 320 quintals per acre in each

					cut).
7	South Eastern Ghat	Malkangiri	18	14.5	<ul style="list-style-type: none"> ❖ In this district 18 farmers have grown fodder during January and February, 2018 ❖ Germination status was very good (more than 70 per cent) ❖ The yield was around 6 kg per square meter (240 quintals per acre) ❖ The low yield was due to lack of proper management by farmers
8	Western Undulating Zone	Kalahandi, Nabarangpur, Nuapada	11	6.75	<ul style="list-style-type: none"> ❖ The seed was sown during February and March ❖ The germination was more than 70 per cent ❖ Fodder yield was around 7 kg per square meter (280 quintals per acre) ❖ Growth rate was very high ❖ One farmer in Koksara Block was very much appreciating this variety due to high yield and low water consumption. ❖ This perennial sorghum variety may be promoted in this region.
9	Western Central Table Land	Boudh Balangir Bargarh Deogarh Jharsuguda Sambalpur Sonepur	53	26.80	<ul style="list-style-type: none"> ❖ This variety was sown during May, June and July, 2018. ❖ The germination was more than 60 per cent. ❖ The yield was around 6 kg per square meter (240 quintals per acre).
10	Mid-Central Table Land	Anugul Cuttack Dhenkanal	14	1.9	<ul style="list-style-type: none"> ❖ COFS-29 was sown during month of June. ❖ Due to continuous rainfall germination was very poor. ❖ Again seed have sown recently.
	Total		230	92.86	

Pictures: Plant growth of Perennial Sorghum (COFS-29)



Sowing Perennial Sorghum Seed



Germination and plant status after 15 days of sowing



Plant status after 30 days of sowing



Plant status after 60 days of sowing



Plant growth after 10 days of 1st cut



Plant growth after 40 days of 1st cut

2.2 Perennial Hybrid Napier Bajra (CO-5 and Sampoorna)

CO-5 was developed and released by Tamil Nadu Agriculture University, Coimbatore and Sampoorna was developed by Indian Grassland and Fodder Research Institute (IGFRI) Dharwad. The main advantage of Sampoorna that even if during dry period, the leave is not coarse, which doesn't harm to animals mouth during feeding.

2.2.1 *Characteristics and Cultivation Practices*

- ❖ High yielding perennial fodder grass.
- ❖ Sampoorna performs best under irrigated conditions than Co-5.
- ❖ Plant stem cuttings in ridge and furrow method at a spacing of 3 x 2 feet
- ❖ NPK dose (kg/acre) : 30-20-20 as basal dose and 30 kg N as top dressing
- ❖ Before planting, the field should be irrigated.
- ❖ Irrigation required once in 7 to 10 to days
- ❖ First harvest at 70 days after sowing and thereafter, the ratoon crop may be harvested once in 50 days.
- ❖ Once planted, the crop can be easily maintained for 3 to 5 years.
- ❖ Green fodder yield is 800 to 900 Quintals per acre in a year.
- ❖ These fodder varieties contain 12% of crude protein.
- ❖ Co-5 leaf length (110-110 cm) and width (4.00-5.00 cm), leaf stem ration is 1.02-1.19.
- ❖ Sampoorna leaf length (80-90 cm) and height is around 157-160 cm.

2.2.2 *Demonstration at Fodder Farm*

The stems and root slips of these variety were brought from Bangalore with support of ICAR-NIANP through freight in less quantity. Total 3000 (1500 Co-5 and 1500 Sampoorna) pieces of stem have been brought. Our aim was to demonstrate these varieties at department fodder farms and latter stems can be distributed to farmers for scaling. During December 2017 to July 2018, these varieties have been demonstrated in 2.35 acres covering eight department fodder farms (Table 3). It is observed that overall the

growth was very good. Among these two varieties (Co-5 and Sampoorna), the growth performance of Sampoorna was better than the CO-5. In each cut, we could be able to harvest more than 300 quintals per acre.

Table 4: Demonstration of CO-5 and Sampoorna at department fodder farm

Sl.no	ACZ Name	District	Name of Fodder Farm	Land in Acre	Variety	Month of Sowing
1	North Central Plateau	Mayurbhanj	Kathapal	0.15	CO-5	January-18
				0.1	Sampoorna	January-18
2	North Eastern Coastal Plain	Balasore	Remuna	0.2	CO-5	Apr-18
				0.4	Sampoorna	Apr-18
3	East & South Eastern Coastal Plain	Puri	Pipili	0.03	CO-5	December-17
				0.03	Sampoorna	December-17
4	North Eastern Ghat	Ganjam	Bhanjanagar	0.15	CO-5	February-18
				0.15	Sampoorna	February-18
5	Eastern Ghat High Land	Koraput	Randapalli	0.1	CO-5	January-18
				0.1	Sampoorna	January-18
6	Western Central Table Land	Bargarh	Barpali	0.12	CO-5	January-18
				0.12	Sampoorna	January-18
7	Western Central Table Land	Sambalpur	Chiplima	0.25	Sampoorna	June-18
				0.25	CO-5	June-18
8	Mid-Central Table Land	Anugul	Panchamahar	0.1	CO-5	July-18
				0.1	Sampoorna	July-18
Total				2.35		

2.2.3 Demonstration at Farmer's field

In the month of May, June and July these varieties have been demonstrated varieties among 42 farmers covering 5.33 acres of land. The plant growth was very good. Though we have given very recent so it is report performance of these varieties at farmer's field.

Pictures: Growth status of Co-5 and Sampoorna at different statges



Planting of CO5 and Sampoorna stem



Plant growth status after 15 days of planting



Plant growth status after 30 days of planting



Plant growth status after 60 days of planting

3. Performance of Seasonal Fodder Crops

Table 5: Demonstration and Performance of seasonal fodder crops in different agro-climatic zones of Odisha

Zone No	Agro-Climatic Zone Name	Districts Covered	No. of farmers	Fodder Variety	Area in Acres	Remark
1	North Western Plateau	Deogarh, Jharsuguda, Sambalpur, Sundargarh	10	Dual purpose Maize P-3401	2.40	<ul style="list-style-type: none"> In the month June and July we have demonstrate dual purpose maize. Therefore, it is very difficult to report the performance of this variety.
2	North Central Plateau	Kendujhar, Mayurbhanj	18	Seasonal Berseem, Dual purpose Maize OMH 14-27, Seasonal Sorghum Sudan Grass	7.10	<ul style="list-style-type: none"> The growth of seasonal sorghum Sudan grass was very good. Due to high temperature in costal are Berseem couldn't come good. In this zone, Sorghum Sudan grass and CSH24MF may be promoted as seasonal fodder crop.
3	North Eastern Coastal Plain	Bhadrak Balasore Jajpur Kendujhar	47	Dual purpose Maize OMH 14-27, Seasonal Sorghum Sudan Grass, Seasonal Berseem Seasonal Cowpea CO-8 CSH24MF	14.37	<ul style="list-style-type: none"> Berseem Performed well in Bhadrak and Balasore. In addition, sorghum CSH24 MF also performed. In this zone, berseem may be promoted duing Rabi (seed should be sown by 31st October) and CSH24MF.
4	East & South Eastern Coastal Plain	Cuttack, Ganjam, Jagatsinghpur Khurdha, Kendrapara, Nayagarh, Puri	08	Seasonal Cowpea CO-8, Dual purpose Maize NK-6240 and P-3401	5.20	<ul style="list-style-type: none"> CSH24 MF and NK6240 have performed good For this zone, CSH24MF and Perennial Sorghum (COFS-29) may be promoted. In Costal are maize may not promoted as this is rice belt.
5	North Eastern Ghat	Boudh Ganjam Gajapati Kandhamal Koraput	15	Dual purpose Maize OMH 14-27, P-3401 and OMH 14-27,	8.20	<ul style="list-style-type: none"> In this Zone, Sorghum Sudan Grass, CHS24 MF and COFS29 performs better than other variety. Berseem did not grow well may be due to high

		Rayagada		Seasonal Cowpea CO-8		<p>temperature. However maize has very good result.</p> <ul style="list-style-type: none"> • In this region Sorghum Sudan Grass and dual purpose Maize may be promoted. Sorghum shouldn't show when the day temperature should be higher than 18 degree.
6	Eastern Ghat High Land	Koraput, Nabarangpur	16	Seasonal Sorghum Sudan Grass, Seasonal Cowpea CO-8, Dual purpose Maize OMH 14-27	21.35	<ul style="list-style-type: none"> • All Maize varieties i.e. NK30 and NK6240 have very good performance in Zone-6. However Hedge Lucerne growth is very slow. • In this region, dual purpose maize should be promoted as maize is principal crop of this region. This will help farmers to get quality feed for their animals.
7	South Eastern Ghat	Malkangiri	04	Seasonal Sorghum Sudan Grass and Dual purpose Maize NK-30	06	<ul style="list-style-type: none"> • The growth performance of seasonal sorghum sudan and maize was good. • In this region, superior maize (dual purpose) may be promote.
8	Western Undulating Zone	Kalahandi Nabarangpur Nuapada	05	Dual purpose Maize OMH 14-27 and Seasonal Sorghum Sudan Grass	4.30	<ul style="list-style-type: none"> • In this zone, Dual purpose Maize and sorghum sudan grass performed well. • In this region, these two varieties may be promoted as seasonal fodder crop.
9	Western Central Table Land	Boudh Balangir Bargarh Deogarh Jharsuguda Sambalpur Sonepur	91	Dual purpose Maize P-3401, OMH 14-27 And NK-6240, Seasonal Berseem Seasonal Sorghum Sudan Grass Seasonal Sorghum CSH-24MF Seasonal	32.65	<ul style="list-style-type: none"> • Along with intrinsic growth rate, disease is a major threat for Sorghum Sudan grass. Whereas CSH24 MF is preferred by the cattle more than SSG. • In this region CSH24MF may be promoted.

