BEFORE THE NATIONAL GREEN TRIBUNAL, WESTERN ZONE, BENCH AT PUNE

MISC. APPLICATION NO. _____ OF 2020
IN
EXECUTION APPLICATION NO. 58 OF 2016 (WZ)
IN
MISC. APPLICATION NO. 48 OF 2016
IN
MISC. APPLICATION NO. 274 OF 2016
IN
APPLICATION NO. 68 OF 2014 (WZ)
(DISPOSED OF ON 19.5.2015)

DISTRICT: AHMEDNAGAR

Godavari Bio Refineries Ltd. and others ...Applicants

Versus

Ashok Gabaji Kajale and others ...Respondents

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Date : 04/11/2020

V.D. Hon

Place : Pune

Advocate for Applicant

BEFORE THE NATIONAL GREEN TRIBUNAL, WESTERN ZONE, BENCH AT PUNE

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DISTRICT: AHMEDNAGAR

Godavari Bio Refineries Ltd. and others ...Applicants

Versus

Ashok Gabaji Kajale and others ...Respondents

AFFIDAVIT IN REJOINDER OF THE APPLICANTS TO THE REPLY AFFIDAVIT OF THE RESPONDENT NO. 4 AND OTHERS.

1. I, S. Mohan, Age 62 years, Occ. Service serving as Director (Works) with the applicant Industry R/o. Sakarwadi, Tq. Kopargaon, District Ahmednagar, do hereby state solemn affidavit by way of this affidavit in rejoinder to the affidavit in reply filed by the respondent No. 4 and others.

2. I say that I have read and understood the contents of the common reply affidavit of the respondent No.4 and others. On the basis of my personal knowledge and the record available with the applicant I am filing this reply as I am authorized to do so while reserving my right to file further sir-rejoinder as and when necessary.

NOTARY
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BEFORE ME
Adv.Vidyasagar A.Shinde
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Govt.of INDIA,Reg.11259
Date- 04/11/2020

3. At the outset, I repeat and reiterate all that I have said in the Misc. application filed by the applicant for grant of extension for a period of two years for completing the entire project of Bio remediation as directed by the Tribunal vide order dated 1.8.2017 and the order dated 19.5.2015 passed in application No. 68 of 2014.

4. I specifically deny all contentions raised by the respondent No.4 and others in the affidavit in reply as they do not point out all true, correct and relevant facts. On the contrary, the applicant No.4 and others have made all sorts of vague and baseless allegations. I say that I therefore, deny all contentions raised by the respondent No. 4 and others in the affidavit in reply and put them to the strict proof thereof.

5. I say that Hon'ble Tribunal had passed detail judgment and order on 19.5.2015 and issued directions in accordance with the provision of sections 14, 15 and 19 r.w. section 20 of the National Green Tribunal Act 2010, respondent No.4 and others have filed execution application No. 58 of 2016 before the Tribunal. The Tribunal in the execution application has passed detail order on 1.8.2017 after taking into consideration the affidavit filed by the CPCB dated 25.07.2017. Under the directions in Order dated 1st August 2017 of this Hon'ble Tribunal CPCB has engaged the services of Prof. C.R. Babu to carry out remediation of contaminated land and ground water. The Tribunal had also considered the said issue and approved the applicant's suggestions for availing the services of Prof. C.R. Babu who is an expert in the field.

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Govt.of INDIA,Reg.11259
Dt. 04/11/2020

I say that Prof. C.R. Babu has taken up the Bioremediation activities and the same is showing remarkable effect. I say that the applicants have taken recent photographs of the Bioremediation taken under the guidance of the Prof. C.R. Babu showing over all progress of the Bioremediation in the area. I say that on bare perusal of the aforesaid photographs it is abundantly clear that the Prof. C.R. Babu has carried out the Bioremediation activities and it has shown remarkable overall performance. Hereto annexed and marked as **Exhibit "P-1"** (Collectively) are the copies of the recent photographs of the Bio Remediation activities carried out under the guidance of the Prof. C.R. Babu.

6. I say that Prof. C.R. Babu on 12.10.2020 has submitted a detailed reply showing the work done and the achievements in the project of Bioremediation of contaminated soil, soil plus sludge and surface water and also remediation of groundwater of de-sludged lagoon of distillery spent wash. The Report also shows that the remediation is being carried out in the farmers' wells at Sakarwadi. I say that all details of the activities of Bioremediation project have been brought out clearly in the Report. I say that in the conclusion of the Report it has been specifically pointed out that the weedy and grass communities have successfully bio remediated the surface layers of contaminated soil, and soil plus sludge up to depth of 3'. Out of 20 deep rooted tree species planted in high density for bio remediation of deep layers of soil, soil plus sludge and subsoil water, 5 tree species are found to be very effective in remediation of deep layers of soil, soil plus sludge and subsoil water. It appears that

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these tree species exudates melanoidins (the major pollutants) from contaminated soil, soil plus sludge and subsoil water. I say that to the said Report photographs have also been annexed showing positive effect of the Bioremediation activities. I say that to the said Report copy of the reply given to the complaint regarding ground water contamination is also annexed. I say that the Sub Regional Officer of M.P.C.B. Board, Ahmednagar dated 11.6.2020 has given a detailed reply to the complainant, wherein the colour of the water in the wells of respondent No.4 has been shown nearly colourless and so also of the wells of other respondents. I say that from the aforesaid report by the Professor C.R. Babu and the reply given by Maharashtra Pollution Control Board vide letter no: MPCB/SROANR/108, dated 11th June 2020, that it would be evident that the Bioremediation project conducted by the Professor C.R. Babu has showed expected results leading to bioremediation of polluted substrates (soil, soil plus sludge, surface water, subsoil water and ground water) of the lagoon and there is, therefore, good compliance of the directions issued by the Tribunal in the pending proceeding. Hereto annexed and marked as **Exhibit "P-2"** is the copy of report submitted by the Professor C.R. Babu. Hereto annexed and marked as **Exhibit "P-3"** is the copy of communication dated 11.6.2020 of the Sub Regional Officer, M.P.C.B. Board, Ahmednagar.

NOTARY Adv.Vidyasagar A.Shinde Reg.11259 Ahmednagar Dist. Maharashtra GOVT. OF INDIA

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Date- 04/11/2020

7. I say that the contention of the respondent No.4 and others in the affidavit in reply are totally baseless. On the contrary, the applicant had sought for photographs to show as to how the respondent No.4 is peacefully cultivating his land and getting good crops. I say that the

contention to the respondent No.4 that his agricultural land has been affected and he is not in a position to get the good crops. I say that the respondent No.4 is regularly cultivating his land and getting crops like cotton, maize, Jawar, fodder grass, wheat etc. I say that the contention in this regard of respondent No.4 are totally misconceived. Hereto annexed and marked as **Exhibit "P-4"** (Collectively) are the copies of photographs showing the crops cultivated by the respondent No.4 in his agricultural land.

8. I say that as directed by the Tribunal, the C.P.C.B. has submitted its compliance report on 7.1.2020 pointing out due compliance of the order passed by the Tribunal. I say that in the said report, the C.P.C.B. has pointed out all true, correct and factual position. In spite of the aforesaid fact, the respondents had made incorrect statement that various report submitted by the C.P.C.B. are misguiding and false. I deny the said statement and put the respondents to the strict proof thereof.

9. I say that the respondents are relying upon the M.P.C.B. visit report dated 29.8.2019 and only partial observation in the same are tried to be relied upon. On the contrary, the respondents ought to have looked into all the contents of visit report dated 29.8.2019. The report specifically mentioned that there is reduction in the polluted concentration. I say that the said report therefore has to be read as a whole and not in a piecemeal.

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Date- 04/11/2020

10. I say that in the affidavit in reply the respondents have contended that in case the Hon'ble Tribunal is granting permission for extension, the applicant be directed to pay Rs. 2,00,000/- per acre per year as damages to the affected farmers. I say that from the said contention, it is evident that the respondent No.4 and others are trying to extract the money from the applicant under the garb of being affected farmers. I say that the Hon'ble Tribunal while disposing of the application No. 68 of 2014 vide order dated 19.5.2015 has taken into consideration all aspects and has to pay the compensation to the affected farmers. The applicants have already complied with the said directions. The applicant has also deposited the amount with the Collector and CPCB for implementing the Biormediation project. From the aforesaid contention, it is evident that the respondents are mainly interested in trying to take as much as amount as they can from the applicant.

11. I say that the Tribunal vide order dated 13.9.2017 has directed to pay additional compensation towards loss of crop. Accordingly, the additional compensation of Rs.93,712.80 has been paid to Smt. Babubai Gabaji Kajale and Rs.1,19,078.90 has been paid to Shri. Jalindar Jagannath Landge on 22.9.2017. I say that the Tribunal had also directed to provide one common pump of 5 HP capacity to the applicants along with requisite length of pipes-to two agriculturists. I say that the applicant accordingly had made all arrangement to provide one new common set of electric motor with pipe and offered it to both the agriculturists who have refused to accept the same. I say that the applicant had made correspondence from time to time requesting the said

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INDIA,Reg.11259
04/11/2020

farmers to collect the electric motor and pipe, however, they have not availed the same till date. I say that from all this conduct it would be evident that the respondent No.4 and others are showing total non-co-operation for carrying out the Bioremediation activities in the area. I say that in spite of all these the applicants are carrying out the Bio remediation project as directed by the Hon'ble Tribunal under the guidance of the Prof. C.R. Babu, a very senior person in the field and the project is already yielded tangible results.