				Cowpea CO-8		
10	Mid-Central Table Land	Anugul Cuttack Dhenkanal Jajpur				During this period no demonstration have been done.
	Total		214		101.57	

Pictures: Performance of seasonal fodder varieties ate farmers' field



Sorghum sudan grass



Sorghum CSH24MF



Dual purpose maize (NK-6240)



Berseem -Muscavi

4. Conclusion and Recommendation

Perennial Fodder Crop

As per the research varietal trial guideline, there needs rigorous study for at least three years to know the exact performance and growth status of these perennial varieties, and it helps to recommend suitable varieties scientifically. However, in this case we are reporting based on eight months data and field observations, which is very difficult to recommend suitability of particular fodder varieties scientifically. We are here putting the recommendation based on the six-eight months of field experience along with farmer's management practice.

It is observed that this perennial sorghum (COFS-29) variety was performing very good irrespective agro-climatic zones. As it is drought tolerant, without sufficient irrigation the plant can be grown. Without irrigation farmers are able to harvest two times. Water logging in sandy and red soil, this variety can be survived. However, the germination and growth of the plant depends upon the climate especially temperature and rainfall. When the day temperature is below 15 degree (15th Nov-15th Feb) seed shouldn't be sown in the field. Main advantage of these variety is that through seed plant can be stand up to three years. If we compare with Hybrid Napier, with less cost and less water, this perennial variety can be grown.

Among the hybrid Napier Bajra perennial fodder crops, these two varieties (CO-5 and Sampoorana) can be promoted in all over state. The performance of these varieties will be good in irrigated condition. Without proper irrigation, the growth will be less.

Seasonal Fodder

Among the seasonal fodder, sorghum Sudan grass, CSH24MF, dual purpose maize, berseem and cowpea (Co-8) were demonstrated in different agro-climatic zones of

Odisha. From field observation, berseem, CSH24MF, Sorghum Sudan Grass and also cowpea. However, it is recommended that berseem seed sown by 15th November to get more benefit. Similarly, CSH24MF and SSG should be sown by November 15th for Rabi season and by 15th June for Khariff season.

Annexure I:

List of Farmers Demonstrated perennial sorghum (COFS-29)

Sl. No	Agro-Climatic Zone Name	District	Block	GP	Village	Farmer Name	Phone	Land in Acres	Month of Sowing
1	North Western Plateau	Sambalpur	Kuchinda	Salebadi	Lundruduhi	Nirakhya Kathari	9583781459	0.40	May-18
	Sub-Total					01		0.40	
1	North Central Plateau	keonjhar	Swompatna	Turmunga	kainda	Jatindra behera	9337463367	0.6	Sep-18
2		keonjhar	Swompatna	Turmunga	Kainda	Bhubana nanda dehuri	7608988991	0.4	Sep-18
3		Mayurbhanj	Shamakhunta	Rangamatia	Salabani	Radhanath Singh	7008791172	0.5	Jul-18
4		Mayurbhanj	Shamakhunta	Rangamatia	Salabani	Narahari Sing	9437855455	0.2	Jan-18
5		Mayurbhanj	Rairangpur	Bhalubasa	Nuajoda	Srikanta Mohanta	9668594091	0.1	Jul-18
6		Mayurbhanj	Shamakhunta	Sirisbani	Sudiam	Anil Ku Mohanta	9178338321	0.1	Jul-18
7		Mayurbhanj	Rairangpur	Puruna Ghati	Puruna Ghati	Jagdish Ch Mohanta	977612067	0.1	Jul-18
	Sub-Total					07		2.00	
1	North Eastern Coastal Plain	Balasore	Basta	Vellora	Chandipur	Bhagaban Sahu	8018579048	0.3	Jan-18
2		Balasore	Basta	Vellora	Chandipur	Bhagaban Sahu	8018579049	0.3	Jun-18
3		Balasore	Basta	Vellora	Vellora	Niranjan Sahu	9937853942	0.3	Sep-18
4		Balasore	Basta	Vellora	Vellora	Chitta Ranjan Das	9938968500	0.2	Mar-18
5		Balasore	Basta	Vellora	Baitpada	Narayan Das	8458030218	0.3	Sep-18
6		Balasore	Basta	Paunsakhuli	Sonpur	Manas Sahu	9937115093	0.02	Mar-18
7		Balasore	Basta	Vellora	Chandipur	Madan ku Kunda	9080735231	0.1	Jul-18
8		Balasore	Bahanaga	Talakurunia	Talakurunia	Narahari tripathy	9658249609	0.05	Aug-18
9		Bhadrak	Basudevpur	Lunga	kuruda	Sarbeswara mishra	9668374763	0.7	Feb-18
10		Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Santosh ku. sadangi	7873593287	0.05	Jan-18
11		Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Jagabandhu das		0.05	Jan-18
12		Bhadrak	Basudevpur	Artunga	sankharo	Bijaya sahoo	9178399588	0.2	Jan-18
13		Bhadrak	Basudevpur	Artunga	sankharo	Narendra sahoo	9937346985	0.05	Jan-18

14		Bhadrak	Basudevpur	Artunga	Kumarpur	Rita manjari tripathy	9437673739	0.05	Jan-18
15		Bhadrak	Basudevpur	Artunga	kumarpur	Haramani panda	9583545191	0.1	Jan-18
16		Bhadrak	Basudevpur	Artunga	kumarpur	Haramani panda	9583545191	0.1	Jan-18
17		Bhadrak	Basudevpur	Artunga	Kumarpur	Suryamani tripathy	8093522230	0.2	Jan-18
18		Bhadrak	Basudevpur	bramhangaon	Baikuntha pur	Ananta das	7077800189	0.05	Dec-17
19		Bhadrak	Basudevpur	Arondua	arondua	Laban kumar panigrahi		0.6	Dec-17
20		Bhadrak	Basudevpur	Arondua	arondua	Umakanta lenka		0.5	Dec-17
21		Jajpur	Rasulpur	Gandhana	Ektala	Subash Mishra	9937316238	0.6	Jan-18
22		Jajpur	Rasulpur	Gandhana	Ektala	santunu mohanty		0.5	Jan-18
23		Jajpur	Rasulpur	Gandhana	Ektala	Bipin bihari sahu	9438689594	0.3	Jan-18
24		Jajpur	Rasulpur	Gandhana	Ektala	Rakesh dash	9438689594	0.7	Jan-18
25		Jajpur	Rasulpur	Narsinghpur	Nuamirzapur	Naba mahapatra	9348130891	0.5	Jan-18
26		Jajpur	Binjharpur	Singpur	singpur	Bharat chandra	7504700692	1	Feb-18
27		jajpur	Rasulpur	Narsinghpur	Nuamirzapur	Naba mahapatra	9348130891	0.2	Sep-18
28		jajpur	Rasulpur	Gandhana	Gandhana	Paramananda Swain	9937314384	0.3	Sep-18
29		jajpur	Rasulpur	Gandhana	Gandhana	Birabara sahu	9777328939	0.2	Aug-18
30		Keonjhar	hatadihi	bancho	bancho	Ajay kumar barala	9668727396	0.1	Jan-18
31		Keonjhar	Hatadihi	bancho	bancho	Bidu bhusana mohanty	7894401737	0.2	Jan-18
32		Bhadrak	bhadrak		ranjia	Asit kumar swain	9861666665	0.1	Aug-18
	Sub-Total					32		8.92	
1	East & South Eastern Coastal Plain	Cuttack	N.Koili	Borada	Borada	Surendra Mallick		0.15	Jul-18
2		Cuttack	N.Koili	Borada	Borada	Bhagaban Rout	8908788661	0.4	Jun-18
3		Cuttack	N.Koili	Giginipur	Giginipur	Hemanta Panda		0.5	Jul-18
4		Ganjam	Rangeilunda	New Kamalapur	New Kamalapur	Bauri Bandhu Nayak	9776651917	0.4	Jul-18
5		Ganjam	Rangeilunda	Braja Nagar	Antarabatia	Deepak Nath	9040980123	0.4	Jul-18
6		Jagatsinghpur	Raghunathpur	Tanara	Ramachandrapur	Lata Nayak		0.5	Jul-18
7		Jagatsinghpur	Raghunathpur	Tanara	Ramachandrapur	Puspanjal Das		0.3	Jun-18

8		Jagatsinghpur	Raghunathpur	Tanara	Ramachandrapur	Debendra Nath Rout	9437876981	0.2	Jul-18
9		Jagatsinghpur	Raghunathpur	Tanara	Ramachandrapur	Bhikari Das	9178756464	1.5	Jun-18
10		Jagatsinghpur	Raghunathpur	Tanara	Ramachandrapur	Babu Dash	9178756464	1	Jul-18
11		Jagatsinghpur	Kujanga	Teramanapur	Teramanapur	Gurubari Das	9777576816	0.4	Jun-18
12		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Gopinath Barik	9777976627	1	Jan-18
13		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Ratnakar Barik		0.16	Jan-18
14		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Madan Barik	7873933815	0.12	Jan-18
15		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Amar Parida	9853847859	0.08	Jan-18
16		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Bhikari Parida	7381870967	0.08	Jan-18
17		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Nityananda Lenka	9853110479	0.08	Jan-18
18		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Prabira Pattnaik	9777276101	0.12	Jan-18
19		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Hemanta Das	8658963676	0.2	Jan-18
20		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Prana Krushna Das	8895537502	0.2	Jan-18
21		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Alokha Parida		0.2	Jan-18
22		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Nabakishore Sahoo		0.04	Jan-18
23		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Muralidhar Parida	9938890765	0.08	Jan-18
24		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Shambhunath Sathy		0.12	Jan-18
25		Jagatsinghpur	Raghunathpur	Puranaodapada	Purana	Rajakishore Rout	9937367034	0.2	Jan-18
26		Jagatsinghpur	Raghunathpur	Tarapur	Gokul pur	Chandiprasad Singh	9437034867	0.5	Jan-18
27		Jagatsinghpur	Raghunathpur	Tanara	Ramachandrapur	Dinesh Kumar Rout	9437876981	1	Jan-18
28		Khordha	Begunia	Parichhal	Dangarpada	Subrat Paikaray	8847879465	0.3	Feb-18
29		Khordha	Banapur	Nandapur	Alaidiha	Purnachndra Pradhan	7504817359	0.3	Feb-18
30		Khordha	Baliana	Balakati	Basantapedi	Manas Mohanty	9937252031	0.1	Jan-18
31		Khordha	Baliana	Balakati	Basantapedi	Manas Mohanty	9937252031	0.1	Jan-18
32		Khordha	Begunia	Kunjuri	Barapada	Gauranga Pradhan	9437257965	0.6	Jun-18
33		Khordha	Begunia	Kunjuri	Kunjuri	Bhaskar Mishra	8658043484	0.1	Jun-18
34		Khordha	Banapur	Ayatapur	Ayatapur	Duryodhan behera	9556646983	1	Jul-18
35		Khordha	Baliana	Balakati	Basantapedi	Manas Mohanty	9937252031	0.1	Jan-18
36		Khordha	Baliana	Prataprudrapur	Anthuari	Benudhar Muduli	9090798091	0.24	Jun-18

37		Khordha	Baliana	Prataprudrapur	Anthuari	Papali Behera	9090748909	0.24	Jun-18
38		Khordha	Baliana	Prataprudrapur	Anthuari	Madhusudan Behera	7064203460	0.32	Jun-18
39		Khordha	Baliana	Prataprudrapur	Anthuari	Sadananda Behera	9938945013	0.2	Jun-18
40		Khordha	Baliana	Prataprudrapur	Anthuari	Ramachandra Das	9776058499	0.08	Jun-18
41		Khordha	Baliana	Prataprudrapur	Anthuari	Brundaban Behera	7064198797	0.2	Jun-18
42		Khordha	Baliana	Prataprudrapur	Anthuari	Manoranjan Behera	7064198797	0.08	Jun-18
43		Khordha	Baliana	Prataprudrapur	Anthuari	Gadadhar Behera	7064198797	0.08	Jun-18
44		Khordha	Baliana	Prataprudrapur	Anthuari	Aparti Muduli	7788838697	0.08	Jun-18
45		Khordha	Baliana	Prataprudrapur	Anthuari	Babaji Muduli	9668281803	0.08	Jun-18
46		Khordha	Baliana	Prataprudrapur	Anthuari	Dhiren Behera	789467740	0.16	Jun-18
47		Khordha	Baliana	Prataprudrapur	Anthuari	Banamali Bhoi	9861249034	0.12	Jun-18
48		Khordha	Baliana	Prataprudrapur	Anthuari	Purnachandra Bhatta	9437441213	0.12	Jun-18
49		Khordha	Baliana	Prataprudrapur	Anthuari	Santosh Palei	9777016456	0.24	Jun-18
50		Khordha	Baliana	Prataprudrapur	Anthuari	Manu Nayak		0.24	Jun-18
51		Khordha	Baliana	Prataprudrapur	Anthuari	Ramesh Ch. Prusty	8658456453	0.24	Jun-18
52		Khordha	Baliana	Prataprudrapur	Anthuari	Benu Nayak	9776634868	0.12	Jun-18
53		Khordha	Balipatana	Nariso	Srirampur	Tathagata Das	9861592664	0.24	Jun-18
54		Khordha	Baliana	Prataprudrapur	Anthuari	Suresh Behera	8917341711	0.16	Jun-18
55		Khordha	Balipatana	Nariso	Srirampur	Sricharan Bhoi	NA	0.08	Jul-18
56		Nayagada	Ranapur	surukabadi	Surukabadi	Diptimayee Mahanty	9078085503	1	May-18
57		Nayagada	Nuagaon	Korada	korada	Arun ku. Gochhayata	89808803757	0.4	Jun-18
58		Puri	Gop	Ganswarpur	Benipur	Gangadhar Behara		0.01	Dec-17
59		Puri	Gop	Siso	Benipur	Abdul Rehaman Khan	8984436586	0.1	Feb-18
60		Puri	Gop	Ganeswarpur	Ganeswarpur	Bhagi Behrera		0.5	Jul-18
61		Puri	Kakatapur	Bangurigaon	Kania	Sarbeswar Nayak		0.01	Jul-18
62		Puri	Kakatapur	Bangurigaon	Kania	Jadumani Bastia		0.02	Jul-18
63		Puri	Kakatapur	Bangurigaon	Kania	Jayram Bastia		0.01	Jul-18

64		Puri	Kakatapur	Bangurigaon	Kania	Laxmidhar Bastia		0.02	Jul-18
65		Puri	Kakatapur	Bangurigaon	Kania	Kapila Barik		0.01	Jul-18
66		Puri	Kakatapur	Bangurigaon	Kania	Kailash Biswal		0.01	Jul-18
67		Cuttack	Chowdar/Atagad	Gurudi Gadia	Gurudi Gadia	Sudhanshu Ranjan	9658501478	0.5	Feb-18
68		Cuttack	Niali	Kapasias	Lunigaon	Bijay Kumar Jena	9937389003	0.1	Jul-18
69		Khordha	BBSR	Chandaka	Chandaka	Smruti Ranjan Das	8594805220	0.8	Mar-18
70		Khordha	Tangi	Kamaguru	Dudhaijhar	Jatadhari jena	9776307465	0.3	Jun-18
	Sub-Total					70		19.64	
1	North Eastern Ghat	Boudh	Harbhanaga	Ramgarh	Palsapat	Sarat Mohanty	917841946	0.20	Jan-18
2		Boudh	Harbhanaga	Ramgarh	Pargalpur	Maheswar Bagha	9937905333	0.20	Jan-18
3		Ganjam	KS Nagar	KS NAGAR	Sialia	S.M Kara	9938487627	1	Jun-18
4		Ganjam	KS Nagar	KS NAGAR	Sialia	Kelikara parida	9583013552	0.2	Jun-18
5		Ganjam	KS Nagar	KS NAGAR	Sialia	Pramod gauda	8598917475	0.2	Jun-18
6		Ganjam	KS Nagar	KS NAGAR	Sialia	S.K Mishra	8249996007	0.4	Jun-18
7		Ganjam	KS Nagar	Athagada Patna	Athagada Patna	D.D Behera	9861195863	0.5	Jul-18
8		Ganjam	Kukudakhendi	Antei	Antei	Narahari Padhiali	7787994463	0.2	Jun-18
	Sub-Total					08	2.90		
1	Eastern Ghat High Land	Koraput	Kotpad	Kotpad	Kotpad	Purna ch Panda	7008279661	0.3	Mar-18
2		Koraput	Kotpad	Kotpad	Kotpad	Santosh Ku Mishra	9937653997	0.1	Feb-18
3		Koraput	Borigumma	Borigumma	Borigumma	P. Anurag	8984777886	0.3	Feb-18
4		Koraput	Borigumma	Borigumma	Kebidi	Sidhartha Sankar Sahu	7008553905	1	Feb-18
5		Koraput	Kotpad	Kusumi	Kusumi	Damburu Naik	9556280194	0.3	May-18
6		Koraput	Kotpad	Kusumi	Kusumi	Pintu Bisoi	9777033026	1	Jul-18
7		Koraput	Kotpad	Murtahandi	Ambagaon	Kanchan Harijan	7978779591	0.3	Jul-18
8		Koraput	Borigumma	Kumuli	Kumuli	Binodini Sadhangi	9668664066	0.35	Jul-18
9		Koraput	Borigumma	Kumuli	Kumuli	Sandghamitra Hota	9438763559	0.5	Jul-18
10		Koraput	Borigumma	Benasur	Benasur	Narayan Tripathy	7608926701	0.4	Sep-18
11		Koraput	Borigumma	Borigumma	Kebidi	Sidhartha Sankar	7008553905	1.7	May-18

						Sahu			
12		Koraput	Borigumma	Borigumma	Borigumma	Gayadhar Sahu	8917337372	0.5	May-18
13		Nabarangapur	Nabarangapur	Taragaon	Taragaon	Irfan Khan	9937402926	0.5	Feb-18
14		Nabarangapur	Nabarangapur	Bhatراسيوني	Bhatراسيوني	Lingaraj Mishra	9938000214	0.5	Jan-18
15		Nabarangapur	Nabarangapur	Taragaon	Taragaon	Irfan Khan	9937402926	1.3	Jun-18
	Sub-Total					15	9.05		
1	South Eastern Ghat	Malkangiri	Korkonda	Chitapari-3	MV-37	CHHABI PATRA	8895258388	0.5	Jan-18
2		Malkangiri	Korkonda	Chitapari-3	MV-37	BARJEN BISWAS	8018683361	1	Jan-18
3		Malkangiri	Korkonda	Chitapari-3	MV-37	SUJESH MANDAL	8457954925	1	Jan-18
4		Malkangiri	Korkonda	Chitapari-3	MV-37	BIDHAN PATRA	8895258388	1	Feb-18
5		Malkangiri	Korkonda		MV-31	BIMAL MIRDHA	9938525059	1	Feb-18
6		Malkangiri	Korkonda	Chitapari-3	MV-37	SANJIB MANDAL	8457954925	1	Feb-18
7		Malkangiri	Korkonda	Chitapari-3	M.V-108	AMIT MISTRY	7655998025	0.5	Jan-18
8		Malkangiri	Korkonda	Chitapari-3	M.V-108	TAPAN DEBNATH	7894814701	0.5	Feb-18
9		Malkangiri	Korkonda	Chitapari-3	M.V-108	RAM PRASAD MALAKAR	9556757903	1	Feb-18
10		Malkangiri	Korkonda	Chitapari-3	M.V-108	SATYANDRA MANDAL	8658669180	0.5	Feb-18
11		Malkangiri	Korkonda	Chitapari-3	M.V-108	BANKIM MONDAL	9777001262	0.5	Jan-18
12		Malkangiri	Korkonda	Chitapari-3	M.V-108	ASHISH KUMAR MONDAL	7682021968	0.5	Jan-18
13		Malkangiri	Korkonda	Chitapari-3	Chitapari	KRUSHNA CH. DORA		1	Jan-18
14		Malkangiri	Korkonda	Chitapari-3	Chitapari	BHIMA MADHI		0.5	Feb-18
15		Malkangiri	Kalimela	Chitrangpalli	mpv-08	girish sardar	7749950410	1	Feb-18
16		Malkangiri	Kalimela		Premaguda	manoj beti	9437954274	1	Feb-18
17		Malkangiri	Kalimela		Premaguda	madhi irma		1	Jan-18
18		Malkangiri	Kalimela		Premaguda	irmi madhi(w)		1	Jan-18
	Sub-Total					18	14.50		
1	Western	Kalahandi	Koksara	Phupugaon	Phupugaon	Ghanasyam Jal	9777890914	1	Jan-18
2	Undulating Zone	Kalahandi	Koksara	Mudrabahali	Mudrabahali	Loknath Nag	8457941193	0.2	Feb-18