12. I say that the applicant had taken up Bio remediation project as directed by the Hon'ble Tribunal, however, for completing entire project, the time limit fixed by the Hon'ble Tribunal was till 31.12.2019. I further say and submit that the Applicants practically got only two years for remediation as the 2017 Monsoon was over when the remediation work was commenced under Order dated 1st August 2017 of this Hon'ble Tribunal and the rain during 2018 Monsoon was too below normal. I say that the applicant therefore, is seeking extension of period for two years for completing the project. In the peculiar facts and circumstances of the case, this Misc. application for extension of time be allowed.

NOTARY
Adv.Vidyasagar A.Shinde
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Ahmednagar Dist.
Maharashtra
GOVT. OF INDIA

Place: Pune

Date: 02/11/2020

Deponent

(S. Mohan)

Submitted by

V. D. Hon

Advocate

BEFORE ME

Adv.Vidyasagar A.Shinde
NOTARY
Govt.of INDIA,Reg.11259
Date- 04/11/2020

VERIFICATION

I, S. Mohan, Age 62 years, Occ. Service, serving as Director with applicant Industry, R/o. Sakarwadi, Tq. Kopargaon, District Ahmednagar, do hereby state on solemn affirmation that what is stated in this misc. application from Para No.1 to 4 are true and correct to the best of my knowledge and as per the records available with the applicant.

Hence, verified on 4 th day of November, 2020 at Pune.

Deponent

(S. Mohan)

Identified and
Explained by

V.D. Hon.

Advocate/~~Clerk~~

Solemnly affirmed before me
by S. Mohan, Age. 62yrs occ-service R/o-Sakarwadi
Tal-Kopargaon, Dist-A'nagar
Who is identified before me
by Adv. V.D Hon
To Whom I Know Personally

Adv. Vidyasagar A. Shinde
NOTARY
GOVT. OF INDIA Reg. 1125

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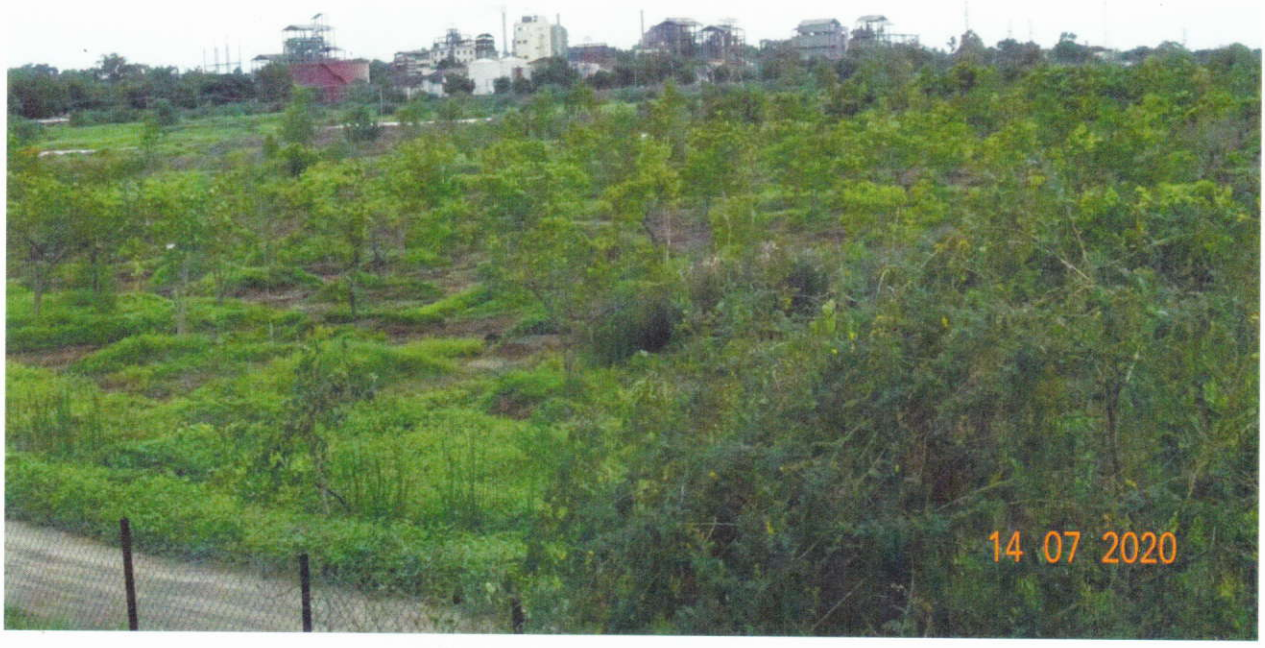
Date - 04/11/2020

NOTARY Adv. Vidyasagar A. Shinde Reg.11259 Ahmednagar Dist. Maharashtra GOVT. OF INDIA

NOTARY Adv. Vidyasagar A. Shinde Reg.11259 Ahmednagar Dist. Maharashtra GOVT. OF INDIA

Exhibit P-1(1) 9/68

Bioremediation Site Photographs
(Activity under guidance of Prof. C. R. Babu)



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Sakarwadi Bioremediation site Green Belt

12/68

Various types of grasses and weeds grown luxuriantly at Bioremediation Site

13/68

Bioremediation site Nursery

14/68

Experimental Tank Photo (Floating ilands and floating Aquatic species)

Exhibit P-1(2)

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Levelled Old Solar Evaporation Pond Photo

(Compliance Conditions for CPCB Direction -2014)

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17/68

Exhibit - P-20)

18/68

Somaiya GROUP

S Mohan <smohan@somaiya.com>

Write up on the word done and achievements in the project entitled "Bioremediation of contaminated soils ..... of M/s Godavari Biorefineries and remediation of farmer's well at Sakarwadi"

1 message

C.R. Babu <crb26@hotmail.com> Mon, Oct 12, 2020 at 4:22 PM
To: "ms@mpcb.gov.in" <ms@mpcb.gov.in>
Cc: "mishrapkin@yahoo.com" <mishrapkin@yahoo.com>, Samir Somaiya <samir@somaiya.com>, "smohan@somaiya.com" <smohan@somaiya.com>, Jayesh Samant <jayesh@somaiya.com>

Dear Sir:

I am attaching herewith a write up on the word done and achievements in the project entitled "Bioremediation of contaminated soils, soils + sludge and surface waters and remediation of ground water of desludged refilled lagoon of distillery spent wash of M/s Godavari Biorefineries Ltd. and remediation of farmer's well at Sakarwadi", for your information. I do hope that this write up would provide you an insight on the work that is being done at Sakarwadi.

This e-mail along with its attachments is also sent to Shri. P. K. Mishra, CPCB and M/s Godavari Biorefineries Pvt. Ltd., for their information.

With best regards:

Sincerely
Professor C.R. Babu

Professor Emeritus
Centre for Environmental Management of Degraded Ecosystems (CEMDE)
University of Delhi
Delhi - 110 007

Phone No: 011-27666237
Email id: crb26@hotmail.com
crbabu26@gmail.com

7 attachments

- **Write up on the project_Sakarwadi (12.10.pdf** 21K
- **Annuxure I.pdf** 3670K
- **Annexure II.pdf** 1304K
- **Annexure III.pdf** 871K

Annexure IV.pdf
1052K

Annexure V.pdf
21K

Annexure VI.pdf
21K

Exhibit- P-2(2) 20/68

Write up on the word done and achievements in the project entitled "Bioremediation of contaminated soils, soils + sludge and surface waters and remediation of ground water of desludged refilled lagoon of distillery spent wash of M/s Godavari Biorefineries Ltd. and remediation of farmer's well at Sakarwadi"

Background:

The Pune Bench of Hon'ble NGT ordered M/s Godavari Biorefineries Pvt. Ltd. to decontaminate the contaminated water in the well of litigant farmer who filed a case against the Company [(O.A. No.68/2014 (WZ)] and made CPCB as the nodal organization to implement the order and monitor the progress on the decontamination of ground water.

M/s Godavari Biorefineries Pvt. Ltd. approached Professor C. R. Babu (Centre for Environmental Management of Degraded Ecosystems, University of Delhi) for the development of Biodiversity Park on the lagoon area of M/s Godavari Biorefineries Pvt. Ltd. at Sakarwadi, Maharashtra. Professor Babu inspected the site and found that the area was contaminated with spent wash of distillery unit. He suggested that bioremediation technology can decontaminate the contaminated lagoon, ground water and the water in the litigant's well. A project of 3 years duration was formulated and submitted to Pune Bench of Hon'ble NGT, which had referred the Project to CPCB for its observations. The CPCB recommended the project to Hon'ble NGT and Hon'ble NGT approved the project for two years and asked to submit quarterly report on the progress and also suggested to remediate the litigant's well water within two good monsoons.