3		Nuapada	Khariar	Khaiar	Gosala (Khariar)	Kedar Saraf	9938002349	1	Feb-18
4		Nuapada	Khariar	Risigaon	Risgaon	Nurpa Singh Babu	9938606693	0.5	Feb-18
5		Nuapada	Khariar	Khashahal	Chacharabhata	Tula Ram hans	9938929989	1	Feb-18
6		Nuapada	Khariar	Mandosil	Goddhuapadar	Altaf Khan		1	Feb-18
7		Nuapada	Komna	Darlipada	Hatisara	Suresh Ahir	7894916455	0.5	Feb-18
8		Nuapada	Komna	Darlipada	Hatisara	Prassna Sahu	9556016028	0.5	Feb-18
9		Nuapada	Komna	Darlipada	Hatisara	Dikshya Majhi	9777170419	0.5	Feb-18
10		Nuapada	Komna	Jadamunda	Thango	Bhagabat Ahir		0.3	Feb-18
11		Nuapada	Komna	Jadamunda	Thango	Tanka Ram Ahir	9178880935	0.25	Feb-18
	Sub-Total					11	6.75		
1	Western Central Table Land	Bargarh	Attabira	Janhapada	Janhapada	Arjun Barik	7381349230	0.30	Jan-18
2		Bargarh	Attabira	Janhapada	Janhapada	Jagannath Seth	7787954037	0.20	Jan-18
3		Bargarh	Attabira	Janhapada	Janhapada	Susnta Barik	NA	0.05	Jan-18
4		Bargarh	Attabira	Larambha	Larambha	Rameswar Kampa	9692218692	0.20	Jan-18
5		Bargarh	Attabira	Janged	Janged	M.Srinivash	8455044368	0.50	Jan-18
6		Bargarh	Attabira	Kanbar	Kanbar	Gupteswar Sahu	9937740819	0.10	Jan-18
7		Bargarh	Attabira	Kanbar	Kanbar	Gangadhar Pradhan	9439549768	0.30	Feb-18
8		Bargarh	Sohella	Kangaon	Kangaon	Babulal Khuntia	8917255302	0.40	Jun-18
9		Bargarh	Sohella	Lebdi	Lebdi	Sangeet Bhoi	9938157001	0.35	Feb-18
10		Bargarh	Sohella	Garbhana	Garbhana	Pitambara Gardia	8456003515	0.40	Jul-18
11		Bargarh	Attabira	Bugbuga	Bugbuga	Mahendra Pradhan	9078979956	0.20	Jul-18
12		Bargarh	Barpali	Sarandapali	Sarandapali (Katapali)	Manoj Jal	8658249812	0.30	May-18
13		Bargarh	Barpali	Sarandapali	Sarandapali (Katapali)	Sudam Gahir	9937785875	0.40	Jun-18
14		Bargarh	Barpali	Sarandapali	Sarandapali (Katapali)	Pagala Sahu	9777433933	0.50	Jun-18
15		Bargarh	Barpali	Kantapali	Duhurakhanda	Mansukh Chinga	8725808360	0.20	Jul-18
16		Bargarh	Barpali	Kantapali	Kanbar	Gupteswar Sahu	9937740819	0.20	Jul-18
17		Bolangiri	Patnagarh	Ulba	Ulba	Suresh ku. Patel	9938200902	0.75	Jan-18

18	Bolangiri	Patnagarh	Ulba	Ulba	Sushil Kumar Patel	9938596457	0.5	Jan-18
19	Bolangiri	Patnagarh	Ulba	Ulba	Ramesh Patel	9178255332	1	Jan-18
20	Bolangiri	Patnagarh	Ulba	Ulba	Murali Patel	9178358510	0.5	Jan-18
21	Bolangiri	Patnagarh	Ulba	Ulba	Debadatta Rout	9178845129	2	Jan-18
22	Bolangiri	Patnagarh	Ulba	Ulba	Saroj Ku. Rout	9777247007	1	Jan-18
23	Bolangiri	Bangomunda	Bhalumunda	Bhalumunda	Pramod Meher	7809284880	0.5	Jan-18
24	Bolangiri	Bangomunda	Bhalumunda	Bhalumunda	Gokul Thela	9178827327	1	Jan-18
25	Bolangiri	Bangomunda	Bhalumunda	Bhalumunda	Prabhas Meher	9937469612	1	Jan-18
26	Bolangiri	Bangomunda	Mundpadar	Mundpadar	Nirmal Singh	7326097164	1	Jan-18
27	Bolangiri	Bangomunda	Mundpadar	Mundpadar	Rabindra Singh	9937125324	1	Feb-18
28	Bolangiri	Bangomunda	Mundpadar	Mundpadar	Debendra Singh	9439146703	1	Feb-18
29	Bolangiri	Bangomunda	Mundpadar	Mundpadar	Atul Singh	9178056481	1	Feb-18
30	Bolangiri	Agalpur	Salebhata	Harbhanga	Benudhar Sahu	9668370165	1	Feb-18
31	Bolangiri	Agalpur	Salebhata	Harbhanga	Gobinda Gatia	9938318481	0.5	Jan-18
32	Bolangiri	Agalpur	Salebhata	Harbhanga	kanishta Sahu	9668491907	0.5	Jan-18
33	Bolangiri	Agalpur	Salebhata	Harbhanga	Balishta Sahu	9556074063	0.5	Feb-18
34	Bolangiri	Agalpur	Salebhata	Murushud	Dhaneswar Sahu	9937765677	1	Jan-18
35	Bolangiri	Agalpur	Salebhata	Murushud	Pradeep Ku. Sahu	9778769774	1	Jan-18
36	Bolangiri	Agalpur	Salebhata	Harbhanga	Malaya Biswal	9777549054	0.25	Feb-18
37	Boudh	Kantamal	Palsagoda	Palsagoda	Harischandra Patel	7077040200	0.50	Feb-18
38	Boudh	Kantamal	Palsagoda	Palsagoda	Satyanarayan Dalbehera	9937398767	0.20	Jul-18
39	Boudh	Kantamal		Lukupada	Babli Naga	8328996350	0.50	Jul-18
40	Boudh	Kantamal	Rundimahul	Barpadar	Swadhin Baghar	9938399203	0.50	Jul-18
41	Boudh	Kantamal	Rundimahul	Barpadar	Parma Karmi	NA	0.50	Jul-18
42	Boudh	Kantamal	Rundimahul	Barpadar	Laxman Karmi	NA	0.20	Jul-18
43	Jharsuguda	Lakhanpur	Remta	Kiritmal	Hemanta Padhan	9178362195	0.20	Jan-18
44	Sambalpur	Rairakhol	Badabhal	Khandahata	Biswamitra Pradhan	9777925073	0.05	Jan-18
45	Sambalpur	Jujumura	kabrapali	kadlimunda	umakant behra	9437736615	0.2	Jul-18
46	Sambalpur	Jujumura	Kukudapali	Dumerpali	Bedbyash Nayak	7978754621	0.6	Aug-18

47		Subarnapur	Sonepur	Bisimunda	Buromunda	Bhagirathi Sethi		0.20	Feb-18
48		Subarnapur	Sonepur		Chepapali	Nirajan Sahu	9178749995	0.20	Feb-18
49		Subarnapur	Sonepur		Chepapali	Jagat Sahu	7750807055	0.20	Jan-18
50		Subarnapur	Subarnapur	Malikmunda	Gadia	Karamchand Mohanty	9437330900	0.20	Oct-18
51		Subarnapur	Sonepur	Bisimunda	Bagduli	Kunjabihari Kheti	9337308155	0.20	Aug-18
52		Subarnapur	BMPur	Champamal	Krushnapali	Prahallad Hota	9777129383	0.40	Jul-18
53		Subarnapur	BMPur	Bagbar	Baliapadar	Abhimanyu Karna	9178326097	0.35	Sep-18
	Sub-Total					53		26.80	
1	Mid-Central Table Land	Cuttack	Badamba	Gopalpur	Biswanathpur	Banamali Padhan	9938596069	0.2	Jun-18
2		Cuttack	Badamba	Gopalpur	Biswanathpur	Santosh Padhan	9778892603	0.15	Jul-18
3		Cuttack	Badamba	Gopalpur	Biswanathpur	Gopal Khatua		0.1	Jul-18
4		Cuttack	Badamba	Gopalpur	Biswanathpur	Bharat Khatua		0.1	Jul-18
5		Cuttack	Badamba	Gopalpur	Biswanathpur	Ananda Behera	7751819422	0.05	Jul-18
6		Cuttack	Badamba	Gopalpur	Gobardhanpur	Dhruba Behera		0.25	Jul-18
7		Cuttack	Badamba	Gopalpur	Gobardhanpur	Kashinath Nayak		0.05	Jun-18
8		Cuttack	Badamba	Gopalpur	Gobardhanpur	Prahallad Nayak	9778865404	0.1	Jul-18
9		Cuttack	Badamba	Gopalpur	Gobardhanpur	Gagani Nayak		0.1	Jun-18
10		Cuttack	Badamba	Gopalpur	Gamei	Santosh Behera	9938655792	0.2	Jun-18
11		Cuttack	Badamba	Gopalpur	Gamei	Bhagaban Bhanja	7787990570	0.1	Jul-18
12		Cuttack	Badamba	Gopalpur	Damanagadia	Pritash Kumar Pradhan	9937614141	0.3	Jun-18
13		Cuttack	Badamba	Gopalpur	Kandha	Debraj Panda		0.1	Jul-18
14		Cuttack	Badamba	Gopalpur	Ratapatt	Damodar Jena		0.1	Jun-18
	Sub-Total					14		1.90	
	Grand Total					229		92.86	

Annexure II

List of Farmers Demonstrated Hybrid Napier Bajra (Co-5 and Sampoorna)

Sl. No	Agro-Climatic Zone Name	District	Block	Village	Farmer Name	Phone	Variety Demonstrated	Land in Acres	Month of Sowing
1	North Central Plateau	Mayurbhanj	Udala	Patpur	Kandur Nayak		CO-5	0.001	Jun-18
2		Mayurbhanj	Udala	Patpur	Lambodhar Khatua		CO-5	0.01	Jun-18
3		Mayurbhanj	Udala	Patpur	Banshidhar Khatua		CO-5	0.01	Jun-18
4		Mayurbhanj	Udala	Patpur	Ramchandra Padhiala	9777394349	CO-5	0.001	Jun-18
5		Mayurbhanj	Rairangpur	Nuajoda	Srikanta Mohanta	9668594091	CO-5	0.3	May-18
7		Mayurbhanj	Rairangpur	Nagvan	Ganeswar Pradhan	8458036965	Sampoorna	0.1	May-18
8	North Eastern Coastal Plain	Balasore	Basta	Chandipur	Bhagaban Sahu	8018579048	CO-5	0.02	Jun-18
9		Balasore	Basta	Chandipur	Ekadashi Mandal	7751948255	CO-5	0.07	May-18
10		Balasore	Basta	Chandipur	Ekadashi Mandal	7751948255	CO-5	0.02	Jun-18
11		Balasore	Basta	Chandipur	Ananta Sahu		CO-5	0.001	May-18
12		Balasore	Basta	Chandipur	Kartika Parida	7205336795	CO-5	0.01	May-18
13		Balasore	Basta	Vellora	Niranjan Sahu	9937853942	CO-5	0.05	Jun-18
14		Balasore	Basta	Vellora	Niranjan Sahu	9937853942	Sampoorna	0.01	Jun-18
15		Balasore	Basta	Vellora	Srustidhar Pal	7683936693	CO-5	0.01	May-18
16		Balasore	Basta	Baitpada	Narayan Das	8458030218	CO-5	0.05	May-18
17		Balasore	Bahanaga	Rahaniaganj	Rashmirekha Behera	7608824624	CO-5	0.02	May-18
18		Balasore	Bahanaga	Haripur	Srustidhar Mohakud	8658587709	CO-5	0.04	May-18
19		Balasore	Bahanaga	Nilakantapur	Sanatan Das	9178131692	Sampoorna	0.05	May-18
20		Balasore	Bahanaga	Fatepur	Prafulla Dash	8599882461	CO-5	0.01	May-18
21		Bhadrak	Basudevpur	Kuruda	Sarbeswara sahu	9668374763	sampoorna	0.2	Jun-18
22		Bhadrak	Tihidi	Bhatpada	Hrusikesh sabat	8596946469	CO-5	0.2	Jun-18
23		Bhadrak	Tihidi	GUAMAL	Satyananda Tripathy	9583277948	CO-5	0.1	Jun-18
24		Bhadrak	Tihidi	GUAMAL	Surendra behera		CO-5	0.05	Jun-18

25	East & South Eastern Coastal Plain	Jagatsinghpur	Raghunathpur	Ramachandrapur	Dinesh Kumar Rout	9437876981	CO-5		Jun-18
26		Jagatsinghpur	Raghunathpur	Purana	Gopinath Barik	9777976627	CO-5	0.1	Jun-18
27		Khordha	Begunia	Barapada	Gauranga Pradhan	9437257965	CO-5	0.1	Jun-18
28		Khordha	Begunia	Kunjjuri	Bhaskar Mishra	8658043484	CO-5	0.1	Jun-18
29		Khordha	Balianta	Baligundi	Harischndra Mahapatra	8118019127	CO-5	0.2	May-18
30		Khordha	Balianta	Baligundi	Harischndra Mahapatra	8118019127	sampoorna	0.1	May-18
31		Khordha	Balianta	Bisarpur	Kapila mohanty	7894904373	sampoorna	0.1	May-18
32		Khordha	Balianta	Bisarpur	Durga behera	7894904373	sampoorna	0.1	May-18
33		Puri	Gop	Balisahi	Purnachandra Behera	7504512372	CO-5	0.4	May-18
34		Puri	Gop	Subarnapur	Bhimasenswain	9692784175	Sampoorna	0.2	May-18
35		Puri	Gop	Subarnapur	Jasobanta Bhatta	9090983447	sampoorna	0.3	May-18
36		Eastern Ghat High Land	Nabarangapur	Nabarangapur	Kesariguda	Srinibas R Sudala	8249367773	sampoorna	0.25
37	Nabarangapur		Nabarangapur	Kesariguda	Srinibas R Sudala	8249367773	CO-5	1.75	May-18
38	Western Central Table Land	Bargarh	Sohella	Kangaon	Babulal Khuntia	8917255302	CO-5	0.02	Jun-18
39		Bargarh	Sohella	Kangaon	Babulal Khuntia	8917255302	Sampoorna	0.02	Jun-18
40		Bargarh	Sohella	Kangaon	Bhagirathi Padhan	9556030380	Sampoorna	0.2	Jun-18
41		Bargarh	Attabira	Bugbuga	Chittaranjan Karna	9861575641	CO-5	0.02	Jun-18
42		Bargarh	Attabira	Bugbuga	Chittaranjan Karna	9861575641	Sampoorna	0.02	Jun-18
Total					42			5.323	

Annexure III

List of Farmers Demonstrated Seasonal Fodder Crops

Slno	ACZ Name	Dist	Block	GP	Village	Farmer Name	Phone	Land in Acre	Fodder Crop Name	Variety	Month of Sowing
1	North Western Plateau	Sambalpur	Kuchinda	Salebadi	Lundrudih	Ramesh Patra	8280440220	0.40	Dual purpose maize	P-3401	May-18
2		Sambalpur	Kuchinda	Salebadi	Lundrudih	Nirakhya Kathari	9583781459	0.40		P-3401	June-18
3		Sambalpur	Kuchinda	Salebadi	Lundrudih	Susanta Patel	9777048922	0.60		P-3401	June-18
4		Sambalpur	Kuchinda	kusmi	kusmi	Dinesh Patel	8018010663	0.20		P-3401	June-18
5		Sambalpur	Kuchinda	kusmi	Pandiadhipa	Pabitra Nayak	7077797514	0.20		P-3401	June-18
6		Sambalpur	Kuchinda	kusmi	Pandiadhipa	Bhabani Nayak	9777263756	0.20		P-3401	June-18
7		Sambalpur	Kuchinda	kusmi	Pandiadhipa	Judhistir Sahu	9938215084	0.10		P-3401	June-18
8		Sambalpur	Kuchinda	kusmi	Pandiadhipa	Madhu Dash	7325918683	0.10		P-3401	June-18
9		Sambalpur	Kuchinda	kusmi	Pandiadhipa	Jagadananda Patel	9583322410	0.10		P-3401	June-18
10		Sambalpur	Kuchinda	kusmi	Pandiadhipa	Akshya Katuri	8018889208	0.10		P-3401	June-18
	Sub-Total					10		2.40			
1	North Central Plateau	Keonjhar	Swompatna	Turmunga	Kainda	Kusa dehuri	9937495860	0.4	Dual purpose maize	OMH 14-27	June-18
2		Keonjhar	Swompatna	Turmunga	Kainda	Jatindra behera	9337463367	0.3			June-18
3		Keonjhar	Swompatna	Turmunga	Kainda	Dhira dehuri		0.4			June-18
4		Keonjhar	Swompatna	Turmunga	Kainda	Ugrasen behera	9078300461	0.5			June-18
5		Keonjhar	Swompatna	Turmunga	Kainda	Ekadusi behera	8018489928	0.4			June-18
6		Keonjhar	Swompatna	Turmunga	Kainda	Babita behera		0.3			June-18
7		Keonjhar	Swompatna	Turmunga	Kainda	Rankanidhi dehuri	9178909462	0.7			June-18
8		Keonjhar	Swompatna	Turmunga	Kainda	Pratap Khatua		0.5			June-18