Since the project is of three years duration and the work is not yet completed, Professor Babu requested CPCB to extend the project for another two years (i.e. a total of four years) and CPCB recommended the Hon'ble NGT for the extension of the Project for another two years. The Pune Bench of Hon'ble NGT did not meet so far and the project is still ongoing.

Work Done and Achievements

The details of the work done is given in the Annexures. The major achievements are highlighted below:

1. The contaminated upper layers (upto 2-3 feet) of soil and soil + sludge were decontaminated using weedy and grassland communities (Annexure I).

2. The deep layers of contaminated soil and soil + sludge (upto 8-10 feet depth or more) is being decontaminated by dense plantation of deep rooted tree species. This is evident not only from the vertical soil profiles of the rhizospheric zone of trees but also by the histochemical studies. The histochemical studies showed that the main pollution (melanoidins) were taken up by plants and deposited in the outer bark/ exuded through resins (Annexure II).

3. The contaminated surface waterbodies (puddles to shallow waterbodies) were decontaminated by aquatic and marsh vegetation, besides blue-green algae (Annexure I).

4. It was observed that the aquifer at 32' deep is contaminated and the litigant's well is 32' deep. The contaminated aquifers are localised and some of the aquifers are interconnected through seed joints. **The only way to decontaminate the contaminated aquifer system is to flush out the contaminated water through continuous extraction from the wells/ trenches and recharging through reservoirs/ trenches filled with flood waters of river Godavari.**

   Both the flood water filled trenches and reservoirs are being used continuously in recharging the trenches/ wells from where the contaminated water is being extracted. The reservoirs and trenches are filled with flood waters of river Godavari. Using this technology the litigant's well and its surroundings dug wells and bore wells were decontaminated (Annexure IV). The water quality of decontaminated wells was also tested and found to that major parameters are within the limits of standards prescribed by CPCB. These results are also further confirmed by MSPCB (Annexure III).

5. The extracted contaminated water from the wells and trenches dug upto 32' deep was bioremediated in the Experimental Tank using floating wetlands and used for irrigation of high density deep rooted plants and weedy and grassland communities.

6. There are trenches dug at the lower gradient which are yet filled with contaminated water. These are not yet extracted due to lack of storage space. More recharging reservoirs are being developed in the low-lying areas and as soon as these will be developed the extraction of contaminated water will be carried out to flush out other localised contaminated aquifers (Annexure I).

7. Allegations were made by the Litigants on the successful outcomes of the project without any insight on the work done in the project. These allegations are baseless and malafide as evident from the responses given (Annexures V & VI).

Exhibit- P-2(3) 23/68

Quarterly Progress Report on "Bioremediation of contaminated soil and surface waterbodies and ground water (aquifer) of the desludged and refilled lagoons of distillery spent wash (waste waters released from distilleries) of M/s Godavari Biorefineries Ltd. at Sakarwadi, Maharashtra"

(August – October 2019)

Bioremediation of contaminated surface layers of soil and soil + sludge:

An additional 10 hectares of contaminated surface soil and soil + sludge (upto a depth of 3 feet) of the lagoon were bioremediated using grass communities such as *Cyanodon*, *Paspalum notatum*, *Panicum*, *Cenchrus*, *Setaria italica*, *Eragrostis*, *Dichanthium*, *Aristida*, and *Digitaria* species and the weedy communities such as *Alternanthera ficoidea*, *A. polygonoides*, *Achyranthes aspera*, *Sida*, *Abutilon*, *Solanum*, *Ipomoea* and *Chenopodium* species. The weedy and grass communities cover the entire lagoon area in such a way that it forms the dense mat over the surface soil and their roots covering a large volume of subsoil layers (upto a depth of 3 feet) bioremediation 80 percent of lagoon (Figure 1).

It may be noted that with the increase in the plantation density and ground cover with the weedy and grass communities, there has been an increase in the population of soil borne invertebrates (particularly arthropods) and others, all of which are improving the soil quality by changing the soil texture, aerating and mixing the soil (Figure 2).

Bioremediation of contaminated surface waterbodies:

Because of the seepage of water from 80,000 m^3, 45,000 m^3 and 20,000 m^3 fresh water reservoirs in the lagoon area soil + sludge dumped in the embankment water reservoir resulting in coloured water which accumulates in shallow depressions forming puddles. Most of these shallow contaminated waterbodies were decontaminated by blue-green algae, Alternanthera philoxeroides, Paspalum and Cyperus. But lagoon 3, 4 and 5 have 3 to 5 feet deep red coloured water due to seepage from reservoirs. These waters are being remediated by a variety of aquatic plants but the process is slow.

Bioremediation of deep layers of soil + sludge and subsoil water:

Dense plantation of trees is being carried out on a large scale so that maximum volume of the deep layers of the soils can be bioremediated using deep rooted tree species (Figure 3). About

35,000 saplings belonging to *Acacia nilotica*, *Azadirachta indica*, *Dalergia sissoo*, *Eucalyptus globulus*, *Ficus religiosa*, *Samanea saman*, *Sesbania*, *Terminalia catappa* were planted. Some of these plants already bioremediated the deep layers of contaminated soil + sludge and subsoil water by uptake and deposition of coloured pollutant in dead bark and exudating it through resins.

Decontamination of ground water:

There is a marked reduction in the colour of the dug wells 1 and 2, dispensary well (yellow to pale yellow) and reddish in the trench at the location of bore well 10 (Figures 4, 5, 6 & 7). This shows that there is a considerable reduction in the contaminants present in the contaminated aquifer. Three unlined fresh water reservoirs were created with the carrying capacity of 80,000 m^3, 45,000 m^3, and 20,000 m^3 at the upper gradient, one the trench at the location of bore well 10 and 6 trenches along the bund at the lower gradient were created to flush out the contaminated water from aquifer. All these three fresh water reservoirs are being used as recharging and all the trenches are being used as extraction to flush out the contaminants of aquifer and also subsoil water.

The amount of water infiltrated into the ground is around 75,000 m^3 fresh river water through these unlined fresh water reservoirs and the amount of contaminated water extracted from all the trenches is around 80,000 m^3 in this monsoon.

All the extraction trenches received red coloured water due to recharge of enormous amount of fresh river water at the higher gradient through reservoirs. All the extracted water was pumped into the Experimental Tank where the contaminated red coloured water is being treated through floating beds carrying macrophytes and also weeds and grasses.

It may be noted that due to extensive recharging, the ground water table has been increased drastically which improves quantity and quality of the ground water in and around the area.

Conclusion

The grass and weedy communities have successfully bioremediated the surface and subsurface contaminated soils and soil + sludge upto a depth of 3'. Out of 20 species of deep rooted trees planted for bioremediation of deep layers of soil + sludge and subsoil water, 5

trees are found to be very effective in uptake, deposition and exudation of melanoidins from contaminated soils + sludge and subsoil water (ground water).

The recharging of the ground water through reservoirs and extraction of contaminated water through trenches led to change in the red coloured ground water in Wells 1, 2 and Dispensary well to pale yellow coloured water suggesting drastic attenuation in the contaminants of ground water.

Figures

Figure 1: Weedy and grass communities formaing a dense mat over the soil.

Figure 2: Remediated soil showing soil invertebrates activity.

Figure 3: Dense plantation of deep rooted tree species which are most effective in Bioremediation of deep layers of contaminated soil.

Figure 4: Water from Well 1 showing pale yellowish colour.

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Figure 5: The water of Well 2 showing faint yellowish.

Figure 6: The water of Dispensary well showing faint yellowish.

Figure 7: Water of trench at bore well no. 10 showing reddish colour.

Exhibit-P-2-(4) 30/68

Quarterly Progress Report on "Bioremediation of contaminated soil and surface waterbodies and ground water (aquifer) of the desludged and refilled lagoons of distillery spent wash (waste waters released from distilleries) of M/s Godavari Biorefineries Ltd. at Sakarwadi, Maharashtra"

(May – July 2019)

A team consisting of Professor C. R. Babu, Mr. Vikrant Kumar Goswami and Mr. Jayesh Samant visited the site of M/s Godavari Biorefineries Limited undergoing Bioremediation at Sakarwadi during 11th – 14th July 2019 to assess the status of bioremediation of contaminated soil and soil + sludge, surface water and ground water. The significant achievements during the period under view are summarised below:

Bioremediation of contaminated surface layers of soil and soil + sludge:

An additional 10 hectares of contaminated surface soil and soil + sludge of the lagoon were bioremediated using *Alternanthera polygonoides*, *A. ficodea*, *Paspalum*, *Chenopodium* and other weeds and other grass species upto the depth of 2'–3'. This makes that 70% of the lagoon area is decontaminated with respect to soil and soil + sludge upto a depth of 2'–3' (**Figure 1**).

Bioremediation of contaminated surface waterbodies:

Except the shallow depressions in the lagoons 3, 4 and 5, bioremediation of surface water puddles/ ponds in lagoon area using *Alternanthera philoxeroides*, *Typha*, *Phragmites*, *Paspalum*, *Potamogeton pectinatus* and sedges was bioremediated. The decontamination of shallow waters of lagoons 3, 4 and 5 is under progress.

Bioremediation of deep layers of soil + sludge and subsoil water:

Dense plantation of trees was carried out over an area of 35 hectares. Some of these plants already bioremediated the deep layers of contaminated soil + sludge and subsoil water.