9		Keonjhar	Swompatna	Turmunga	Kainda	Sashi bhudana khatua		0.4			June-18
10		Keonjhar	Swompatna	Turmunga	Kainda	Chaitan behera		1			June-18
11		Keonjhar	Swompatna	Turmunga	Kainda	Ajit dehuri	9668000280	0.4			June-18
12		Keonjhar	Swompatna	Turmunga	Kainda	Bhubanananda dehuri	9853122779	0.4			June-18
13		Keonjhar	Swompatna	Turmunga	Kainda	Juhi dehuri		0.2			June-18
14		Keonjhar	Swompatna	Turmunga	Kainda	Mandakini dehuri		0.2			June-18
15		Keonjhar	Swompatna	Turmunga	Kainda	Tara dehuri		0.3			June-18
16		Mayurbhanj	Shamakhunta	Rangamatia	Kundalbani	Ashis Ku Pandy	7873379088	0.3	Berseem	Mascavi	Jan-18
17		Mayurbhanj	Shamakhunta	Rangamatia	Kundalbani	Ashis Ku Pandy	7873379088	0.3	Dual purpose maize	OMH 14-27	Jan-18
18		Mayurbhanj	Shamakhunta	Sirisbani	Sudiam	Anil Ku Mohanta	9178338321	0.1	Sorghum	Sudan Grass	July-18
	Sub-Total					18		7.10			
1		Jajpur	Rasulpur	Gandhana	Ektala	Subash Mishra	9937316238	0.6	Barseem	Mascavi	Dec-17
2		Jajpur	Rasulpur	Gandhana	Ektala	Babun Pati	9178340917	0.3	Barseem	Mascavi	Dec-17
3		Jajpur	Rasulpur	Gandhana	Ektala	Rakesh dash	9438689594	0.2	Dual purpose Maize	OMH 14-27	Jan-18
4	North Eastern Coastal Plain	Jajpur	Binjharpur	jari	Nuabanka	Padmanav sahu		0.4	Berseem	Mascavi	Dec-17
5		Bhadrak	Basudevpur	barondua	barondua	Maheswar panigrahi	9556585995	0.5	Sorghum	Sudan Grass	Jan-18
6		Bhadrak	Basudevpur	barondua	barondua	Sarat behera	9178485709	2	Dual purpose Maize	OMH 14-27	Jan-18
7		Bhadrak	Basudevpur	barondua	barondua	Sarat behera	9178485709	1	Sorghum	Sudan Grass	Jan-18
8		Bhadrak	Basudevpur	barondua	barondua	Sarat behera	9178485709	0.6	Sorghum	Sudan Grass	Jan-18
9		Bhadrak	Basudevpur	barondua	barondua	Sudakar behera	9178040334	0.5	Sorghum	Sudan Grass	Jan-18

10	Bhadrak	Basudevpur	barondua	barondua	Sudakar behera	9178040334	0.5	Sorghum	Sudan Grass	Jan-18
11	Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Subas sadangi	7735011222	0.1	Berseem	Mascavi	Dec-17
12	Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Subas sadangi	7735011222	0.1	Sorghum	Sudan Grass	Dec-17
13	Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Narendra sadangi	9114582855	0.1	Berseem	Mascavi	Dec-17
14	Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Narendra sadangi	9114582855	0.05	Sorghum	Sudan Grass	Jan-18
15	Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Niranjana dangua	9090245626	0.1	Sorghum	Sudan Grass	Dec-17
16	Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Santosh ku. sadangi	7873593287	0.1	Sorghum	Sudan Grass	Dec-17
17	Bhadrak	Basudevpur	B. Binayakpur	B. Binayakpur	Jagabandhu das		0.05	Sorghum	Sudan Grass	Jan-18
18	Bhadrak	Basudevpur	Artunga	sankharo	Debendra sahu	8596020427	0.2	Berseem	Mascavi	Dec-17
19	Bhadrak	Basudevpur	Artunga	sankharo	Debendra sahu	8596020427	0.2	Sorghum	Sudan Grass	Dec-17
20	Bhadrak	Basudevpur	Artunga	sankharo	Debendra sahu	8596020427	0.1	Sorghum	Sudan Grass	Dec-17
21	Bhadrak	Basudevpur	Artunga	sankharo	Debendra sahu	8596020427	0.2	Dual purpose Maize	OMH 14-27	Dec-17
22	Bhadrak	Basudevpur	Artunga	sankharo	Bijaya sahu	9178399588	0.3	Berseem	Mascavi	Jan-18
23	Bhadrak	Basudevpur	Artunga	sankharo	Narendra sahu	9937346985	0.2	Sorghum	Sudan Grass	Jan-18
24	Bhadrak	Basudevpur	Artunga	sankharo	Srikant ch. sahu	8984756734	0.3	Berseem	Mascavi	Jan-18
25	Bhadrak	Basudevpur	Artunga	sankharo	Srikant ch. sahu	8984756734	0.1	Sorghum	Sudan Grass	Jan-18
26	Bhadrak	Basudevpur	Artunga	Kumarpur	Rita manjari tripathy	9437673739	0.1	Sorghum	Sudan Grass	Jan-18
27	Bhadrak	Basudevpur	B. Binayakpur	belasauli	Panchua mishra	8112074209	0.4	Berseem	Mascavi	Jan-18
28	Bhadrak	Basudevpur	B. Binayakpur	belasauli	Prafulla mishra	9938775277	0.1	Berseem	Mascavi	Jan-18
29	Bhadrak	Basudevpur	B. Binayakpur	belasauli	Santilata	9861348225	0.1	Berseem	Mascavi	Jan-18

					mishra					
30	Bhadrak	Basudevpur	B. Binayakpur	belasauli	Umakanta mishra	9583922486	0.2	Berseem	Mascavi	Jan-18
31	Bhadrak	Basudevpur	B. Binayakpur	belasauli	Bamdev mishra		0.1	Berseem	Mascavi	Jan-18
32	Bhadrak	Basudevpur	bramhangaon	Baikuntha pur	Ananta das	7077800189	0.2	Berseem	Mascavi	Dec-17
33	Bhadrak	Basudevpur	bramhangaon	bramhangaon	Bhabagrahi mishra	7978668311	0.3	Dual purpose Maize	OMH 14-27	Jan-18
34	Bhadrak	Basudevpur	bramhangaon	bramhangaon	Gyanendra behera		0.5	Sorghum	Sudan Grass	Jan-18
35	Bhadrak	Basudevpur	Arondua	arondua	SivaPrasad palai		0.3	Berseem	Mascavi	Jan-18
36	Bhadrak	Basudevpur	Arondua	arondua	Raghunath samanta		0.3	Sorghum	Sudan Grass	Dec-17
37	Bhadrak	Basudevpur	Arondua	arondua	Raghunath samanta		0.3	Dual purpose Maize	OMH 14-27	Dec-17
38	Keonjhar	Ghasipura	batto	batto	Gangadhara bhoi	9668666502	0.3	Berseem	Mascavi	Jan-18
39	Keonjhar	Ghasipura	batto	batto	Gangadhara bhoi	9668666502	0.3	Sorghum	Sudan Grass	Jan-18
40	Keonjhar	Ghasipura	batto	batto	Gangadhara bhoi	9668666502	0.1	Dual purpose Maize	OMH 14-27	Jan-18
41	Keonjhar	ghasipura	batto	ulala	Madhava charana palai	8763407504	0.5	Berseem	Mascavi	Jan-18
42	Keonjhar	Hatadihi	bancho	sivnarayanpur	Kailash jena	9078237076	0.05	Sorghum	Sudan Grass	Jan-18
43	Balasore	Basta	Vellora	Chandipur	Bhagaban Sahu	8018579048	0.3	Berseem	Mascavi	Jan-18
44	Balasore	Basta	Vellora	Chandipur	Harekrushna Nayak		0.3	Berseem	Mascavi	Jan-18
45	Balasore	Bahanaga	Talakurunia	Rahaniaganj	Rashmirekha Behera	7608824624	0.3	Berseem	Mascavi	Jan-18
46	Balasore	Baliapal	Deula	Deula	Susanta Sing	8093492507	0.5	Berseem	Mascavi	Jan-18

47		Balasore	Bahanaga	Talakurunia	Talakurunia	Amita Panigrahi	9776145838	0.02	Cowpea	CO-8	July-18
	Sub-Total					47		14.37			
1	East & South Eastern Coastal Plain	Jagatsinghpur	Balikuda	Sangram pur	Sangram pur	Surya Narayan Swain	9583387724	0.3	Cowpea	CO-8	Oct-18
2		Jagatsinghpur	Balikuda	Sangram pur	Sangram pur	Debadutta Bhola		0.2	Cowpea	CO-8	Oct-18
3		Jagatsinghpur	Balikuda	Sangram pur	Sangram pur	Jitendra Bhola		0.3	Cowpea	CO-8	Oct-18
4		Jagatsinghpur	Balikuda	Sangram pur	Sangram pur	Babaji Padhi		0.4	Cowpea	CO-8	Oct-18
5		Puri	Puri Sadar	PRATAP R.C.PUR	AROLAPATAN A	BICHITRA PRADHAN	9692506794	1.5	Dual purpose Maize	NK-6240	Jan-18
6		Puri	Gop	Mahalpada	Keutunga	Durga ch. Padhi	9692506794	0.4	Dual purpose Maize	NK-6240	Dec-17
7		Nayagada	Nuagaon	Korada	korada	Arun ku. Gochhayata	89808803757	2	Dual purpose Maize	P-3401	June-18
8		Nayagada	Nuagaon	Korada	korada	Arun ku. Gochhayata	89808803757	0.1	Cowpea	CO-8	June-18
	Sub-Total					8		5.2			
1	North Eastern Ghat	Ganjam	KS Nagar	KS NAGAR	Sialia	K.C Badatiya	9779701330	0.5	Dual purpose Maize	OMH 14-27	June-18
2		Ganjam	KS Nagar	KS NAGAR	H.Nuagaon	K.C Swain	8018705576	0.1	Cowpea	CO-8	July-18
3		Ganjam	KS Nagar	KS NAGAR	H.Nuagaon	K.C Swain	8018705576	0.4	Dual purpose Maize	P-3401	July-18
4		Ganjam	KS Nagar	Athagada Patna	Athagada Patna	D.D Behera	9861195863	1.5	Dual purpose Maize	P-3401	July-18