This was confirmed by the uptake, accumulation and secretion of melanoidins from outer bark of trees grown (**Figures 2&3**). The extent of uptake and the mechanism of uptake and chemical nature of the compound accumulated and secreted are yet to be studied.

Decontamination of ground water:

Based upon the patterns of inflows in the dug wells and trenches, we found that 32' deep aquifer is contaminated and there are multiple aquifer systems in the lagoon area. Although, we have made recharging pits and trenches and extracting trenches, we didn't succeed in flushing the contaminated ground water from the aquifer. It may be noted that there was attenuation of contaminants (in colour). It may take sometime to flush out the contaminated water from 32' deep aquifer. We are also worked with two hydrogeoloists (Dr. Pawar and Dr. Deshpande) for finding the direction of flow of water in the contaminated aquifer and the extent of spread of the contaminated aquifer essentially for locating recharging wells / trenches to flush out the contaminated water in the aquifer that feeds Mr. Kajale's well (Well 1).

Additional two unlined deep reservoirs were made in lagoon 1 area and are filled with flood waters of the river for recharging the contaminated aquifer. It may be noted that the water table in the surrounding areas is increased due to water reservoirs.

As a result of recharging and extracting, there was a marked attenuation of contaminants in the ground water.

Figures

Figure 1: Overview of the herbaceous vegetation developed for bioremediation of contaminated lagoon area at Sakarwadi.

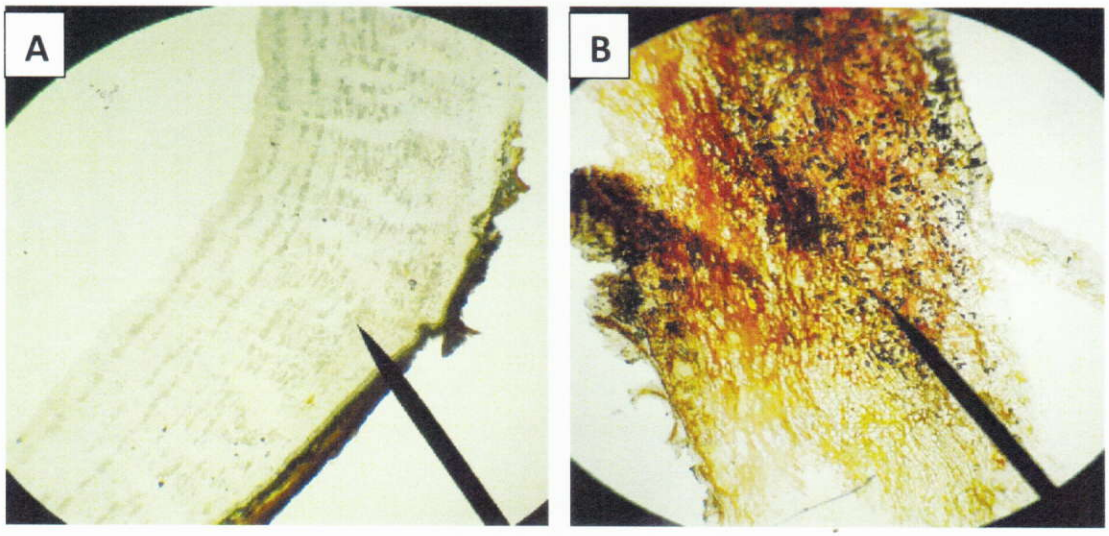

Figure 2: Transverse section of the bark of *Azadirachta indica* growing at uncontaminated site (A); and Transverse section of the bark of *Azadirachta indica* growing at contaminated site (B).

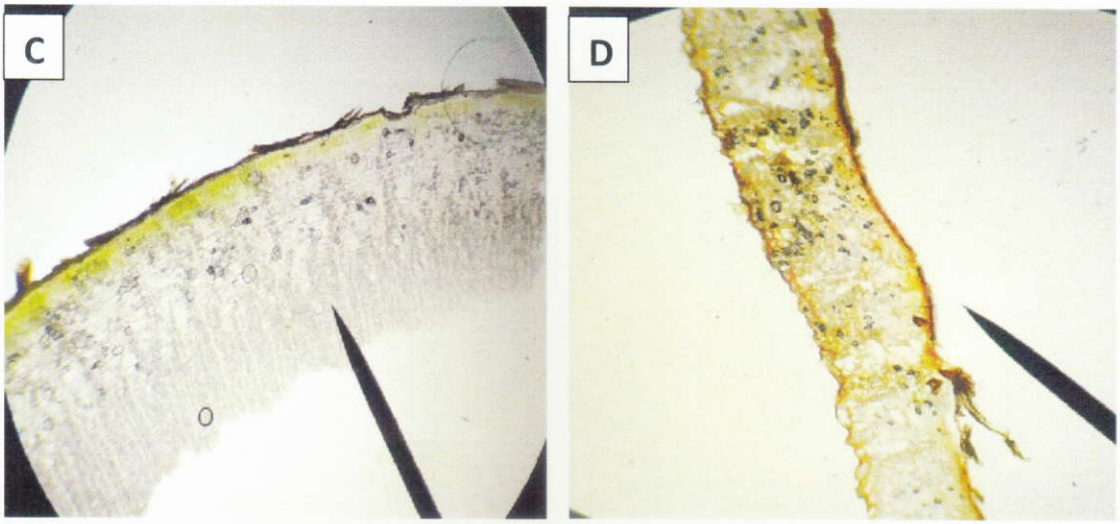

Figure 3: Transverse section of the bark of *Eucalyptus globulus* growing at uncontaminated site (C); and Transverse section of the bark of *Eucalyptus globulus* growing at contaminated site (D).

Exhibit - P-2(5) 34/68

Maharashtra Pollution Control Board

Sub Regional Office, Ahmednagar

E-Mail – sroahmednagar@mpcb.gov.in

Ph.No. 0241-2470852

Savitribai Fule Vyapari sankul, 1st floor, Hall No. 2 & 3, Near T. V. Centre, Savedi, Ahmednagar-414003

No. : MPCB / SROANR / 108 **Date:** 11/06/2020

To,
Shri. Narendra Eknath Teke,
A/P- Sakharwadi, Hanuman Nagar
Tal- Kopargaon, Dist- Ahmednagar

Sub: Complaint regarding ground water contamination due to M/s Godavari Biorefineries Ltd., Post-Sakarwadi, Tal- Kopargaon, Dist- Ahmednagar
Ref: Your complaint through email 22.05.2020

This refers to your representation submitted to CPCB through email on 29.04.2020 regarding ground water contamination in & around M/s Godavari Biorefineries Ltd., Post-Sakarwadi, Tal- Kopargaon, Dist- Ahmednagar. In this regard, it is to inform you that the Board Officer visited the area alongwith yourself on 27.05.20 and collected water samples from 9 locations. The analysis results of these samples are enclosed herewith for ready reference.

The issue of ground water contamination was already filed before Hon'ble NGT (WZ) Pune. As per order Dtd-19.05.2015 of Hon'ble NGT, CPCB Bioremediation action plan work is in progress. The CPCB is being submitted quarterly monitoring report towards compliance to the Hon'ble NGT.

The Board has also constituted technical committee towards investigation of said compliant. The said committee visited the site on 29.08.2019 & submitted the investigation report to the Board. The copy of said report is already handed over personally to yourself on 27.05.20.

MoEF, Delhi has issued TOR to the said unit for expansion. As per the said TOR , the Public Hearing was scheduled on 07.04.20. However, the said Public Hearing is postponed by District Collector due to COVID-19.

This is for information, please.

(Sanjeev A. Redasni)
I/c **Sub Regional Officer,**
M. P. C. Board, Ahmednagar.

D.A.- As above

Copy submitted to-
1) The Principal Scientific Officer, MPCB, Mumbai
2) The Regional Officer, M.P.C. Board, Nashik

Copy to- Master File

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Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

REGIONAL LABORATORY, NASHIK
(An ISO: 9001:2015 & OHSAS: 18001:2007 Certified Laboratory)

To,
The Sub Regional Officer,
M.P.C. Board, Ahemednagar

Lab Report. No.	ENV -09	ENV – 10	ENV - 11
Details of Sample	Water Sample of Open Well of Mr. Narendra Eknath Teke. Gat No. 184, Wari, Tal Kopargaon, Dist. A.Nagar	Water Sample of Open Well of Mr. Kishor K. Waykar, Gat No,137/3, Kanegaon. Tal Kopargaon Dist. A.Nagar	Water Sample of Open Well of Mrs. Janabai Waykar, Gat No 157/2, Kanegaon, Tal. Kopargaon, Dist. A.Nagar
Date of Collection	27/05/2020		
Date of Receipt	28/05/2020		
pH	8.05	7.71	8.01
B.O.D. 3day 27 C	3.5	3.8	5.2
Oil & Grease	BDL	BDL	BDL
Dissolved Oxygen	6.0	6.0	5.6
C.O.D.	16.0	16.0	20.0
Suspended Solids	32.0	30.0	28.0
Total Dissolved Solids	1573.0	1720.0	2528.0
Chloride	200.0	225.0	300.0
Sulphate	339.0	503.0	820.0
Ammonia	0.02	0.04	0.03
Phosphate	0.18	0.27	0.28
Turbidity NTU	2.25	0.98	1.28
Conductivity us/cm	1857.0	2057.0	3212.0
Nitrate N	3.31	2.90	5.65
Total Residual Chlorine	NIL	NIL	NIL
Hardness	268.0	620.0	420.0
Calcium	160.0	256.0	284.0
Magnesium	108.0	364.0	136.0
Total Alkalinity	26.0	20.0	28.0
Sodium	72.0	54.0	56.0

Note: 1) All Result are in ppm except pH & Conductivity.
2) BDL indicates below detectable limit.

Regional Laboratory ★ M.P.C.Board, Nashik ★

(S.H.Nagare)
Scientific Officer,
Regional Laboratory, Nashik

Udyog Bhavan 1 st Floor, Near ITI Signal, Trimbak Road,
MIDC Compound, Nashik - 422007.
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Email :- sonashiklab@mpcb.gov.in

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Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

REGIONAL LABORATORY, NASHIK
(An ISO: 9001:2015 & OHSAS: 18001:2007 Certified Laboratory)

To,
The Sub Regional Officer,
M.P.C. Board, Ahemednagar

Lab Report. No.	ENV -12	ENV – 13	ENV - 14
Details of Sample	Water Sample of Open Well of Mr. Ranganath Damodhar Kajale, Gat No. 138, Kanegaon, Tal Kopargaon, Dist. A.Nagar	Water Sample of Open Well of Mr. Dattatraya Shrihari Walunj, Gat No ,131/5, Kanegaon. Tal Kopargaon Dist. A.Nagar	Water Sample of Open Well of Mr. Ashok G. Kajale, Gat No 139/1, Kanegaon, Tal. Kopargaon, Dist. A.Nagar
Date of Collection	27/05/2020		
Date of Receipt	28/05/2020		
pH	7.88	7.52	7.87
B.O.D. 3day 27 C	3.2	3.8	4.8
Oil & Grease	BDL	BDL	BDL
Dissolved Oxygen	6.1	5.9	5.8
C.O.D.	12.0	16.0	20.0
Suspended Solids	33.0	29.0	31.0
Total Dissolved Solids	2080.0	2150.0	1810.0
Chloride	315.0	330.0	225.0
Sulphate	270.0	624.0	498.0
Ammonia	0.04	0.11	0.07
Phosphate	0.20	0.16	0.18
Turbidity NTU	1.11	2.24	3.71
Conductivity us/cm	2514.0	2712.0	2364.0
Nitrate N	3.45	6.80	1.70
Total Residual Chlorine	NIL	NIL	NIL
Hardness	460.0	360.0	380.0
Calcium	280.0	96.0	260.0
Magnesium	180.0	264.0	120.0
Total Alkalinity	24.0	20.0	22.0
Sodium	132.0	108.0	46.2

Note: 1) All Result are in ppm except pH & Conductivity.
2) BDL indicates below detectable limit.

Regional Laboratory M.P.C.Board, Nashik

(S.H.Nagare)
Scientific Officer,
Regional Laboratory, Nashik

Udyog Bhavan 1st Floor, Near ITI Signal, Trimbak Road,
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Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

REGIONAL LABORATORY, NASHIK
(An ISO: 9001:2015 & OHSAS: 18001:2007 Certified Laboratory)

To,
The Sub Regional Officer,
M.P.C. Board, Ahemednagar

Lab Report. No.	ENV -15	ENV – 16	ENV - 17
Details of Sample	Water Sample of Open Well of Mr. Dnyaneshwar Ambadas Bhakare, Kanegaon, Tal Kopargaon, Dist. A.Nagar	Water Sample Stretch near Water Storage Pond,	Water Sample of Open Well Near Dispensary
Date of Collection	27/05/2020		
Date of Receipt	28/05/2020		
pH	7.43	7.89	7.82
B.O.D. 3day 27 C	6.5	4.5	3.2
Oil & Grease	BDL	BDL	BDL
Dissolved Oxygen	5.0	5.6	6.2
C.O.D.	24.0	20.0	12.0
Suspended Solids	98.0	24.0	21.0
Total Dissolved Solids	1860.0	1910.0	1680.0
Chloride	290.0	250.0	190.0
Sulphate	396.0	461.0	269.0
Ammonia	0.06	0.20	0.50
Phosphate	0.30	0.29	0.18
Turbidity NTU	30.0	1.5	0.801
Conductivity us/cm	2363.0	2460.0	2155.0
Nitrate N	4.21	1.84	4.10
Total Residual Chlorine	NIL	NIL	NIL
Hardness	316.0	504.0	328.0
Calcium	172.0	260.0	288.0
Magnesium	144.0	244.0	40.0
Total Alkalinity	20.0	24.0	24.0
Sodium	48.20	78.6	112.0

Note: 1) All Result are in ppm except pH & Conductivity.
2) BDL indicates below detectable limit.

M.P.C.Board, Nashik ★ Regional Laboratory ★

(S.H.Nagare)
Scientific Officer,
Regional Laboratory, Nashik

Udyog Bhavan 1 st Floor, Near ITI Signal, Trimbak Road,
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Exhibit - P-2 (6)

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Water quality analysis of the samples collected on 24th May 2020

Sr. no	Description	pH	Color	COD (mg/lit)	BOD (mg/lit)	TSS (mg/lit)
1	Well-1 (Mr. Kajale – Litigant 1)	7.68	Nearly colourless	65	2	205
2	Well-2 (Mr. Walunj – Litigant 2)	7.45	Nearly colourless	60	1	185
3	Well- 3 (Awatade well) (Positive Control)	7.74	Colourless	23	3	265

The water quality of the samples presented in figures are yet to be analysed. The following samples were collected on 13th May 2020.

Figure 1: The colour of Well 1 (Mr. Kajale's well – Litigant 1) is nearly colouress with yellowish tinge.

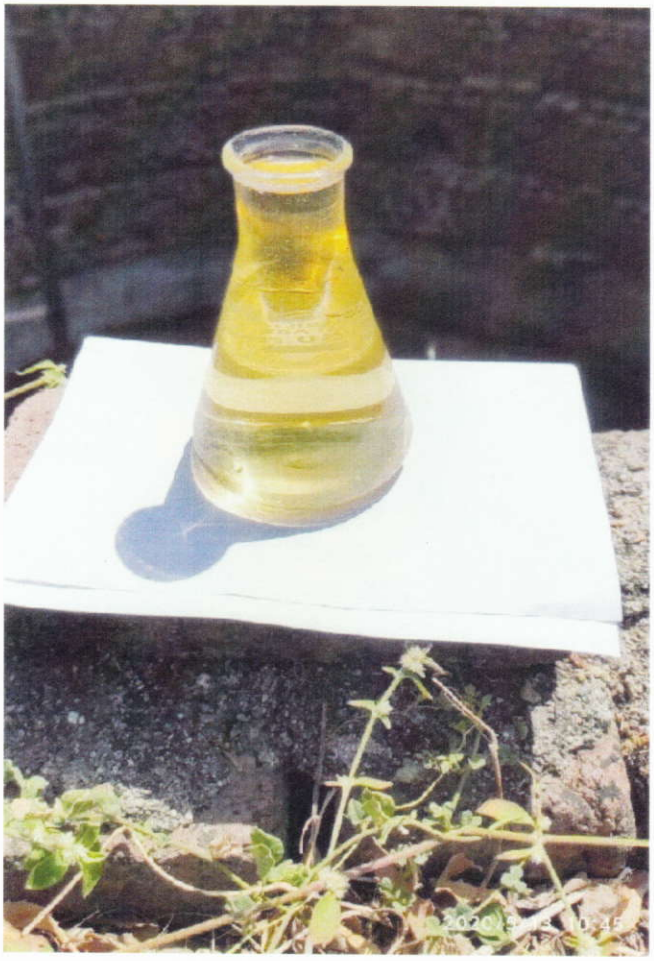

Figure 2: The colour of Well 2 (Mr. Walunj's well – Litigant 2) is nearly colourless with yellowish tinge.

Figure 3: The water of Well 3 (Mr. Awtade's well – well located near well 2) is colourless.

Exhibit P-2 (7)

Responses to Common Reply Affidavit of Applicants – Ashok Kajale and others on (1) Misc. Application filed by M/s Godavari Biorefineries Ltd. dated 30/12/2019 for extension of time, and (2) Compliance Report filed on behalf of CPCB dated 07/01/2020 in case of Ori. Application No. 68/2014 (WZ) (Disposed of on 19/05/2015)

Response to Paras 1 and 2: The Applicant has no understanding of the work done in the Project nor bothered about the true outcome of the Project. His interest is to get more compensation by falsely claiming that there is loss in crop productivity of fields. Further, the Applicant is dubious by stating that no extension should be given to the project and at the same time, if given, the compensation for the applicants be enhanced. This is evident from what the Applicants have been focussing in different paras of the affidavit.

Response to Paras 2, 3, 4 and 5: As per the project is concerned, the directions of Hon'ble NGT has been fulfilled in its time span to a large extent. The extension is sought for fulfilling the unfinished tasks. For example, the upper layers of contaminated soils, subsurface water and surface waters were fully decontaminated.