5		Ganjam	Seragada	Mahupadar	Kerikerijhola	Panchanan Gouda	8596821711	4	Dual purpose Maize	OMH 14-27	June-18
6		Ganjam	Seragada	Mahupadar	Kerikerijhola	Soura Swain	7064183982	0.15	Dual purpose Maize	OMH 14-27	June-18
7		Ganjam	Seragada	Mahupadar	Kerikerijhola	Daka Gouda	9777829009	0.2	Dual purpose Maize	OMH 14-27	June-18
8		Ganjam	Seragada	Mahupadar	Kerikerijhola	Tukuna Gouda	7873566211	0.5	Dual purpose Maize	OMH 14-27	June-18
9		Ganjam	Seragada	Mahupadar	Kerikerijhola	Gopi Gouda	8160051304	0.2	Dual purpose Maize	OMH 14-27	June-18
10		Ganjam	Seragada	Mahupadar	Kerikerijhola	Bidesi Gouda	9937058192	0.15	Dual purpose Maize	OMH 14-27	June-18
11		Ganjam	Seragada	Mahupadar	Kerikerijhola	Laxman Swain	9777534422	0.3	Dual purpose Maize	OMH 14-27	June-18
12		Boudh	Harbhanaga	Ramgarh	Pargalpur	Santosh Pradhan	70777388977	0.05	Cowpea	CO-8	July-18
13		Boudh	Harbhanaga	Ramgarh	Pargalpur	Aswini Dangaa	9556011588	0.05	Cowpea	CO-8	July-18
14		Boudh	Harbhanaga	Ramgarh	Palsapat	Sarat Mohanty	917841946	0.05	Cowpea	CO-8	July-18
15		Boudh	Harbhanaga	Ramgarh	Pargalpur	Parameswar Bagha	8456924870	0.05	Cowpea	CO-8	July-18
	Sub-Total					15		8.20			
1	Eastern Ghat High Land	Koraput	Kotpad	Kusumi	Kusumi	Damburu Naik	9556280194	0.7	Dual purpose Maize	OMH 14-27	May-18
2		Koraput	Kotpad	Kotpad	Kotpad	Purna ch Panda	7008279661	3	Sorghum	Sudan Grass	July-18

3	Koraput	Kotpad	Kotpad	Kotpad	Pratap Ku Mantrei	8456091980	4	Dual purpose Maize	OMH 14-27	July-18
4	Koraput	Kotpad	Kotpad	Kotpad	Santosh Ku Mishra	9937653997	4	Dual purpose Maize	OMH 14-27	June-18
5	Koraput	Kotpad	Damana handi	Damanahandi	Debadatta Brahma	9777723897	1	Sorghum	Sudan Grass	July-18
6	Koraput	Borigumma	Ranaspur	Ranaspur	Subash Tanti	9348220349	0.5	Dual purpose Maize	OMH 14-27	July-18
7	Koraput	Borigumma	Ranaspur	Ranaspur	Binod Ku Golari	7327081196	0.4	Sorghum	Sudan Grass	July-18
8	Koraput	Borigumma	Kumuli	Kumuli	Binodini Sadhangi	9668664066	0.65	Dual purpose Maize	OMH 14-27	July-18
9	Koraput	Borigumma	Kumuli	Kumuli	Sandghamitra Hota	9438763559	1.5	Dual purpose Maize	OMH 14-27	July-18
10	Koraput	Borigumma	Benasur	Benasur	Narayan Tripathy	7608926701	0.6	Dual purpose Maize	OMH 14-27	Sep-18
11	Koraput	Borigumma	Borigumma	Borigumma	Gayadhar Sahu	8917337372	2.5	Dual purpose Maize	OMH 14-27	May-18
12	Nabarangapur	Jharigaon	Ratakhandiguda	Chotoguda	Nirmal ku Mandal	8658011616	0.5	Sorghum	Sudan Grass	June-18
13	Nabarangapur	Jharigaon	Belgaon	Belgan	Bansingh Kumbhar	9937103282	0.5	Dual purpose Maize	OMH 14-27	July-18
14	Nabarangapur	Nabarangapur	Taragaon	Taragaon	Irfan Khan	9937402926	0.7	Cowpea	CO-8	Aug-18
15	Nabarangapur	Nabarangapur	Nabarangapur	Turunjiaguda	Subhasmit Patra	9777590897	0.5	Dual purpose Maize	OMH 14-27	Sep-18
16	Nabarangapur	Nabarangapur	Nabarangapur	Kusumi	R.K Tripathy	8457858637	0.3	Dual	OMH 14-27	July-18

									purpose Maize		
	Sub- Total					16		21.35			
1	South Eastern Ghat	Malkangiri	Korkonda	Tarlakota	Mpv-37	Brajen Biswas	8763973973	2	Dual purpose Maize	NK-30	Dec-17
2		Malkangiri	Korkonda	Tarlakota	MV-31	Bimal Mirdha	9938525059	1		NK-30	Dec-17
3		Malkangiri	Korkonda	Tarlakota	MPV-37	Sanjib Mandal	8457954925	2		NK-30	Dec-17
4		Malkangiri	Korkonda		MV-29	Sustidhar Mahapatra		1	Sorghum	Sudan Grass	Dec-17
	Sub- Total					04		06			
1	Wester n Undulat ing Zone	Kalahandi	Kesinga	Kasurupada	Binikela	Rasmita Bhoi	9937785336	1.5	Dual purpose Maize	OMH 14-27	Aug-18
2		Kalahandi	Kesinga	Kasurupada	Binekela	Ramesh Pradhan	8917482901	1	Sorghum	Sudan Grass	July-18
3		Kalahandi	Kesinga	Kasurupada	Binekela	Navin Bhoi	7077964503	1	Sorghum	Sudan Grass	July-18
4		Kalahandi	Kesinga	Hatikhoj	Hatikhoj	Basista Sahu	9938860761	0.5	Dual purpose Maize	OMH 14-27	Aug-18
5		Kalahandi	Kesinga	Sirjapalli	Sirjapalli	Pradeep Gahir	9777949053	0.3	Dual purpose Maize	OMH 14-27	July-18
	Sub- Total					05		4.30			
1	Wester n Central Table Land	Sambalpur	Jujumura	Kukudapali	Gambharpank	Byomokesh Sahu	9777263768	1.00	Sorghum	Sudan Grass	Jan-18
2		Jharsuguda	Lakhanpur	Badabhal	Baddhara	Madhu Bhoi	9938770826	0.50	Sorghum	Sudan Grass	Jan-18
3		Jharsuguda	Lakhanpur	Badabhal	Baddhara	Thabira Bhoi	9178920406	0.50	Sorghum	Sudan Grass	Jan-18
4		Jharsuguda	Lakhanpur	Badabhal	Baddhara	Janagram Luha	7077612612	0.50	Sorghum	Sudan Grass	Jan-18
5		Jharsuguda	Lakhanpur	Charpali	Chantipali	Netranan Sahu	7894596131	0.50	Sorghum	Sudan Grass	Jan-18
6		Sambalpur	Jujumura	Kukudapali	Dumerpali	Bedbyash Nayak	7978754621	0.80	Sorghum	Sudan Grass	Aug-18

7	Sambalpur	Rairakhol	Luhapank	Luhapank	Bitina Sahu	7873516807	0.30	Sorghum	Sudan Grass	July-18
8	Sambalpur	Rairakhol	Luhapank	Luhapank	Bitina Sahu	7873516807	0.20	Dual purpose Maize	P-3401	July-18
9	Sambalpur	Rairakhol	Luhapank	Luhapank	Gyanaranjan Pradhan		0.10	Dual purpose Maize	P-3401	July-18
10	Sambalpur	Rairakhol	Luhapank	Luhapank	Gokula Sahu	7873497897	0.20	Dual purpose Maize	P-3401	July-18
11	Sambalpur	Rairakhol	Luhapank	jarapni	Ramakanta Behera	9776241330	0.10	Dual purpose Maize	P-3401	July-18
12	Sambalpur	Rairakhol	Luhapank	jarapni	Ratnakara Dehuri	8018367725	0.10	Dual purpose Maize	P-3401	July-18
13	Sambalpur	Rairakhol	Luhapank	jarapni	Bidyadhara Dehury		0.20	Dual purpose Maize	P-3401	July-18
14	Sambalpur	Rairakhol	Luhapank	jarapni	bijay behera	8339034048	0.10	Dual purpose Maize	P-3401	July-18
15	Sambalpur	Rairakhol	Luhapank	jarapni	kritan kisan	8339007314	0.05	Dual purpose Maize	P-3401	July-18
16	Sambalpur	Rairakhol	Luhapank	jarapni	Bharata kisan		0.05	Dual purpose Maize	P-3401	July-18
17	Sambalpur	Rairakhol	Luhapank	Betagarh	Sarta sahu		0.1	Dual purpose Maize	P-3401	July-18
18	Sambalpur	Rairakhol	Luhapank	jarapni	Padma bhera	9550499942	0.1	Dual purpose Maize	P-3401	July-18

19	Sambalpur	Rairakhol	Luhapank	jarapni	laba munda		0.1	Dual purpose Maize	P-3401	July-18
20	Sambalpur	Rairakhol	Luhapank	jarapni	laba munda		0.1	Dual purpose Maize	P-3401	July-18
21	Sambalpur	Rairakhol	Luhapank	Betagarh	Sarat pradhan		0.1	Dual purpose Maize	P-3401	July-18
22	Jharsuguda	Lakhanpur	Remta	Kiritmal	Chaitnya Pradhan	9777959242	0.50	Sorghum	Sudan Grass	July-18
23	Jharsuguda	Lakhanpur	Remta	Kiritmal	Anand Padhan	8018339356	0.10	Dual purpose Maize	P-3401	July-18
24	Jharsuguda	Lakhanpur	Remta	Kiritmal	Jagabandhu Saa	9777774721	0.50	Sorghum	Sudan Grass	July-18
25	Jharsuguda	Lakhanpur	Remta	Kiritmal	Kula Saa	8018330081	0.50	Sorghum	Sudan Grass	June-18
26	Jharsuguda	Lakhanpur	Remta	Kiritmal	Kula Saa	8018330081	0.20	Dual purpose Maize	P-3401	June-18
27	Jharsuguda	Lakhanpur	Remta	Kiritmal	Susanta cock	8456826088	0.25	Sorghum	Sudan Grass	June-18
28	Jharsuguda	Lakhanpur	Remta	Kiritmal	Susanta cock	8456826088	0.20	Dual purpose Maize	P-3401	June-18
29	Jharsuguda	Lakhanpur	Remta	Kiritmal	Srimukha Padhan		0.25	Sorghum	Sudan Grass	July-18
30	Jharsuguda	Lakhanpur	Remta	Kiritmal	Tikeswar padhan	9777095307	0.25	Sorghum	Sudan Grass	June-18
31	Jharsuguda	Lakhanpur	Remta	Kiritmal	Siva pradhan		1.00	Sorghum	Sudan Grass	July-18
32	Jharsuguda	Lakhanpur	Amapali	Amapali	Sanjay Barik	9777773812	0.50	Sorghum	Sudan Grass	July-18
33	Jharsuguda	Lakhanpur	Amapali	Amapali	Pramod Dehury	9668605488	0.50	Sorghum	Sudan Grass	Aug-18
34	Jharsuguda	Lakhanpur	Amapali	Amapali	Pramod Dehury	9668605488	0.50	Dual purpose	P-3401	Aug-18