Decontamination of deep layers of soils is in progress as the deep root penetrating tree species takes time to reach greater depths and the ground water is being decontaminated. The water in Applicant's well are almost decoloured and can be used for irrigation. The farmers are using such water for irrigation and getting higher yields. Spent wash is used for composting and sold as organic manure.

It is an utter lie that the Respondent is filing various applications and taking extension of time without complying with the Hon'ble NGT's order in its true spirit.

The extension of the project is sought only once because of slow action by the biological system and absence of adequate water in one season for flushing out the contaminated ground water and not because of large area affected by contamination as claimed by the Applicants which is again a lie.

Response to Paras 6, 7, 8 and 9: The Applicants have no understanding of environment and bioremediation. Through imagination and misrepresentation of facts, the Applicants goes on

filing applications containing blatant lies for the sake of enhanced compensation. The allegation that concocted reports are being submitted is very serious and baseless without any facts and Hon'ble NGT should penalise the applicants for defaming the work done without any evidence and Hon'ble NGT should cancel the compensation to the Applicants. In fact, the Applicants can utilize the well water for irrigation as it become almost colourless.

In fact, the Applicant questioned the wisdom of Hon'ble NGT by making allegations that "..... they can misguide all the time .....". Is it misguiding Hon'ble NGT, if the scientific facts and data presented in the form of photographs and tables? The Applicant allegations are mischievous and malafide with intension to get higher compensation – the sole objective of the Affidavit.

Response to Para 10: The project was initiated on 5th September 2017; out of 2 years completed, the first year did not have enough flood waters in river Godavari due to dry year and hence recharging for flushing contaminated ground water was not done. In the second year, there was a good monsoon, the flood waters were abundant and were heavily recharged through unlined reservoirs and continuous extraction of contaminated water from trenches and Well 1 and Well 2 (Litigant's Wells). Today, both the wells have nearly colourless water that can be used for irrigation. By the next monsoon the ground water with attenuated pollutant will be decontaminated. This is the realistic ground situation. The statement made by the Applicant "..... still going through problems related to ground water from the year 2014 and the situation is same at present in the year 2020 as well" is not true and misrepresentation of the ground reality.

Response to Paras 11 and 12: The allegations made in the two paras are baseless and fictitious. This can be verified by the photograph attached showing the luxuriant growth of grasses, bushes and tree species. There is no question of burning. The applicant does not understand what is burning. The entire vegetation developed as a part of bioremediation is thriving and decontaminating soils, surface and subsoil waters.

Litigant's Well 1 and Well 2 are under custody for decontamination of contaminated water. Water in Well 2 is continuously used for irrigation and hence not taken into custody. Both the Wells will soon have clean water.

The Applicant has been blaming authorities, including Hon'ble NGT for ignoring the burned trees. This is again a blatant lie. How the authorities will take action on a lie and not on the

ground reality? The Applicant has habit of accusing/ blaming authorities for not taking action on his lies and baseless allegations. Hon'ble NGT should take it seriously his baseless allegations levelled on authorities, including CPCB, and penalise appropriately.

Response to Para 13: This is again a mischievous allegation without understating the ground reality.

The unlined reservoirs were made in the low-lying depressions which used to collect rainwater. These are filled with flood waters only for recharging the contaminated ground water which is extracted from trenches/ wells, and after bioremediation it is used for irrigation of the vegetation developed.

On the other hand, the farmers not only use river water but also dug wells in the riverbed during dry season for irrigating the crops. The farmers also made reservoirs to store monsoon water from the river. The farmers grow crops all through the year and at no stage the fields are barren and without crop. The statement that the "farmers are not getting any yield from their farmlands" is an utter lie and there is no truth in it.

Response to Para 14: As has been pointed earlier that the Applicant is habitual in blaming authorities, including CPCB for not believing in his lies and false, baseless allegations on the successful outcome of the bioremediation project.

Response to Paras 15, 16, 17, 18 and 23: These paras clearly reflect the purpose of the affidavit i.e. to get higher compensation by making all kinds of lies, false and baseless allegations and accusing authorities for acting on the lies and baseless allegations.

Para 16 talks about "deep level contamination". In one of the reports submitted it was clearly stated that only 32 feet aquifer is contaminated and dugging of deep wells and bore wells in the contaminated zone will get contamination. It was warned that no digging of deep wells nor installing bore wells in the contaminated zone. In spite of this warning, the Applicants/ farmers dug deep bore wells/ dug wells resulting contamination of deep aquifers. For this, the Applicant/ farmers should be punished. The upper contaminated ground water moves down to the deeper layers through perforated bore well pipes.

Response to Paras 19, 20, and 21: The statements in para 19 are mischievous and baseless and malafide. The information given is incorrect. C. R. Babu is a Professor Emeritus and Project Incharge and not a consultant engaged by the Respondent I. This is another serious

allegation which is false and mischievous. The Project is approved by Hon'ble NGT (WZ) and is implemented through CPCB and the question of involving Respondent I does not arise. The CPCB is India's premier Regulatory Authority with high competence in the area of pollution of air, water and soil. On the other hand, the Applicants have no understanding of the Project. Further his sole objective is to higher compensation through lies and making false and baseless allegation.

In paras 20 and 21, the Applicant mentioned about the Report of MPCB on their visit to M/s Godavari Biorefineries Ltd, and reproduced a para from the report which states that "water in the wells are contaminated and there was no significant changes in the water quality as compared to previous year. A slight reduction in pollutant concentration was observed for few samples, which might be due to dilution of water samples by rain water". This statement by MPCB is erroneous on the ground that the comparison of treated samples should be compared with initial levels of pollution and not with previous year sample data. It may be noted that Quarterly Progress Reports submitted by CPCB over a period would give the correct status of attenuation of pollutant in water sample. Being a regulator, how MPCB collected water samples during rainy seasons and if that is true, all the samples should have shown reduction in pollutant level instead of few samples.

The recent samples collected in March 2020 of wells and video clip of Well 1 clearly demonstrate that the contaminated groundwater in the wells is almost decontaminated.

The Applicant often imagines and makes fictitious statements without scientific understanding of work done in the project and based on a minor erroneous statement made in the Report.

For example, the Applicant states "If the Report prepared recently shows that grave problems are still remained unaddressed, then the level of compliance and unscientific attitude towards fulfilment of directions of Hon'ble NGT can be seen clearly and on this background the Applicants wish to mention that the Respondent No. I – Godavari Biorefineries Ltd. is not reliable industry which can adhere to the environment norms and hence the Respondent No. I – Industry needs to be closed down permanently".

If MPCB is not satisfied with the work done in project, why it has short-listed for presentation at Geoenvironment 2020 held on 17th February 2020 at IIT-Delhi.

Response to Paras 22 and 23: More or less similar to para 1.

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Response to Para 23: Similar to para 18.

In light of above mentioned facts, the common Reply Affidavit of Applicants – Ashok Kajale and others on –

(1) Misc. Application filed by m/s Godavari Biorefineries Ltd. dated 30/12/2019 for extension of time

(2) Compliance Report filed on behalf of CPCB dated 07/01/2020

should be dismissed and appropriate penalty may be imposed on the Applicants for wasting Hon'ble NGT's time by giving false and baseless information on the project and defaming Authorities.

Exhibit P-2 (8)

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Responses to the allegations made on Professor C. R. Babu's Project on "Bioremediation of contaminated soil and surface waterbodies and ground water (aquifer) of the desludged and refilled lagoons of Distillery Spent Wash (waste waters released from distilleries) of M/s Godavari Biorefineries Ltd. at Sakarwadi, Maharashtra" reply Affidavit filed by Affiant Mr. Ashok Gabaji Kajale [in the case of Execution Application no. 58/2016 in Application no. 68/2014 (WZ) in the matter of Mr. Ashok Gabaji Kajale & Others Vs M/s Godavari Biorefineries Limited & Others]

***Response to Allegation 1 (Para 8)*:** In the first instance, Professor C. R. Babu is a Project Incharge and not a Consultant as termed by the Applicant. The Hon'ble NGT has approved the Project and CPCB had issued the Project work order to Prof. C. R. Babu and the Project has been implemented faithfully and diligently. The quarterly Reports have been filed regularly at CPCB as directed by the Hon'ble NGT. Professor C. R. Babu do visit the site at least twice in a year and he visited Well 1, Well 2 and other bore wells located around it during all his visits and also interacts on day to day basis with the Research Assistant for updates & inputs and instructs him accordingly. The Applicant never visited the wells when Professor C. R. Babu and his team working at the site after the issuance of work order, Professor C. R. Babu spends 4-7 days at the site during each visit. Further, the Research Assistant has been working at the site round the clock by staying at Sakarwadi. In fact, the Applicant threatened him on one occasion and the damage caused to the installations by the Applicant was evident from the photographs presented in one of the Compliance Reports filed at CPCB. It may be noted that when Professor C. R. Babu visited the area for the first time (before the Project implemented), the Applicant did not allow Professor C. R. Babu to visit the Well 1/borewell in complainant's farm land and thwarted the inspection. All these facts not only indicate that the Applicant is neither cooperative nor interested in resolving the problem.