								Maize		
35	Jharsuguda	Lakhanpur	Amapali	Amapali	Deepak Thetua	8658229965	0.50	Sorghum	Sudan Grass	July-18
36	Jharsuguda	Lakhanpur	Amapali	Amapali	Rama Barik	7749065880	0.50	Sorghum	Sudan Grass	July-18
37	Jharsuguda	Lakhanpur	Amapali	Amapali	Hiralal Barik	7077667046	0.50	Sorghum	Sudan Grass	July-18
38	Bargarh	Attabira	Janhapada	Janhapada	Sanircha Rana	8112112023	0.20	Sorghum	Sudan Grass	July-18
39	Bargarh	Attabira	Bugbuga	Bugbuga(Patra pali)	Chittranjan Karna	9861575641	0.50	Sorghum	Sudan Grass	July-18
40	Bargarh	Attabira	Janged	Janged	Shyamsundar Rana	9178740174	0.30	Sorghum	Sudan Grass	July-18
41	Bargarh	Sohella	Kangaon	Kangaon	Babulal Khuntia	8917255302	0.50	Sorghum	CSH-24MF	June-18
42	Bargarh	Sohella	Kangaon	Kangaon	Babulal Khuntia	8917255302	0.50	Dual purpose Maize	OMH 14-27	June-18
43	Bargarh	Sohella	Kangaon	Kangaon	Babulal Khuntia	8917255302	0.20	Berseem	Mascavi	June-18
44	Bargarh	Sohella	Kangaon	Kangaon	Babulal Khuntia	8917255302	0.10	Cowpea	CO-8	June-18
45	Bargarh	Sohella	Lebdi	Lebdi	Sangeet Bhoi		0.50	Dual purpose Maize	OMH 14-27	June-18
46	Bargarh	Sohella	Garbhana	Garbhana	Mohana Barik	7789908292	0.30	Sorghum	Sudan Grass	Sep-18
47	Bargarh	Sohella	Garbhana	Garbhana	Gadana Sahu	7377077071	0.20	Dual purpose Maize	OMH 14-27	July-18
48	Bargarh	Sohella	Garbhana	Garbhana	Thabira Naik	9937586723	0.10	Dual purpose Maize	OMH 14-27	July-18
49	Bargarh	Sohella	Garbhana	Garbhana	Khageswar Sahu	9337980665	0.20	Sorghum	Sudan Grass	Sep-18
50	Bargarh	Sohella	Garbhana	Garbhana	Khageswar Sahu	9337980665	0.20	Dual purpose Maize	OMH 14-27	July-18
51	Bargarh	Sohella	Garbhana	Garbhana	Pitambara Gardia	8456003515	0.20	Dual purpose	OMH 14-27	July-18

								Maize		
52	Bargarh	Sohella	Garbhana	Garbhana	Kanhucharan Bhoi	NA	0.30	Dual purpose Maize	OMH 14-27	July-18
53	Bargarh	Attabira	Tope	Tope	Ashok Barik	9178788642	2.00	Sorghum	Sudan Grass	Oct-18
54	Bargarh	Attabira	Tope	Tope	Saibabu	8114636458	3.00	Sorghum	Sudan Grass	Oct-18
55	Bargarh	Attabira	Bugbuga	Bugbuga	Dibakara Mahakud	9556480280	0.15	Sorghum	Sugar Graze	Oct-18
56	Bargarh	Attabira	Bugbuga	Bugbuga	Dibakara Mahakud	9556480280	0.30	Sorghum	Sudan Grass	Oct-18
57	Bargarh	Attabira	Janged	Janged	Panchanan Chhattar	9938765862	0.10	Sorghum	CSH-24MF	Sep-18
58	Bargarh	Attabira	Janged	Janged	Dinesh Seth		0.10	Sorghum	CSH-24MF	Sep-18
59	Bargarh	Attabira	Janged	Janged	Shyamsundar Rana	9178740174	0.10	Sorghum	Sudan Grass	Sep-18
60	Bargarh	Attabira	Janhapara	Janhapara	Jayadev Pradhan	7008715469	0.50	Sorghum	Sudan Grass	June-18
61	Bargarh	Attabira	Janhapara	Janhapara	Jagannath Seth	7787954037	0.30	Cowpea	CO-8	June-18
62	Bargarh	Sohella	Karandola	Karandola	Rama Khamari	9556616030	1.00	Sorghum	Sudan Grass	June-18
63	Boudh	Kantamal	Palsagoda	Palsagoda	Satyanarayan Dalbehera	9937398767	0.20	Cowpea	CO-8	July-18
64	Boudh	Kantamal	Palsagoda	Baghiabahal	Padnava Panda	7894996081	0.30	Cowpea	CO-8	July-18
65	Boudh	Kantamal	Palsagoda	Baghiabahal	Padnava Panda	7894996081	0.50	Sorghum	Sudan Grass	July-18
66	Boudh	Kantamal	Palsagoda	Baghiabahal	Srikanta Mahakud	9777748439	0.20	Cowpea	CO-8	July-18
67	Boudh	Kantamal	Palsagoda	Baghiabahal	Srikanta Mahakud	9777748439	0.30	Sorghum	Sudan Grass	July-18
68	Boudh	Kantamal	Palsagoda	Baghiabahal	Nabin Mahakud	9777846553	0.20	Cowpea	CO-8	July-18
69	Boudh	Kantamal	Palsagoda	Baghiabahal	Nabin Mahakud	9777846553	0.20	Sorghum	Sudan Grass	July-18
70	Sonepur	Sonepur	Bisimunda	Buromunda	Dayasagar	8018280250	0.25	Sorghum	CSH-24MF	July-18

					Palta					
71	Sonepur	Sonepur	Bisimunda	Buromunda	Dayasagar Palta	8018280250	0.50	Dual purpose Maize	OMH 14-27	Aug-18
72	Sonepur	Sonepur	Bisimunda	Buromunda	Dayasagar Palta	8018280250	0.10	Cowpea	CO-8	Aug-18
73	Sonepur	Sonepur	Bisimunda	Buromunda	Lalit Mohan Kheti	7894582476	0.25	Sorghum	CSH-24MF	Aug-18
74	Sonepur	Sonepur	Bisimunda	Buromunda	Lalit Mohan Kheti	7894582476	0.50	Dual purpose Maize	OMH 14-27	Aug-18
75	Sonepur	Sonepur	Bisimunda	Buromunda	Lalit Mohan Kheti	7894582476	0.10	Cowpea	CO-8	Aug-18
76	Sonepur	Sonepur	Bisimunda	Buromunda	Bhagirathi Sethi		0.10	Cowpea	CO-8	Aug-18
77	Sonepur	Sonepur	Malikmunda	Gadia	Karamchand Mohanty	9437330900	0.50	Sorghum	CSH-24MF	Sep-18
78	Sonepur	Sonepur	Malikmunda	Gadia	Karamchand Mohanty	9437330900	0.15	Cowpea	CO-8	Oct-18
79	Sonepur	Sonepur	Malikmunda	Gadia	Sashibhusan Bagarti	9437330900	0.10	Sorghum	CSH-24MF	Oct-18
80	Sonepur	Sonepur		Dungripali	Iswarchandra Palia	9861486141	0.50	Sorghum	CSH-24MF	Oct-18
81	Sonepur	Sonepur	Mayuruden	Khirtikra	Srikanta Dehury	9777144169	0.50	Sorghum	CSH-24MF	Oct-18
82	Sonepur	Sonepur	Bisimunda	Bagduli	Kunjabihari Kheti	9337308155	0.50	Dual purpose Maize	OMH 14-27	Aug-18
83	Sonepur	Sonepur	Bisimunda	Bagduli	Kunjabihari Kheti	9337308155	0.50	Sorghum	Sudan Grass	Aug-18
84	Sonepur	BMPur		Manikpur	Satyanarayan Pradhan	9668734816	0.10	Cowpea	CO-8	July-18
85	Sonepur	BMPur	Hilung	Patharghat	Dilip Karna	8457019567	0.50	Sorghum	CSH-24MF	July-18
86	Sonepur	BMPur	Hilung	Patharghat	Dilip Karna	8457019567	0.50	Dual	OMH 14-27	July-18

								purpose Maize		
87		Sonepur	BMPur	Hilung	Patharghat	Dilip Karna	8457019567	0.10	Cowpea	CO-8 July-18
88		Sonepur	BMPur		Mursundi	Sananu Kheta	9178340682	0.10	Cowpea	CO-8 July-18
89		Sonepur	Dungripali		Tileimal	Nabin Bhibela		0.10	Cowpea	CO-8 Sep-18
90		Sonepur	Dungripali		Tileimal	Chudamani Sahu		0.20	Sorghum	Sudan Grass Sep-18
91		Sonepur	Dungripali		Tileimal	Biseswar Pradhan		0.30	Sorghum	Sudan Grass Sep-18
Sub-Total						91		32.65		
Grand Total						214		101.57		