***Response 2 (Para 9)*:** Well No. 1 & 2 contaminated water is used for irrigation by the applicant for last many years. It takes time to remediate the contaminated ground water since the soil in the area is black cotton soil where the infiltration rate is slow. The 1st year monsoon was very weak and the river had a little water for a short period, and hence could not achieve flushing out of the contaminated water through recharging and extraction wells/trenches.

However, we would like to bring to the kind notice of Hon'ble NGT that 80,000 m^3 of fresh river water was used to recharge Well No. 1, Well No. 2, all the trenches and ponds to extract/flush out contaminants. The results indicate that attenuation of the contaminant in ground water took place. We are working hard to see how quickly we can decontaminate Well 1.

Response 3 (Para 12): The Research Assistant of the Project working at the site regularly monitor the quality of water in the Well 1 and Well 2. The Research Assistant observed, one day, that contaminated water from the bore well was continuously pumped into Well 2 and that water entered into the aquifer, which was cleaned, and inter connected to Well 1. This is a fact as earlier mentioned in the compliance report.

Response 4 (Para 13): Since the Research Assistant has been working continuously at the site and interacting with the villagers and local people in and around the area during his stay. He has been informed that the Applicant has been encouraging the farmers to dig the wells/bore wells in the contaminated area. We have clearly indicated to the farmers that digging more deep wells/bore wells in the contaminated area would further contribute to ground water contamination.

Response 5 (Para 14): The Applicant's allegation that no work has been done at the site is totally baseless. The Project Incharge has been submitting Quarterly Progress Reports to CPCB in compliance to Hon'ble NGT order and these Reports provide the significant outcomes of the work done so far in the Project. For example, bioremediation of contaminated subsoil and deep layers of soils is successful. *Eucalyptus* and *Acacia* bioremediated the deep layers of the soil. It may be noted that the contaminated area is completely covered with the grasses and other herbs. High density plantation of *Eucalyptus* and *Acacia* were carried out. All these facts suggest that the Applicant's allegation is baseless.

I may submit that the only way to remediate the contaminated soil and subsoil water is to plant shallow rooted herbs and deep rooted trees. To decontaminate the contaminated ground water, it is necessary to recharge the contaminated aquifer at higher gradient and flushing out the contaminants by extracting it later at lower gradient. This is being practiced. It was incorrect on the part of Applicant to make false allegation that the ongoing Project is showing no result. We have just completed 1 year 9 months.

Exhibit- P-3

48/68

Maharashtra Pollution Control Board

Sub Regional Office, Ahmednagar

E-Mail –
sroahmednagar@mpcb.gov.in

Ph.No. 0241-2470852

Savitribai Fule Vyapari sankul, 1st floor,
Hall No. 2 & 3, Near
T. V. Centre, Savedi, Ahmednagar-
414003

No. : MPCB / SROANR / 108 **Date: 11/06/2020**

To,
Shri. Narendra Eknath Teke,
A/P- Sakharwadi, Hanuman Nagar
Tal- Kopargaon, Dist- Ahmednagar

Sub: Complaint regarding ground water contamination due to M/s Godavari Biorefineries Ltd., Post-Sakarwadi, Tal- Kopargaon, Dist- Ahmednagar
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This is for information, please.

(Sanjeev A. Redasni)
I/c **Sub Regional Officer,**
M. P. C. Board, Ahmednagar.

D.A.- As above

Copy submitted to-
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2) The Regional Officer, M.P.C. Board, Nashik

Copy to- Master File

49/68

Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

REGIONAL LABORATORY, NASHIK
(An ISO: 9001:2015 & OHSAS: 18001:2007 Certified Laboratory)

To,
The Sub Regional Officer,
M.P.C. Board, Ahemednagar

Lab Report. No.	ENV -09	ENV – 10	ENV - 11
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Oil & Grease	BDL	BDL	BDL
Dissolved Oxygen	6.0	6.0	5.6
C.O.D.	16.0	16.0	20.0
Suspended Solids	32.0	30.0	28.0
Total Dissolved Solids	1573.0	1720.0	2528.0
Chloride	200.0	225.0	300.0
Sulphate	339.0	503.0	820.0
Ammonia	0.02	0.04	0.03
Phosphate	0.18	0.27	0.28
Turbidity NTU	2.25	0.98	1.28
Conductivity us/cm	1857.0	2057.0	3212.0
Nitrate N	3.31	2.90	5.65
Total Residual Chlorine	NIL	NIL	NIL
Hardness	268.0	620.0	420.0
Calcium	160.0	256.0	284.0
Magnesium	108.0	364.0	136.0
Total Alkalinity	26.0	20.0	28.0
Sodium	72.0	54.0	56.0

Note: 1) All Result are in ppm except pH & Conductivity.
2) BDL indicates below detectable limit.

Regional Laboratory M.P.C.Board, Nashik

(S.H.Nagare)
Scientific Officer,
Regional Laboratory, Nashik

Udyog Bhavan 1 st Floor, Near ITI Signal, Trimbak Road,
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Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

REGIONAL LABORATORY, NASHIK
(An ISO: 9001:2015 & OHSAS: 18001:2007 Certified Laboratory)

To,
The Sub Regional Officer,
M.P.C. Board, Ahemednagar

Lab Report. No.	ENV -12	ENV – 13	ENV - 14
Details of Sample	Water Sample of Open Well of Mr. Ranganath Damodhar Kajale, Gat No. 138, Kanegaon, Tal Kopargaon, Dist. A.Nagar	Water Sample of Open Well of Mr. Dattatraya Shrihari Walunj, Gat No ,131/5, Kanegaon. Tal Kopargaon Dist. A.Nagar	Water Sample of Open Well of Mr. Ashok G. Kajale, Gat No 139/1, Kanegaon, Tal. Kopargaon, Dist. A.Nagar
Date of Collection	27/05/2020		
Date of Receipt	28/05/2020		
pH	7.88	7.52	7.87
B.O.D. 3day 27 C	3.2	3.8	4.8
Oil & Grease	BDL	BDL	BDL
Dissolved Oxygen	6.1	5.9	5.8
C.O.D.	12.0	16.0	20.0
Suspended Solids	33.0	29.0	31.0
Total Dissolved Solids	2080.0	2150.0	1810.0
Chloride	315.0	330.0	225.0
Sulphate	270.0	624.0	498.0
Ammonia	0.04	0.11	0.07
Phosphate	0.20	0.16	0.18
Turbidity NTU	1.11	2.24	3.71
Conductivity us/cm	2514.0	2712.0	2364.0
Nitrate N	3.45	6.80	1.70
Total Residual Chlorine	NIL	NIL	NIL
Hardness	460.0	360.0	380.0
Calcium	280.0	96.0	260.0
Magnesium	180.0	264.0	120.0
Total Alkalinity	24.0	20.0	22.0
Sodium	132.0	108.0	46.2

Note: 1) All Result are in ppm except pH & Conductivity.
2) BDL indicates below detectable limit.

Regional Laboratory M.P.C.Board, Nashik

(S.H.Nagare)
Scientific Officer,
Regional Laboratory, Nashik

Udyog Bhavan 1st Floor, Near ITI Signal, Trimbak Road,
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Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ

REGIONAL LABORATORY, NASHIK
(An ISO: 9001:2015 & OHSAS: 18001:2007 Certified Laboratory)

To,
The Sub Regional Officer,
M.P.C. Board, Ahemednagar

Lab Report. No.	ENV -15	ENV – 16	ENV - 17
Details of Sample	Water Sample of Open Well of Mr. Dnyaneshwar Ambadas Bhakare, Kanegaon, Tal Kopargaon, Dist. A.Nagar	Water Sample Stretch near Water Storage Pond,	Water Sample of Open Well Near Dispensary
Date of Collection	27/05/2020		
Date of Receipt	28/05/2020		
pH	7.43	7.89	7.82
B.O.D. 3day 27 C	6.5	4.5	3.2
Oil & Grease	BDL	BDL	BDL
Dissolved Oxygen	5.0	5.6	6.2
C.O.D.	24.0	20.0	12.0
Suspended Solids	98.0	24.0	21.0
Total Dissolved Solids	1860.0	1910.0	1680.0
Chloride	290.0	250.0	190.0
Sulphate	396.0	461.0	269.0
Ammonia	0.06	0.20	0.50
Phosphate	0.30	0.29	0.18
Turbidity NTU	30.0	1.5	0.801
Conductivity us/cm	2363.0	2460.0	2155.0
Nitrate N	4.21	1.84	4.10
Total Residual Chlorine	NIL	NIL	NIL
Hardness	316.0	504.0	328.0
Calcium	172.0	260.0	288.0
Magnesium	144.0	244.0	40.0
Total Alkalinity	20.0	24.0	24.0
Sodium	48.20	78.6	112.0

Note: 1) All Result are in ppm except pH & Conductivity.
2) BDL indicates below detectable limit.

Regional Laboratory ★ M.P.C.Board, Nashik ★

(S.H.Nagare)
Scientific Officer,
Regional Laboratory, Nashik

Udyog Bhavan 1 st Floor, Near ITI Signal, Trimbak Road,
MIDC Compound, Nashik - 422007.
Tel: 0253, 2362820 Fax:-0253, 2365150
Email :- sonashiklab@mpcb.gov.in

Exhibit P-4

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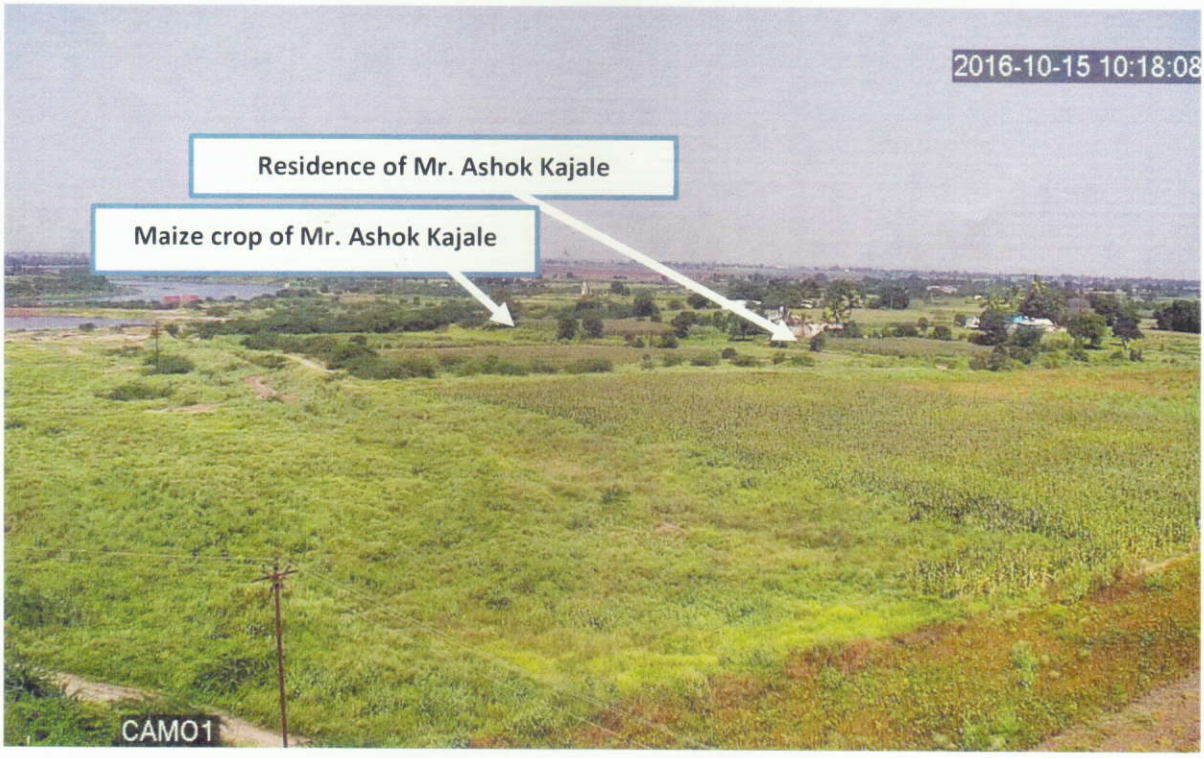
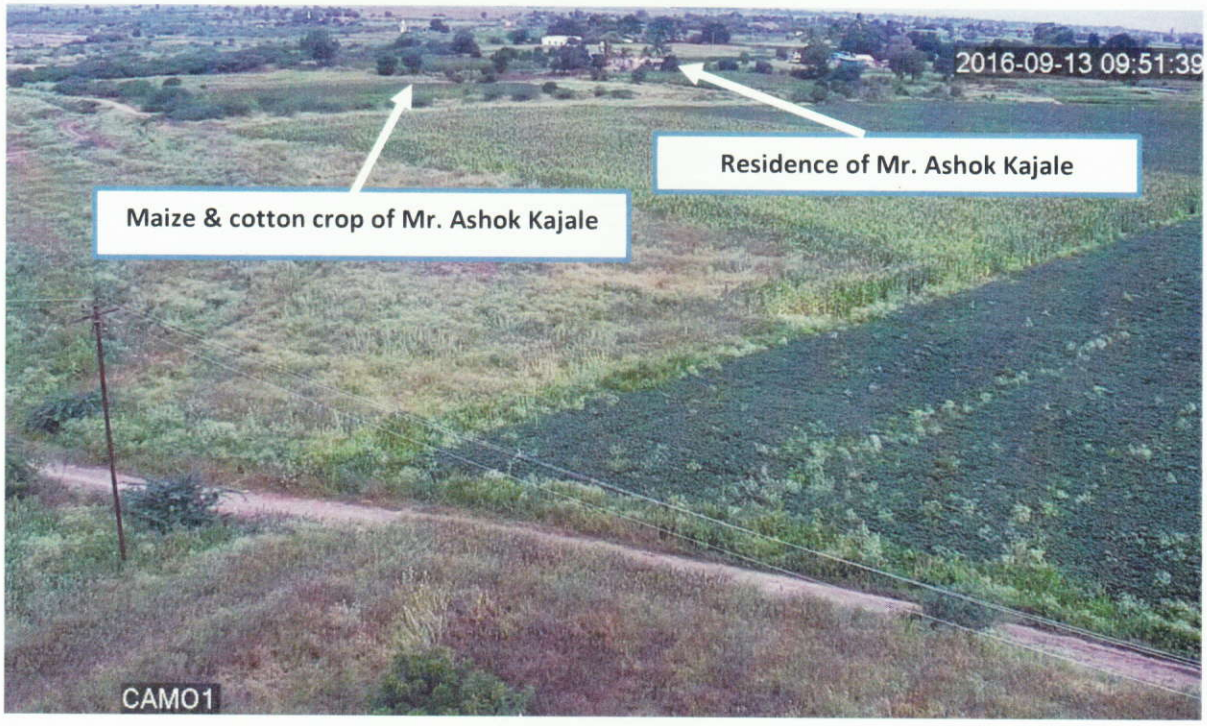
Photographs of Agricultural crops taken by Of Mr. Ashok Gabaji Kajale (Respondent No-4) & Others

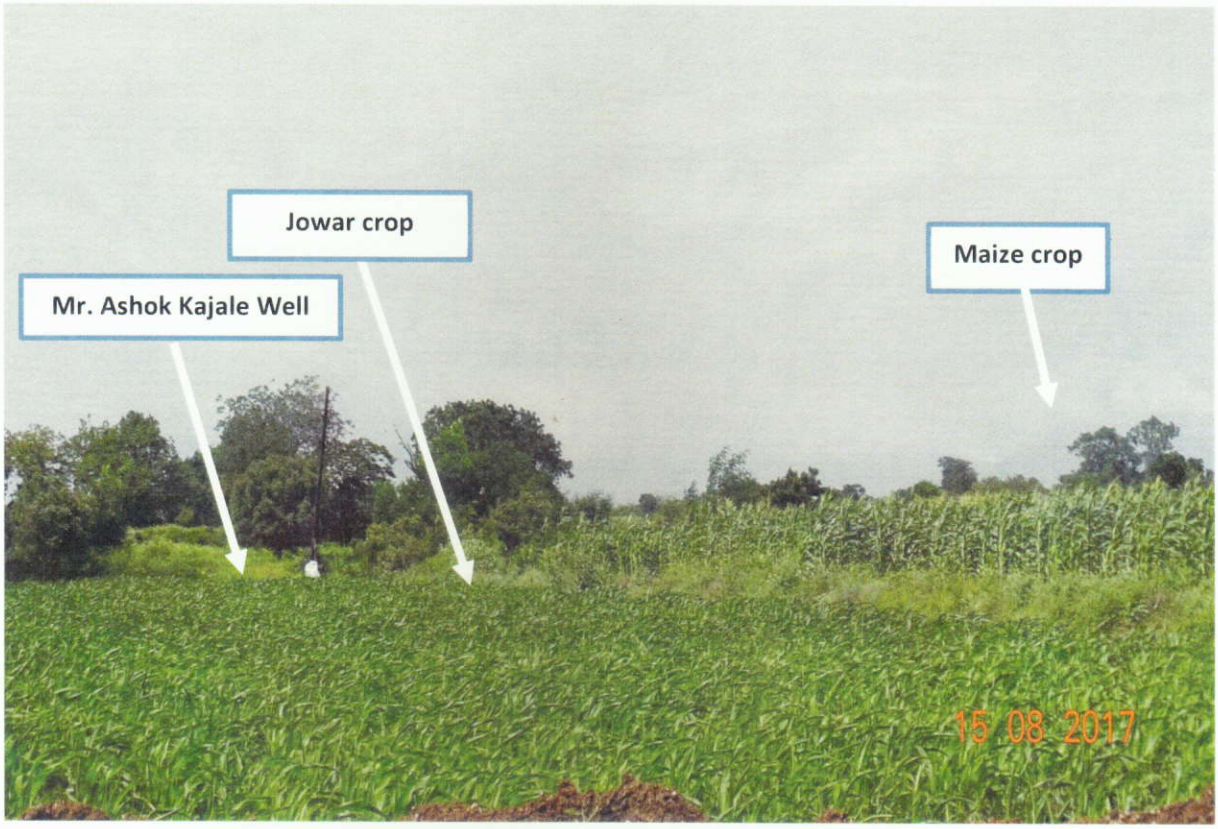
(In the period of 2015 to 2020)



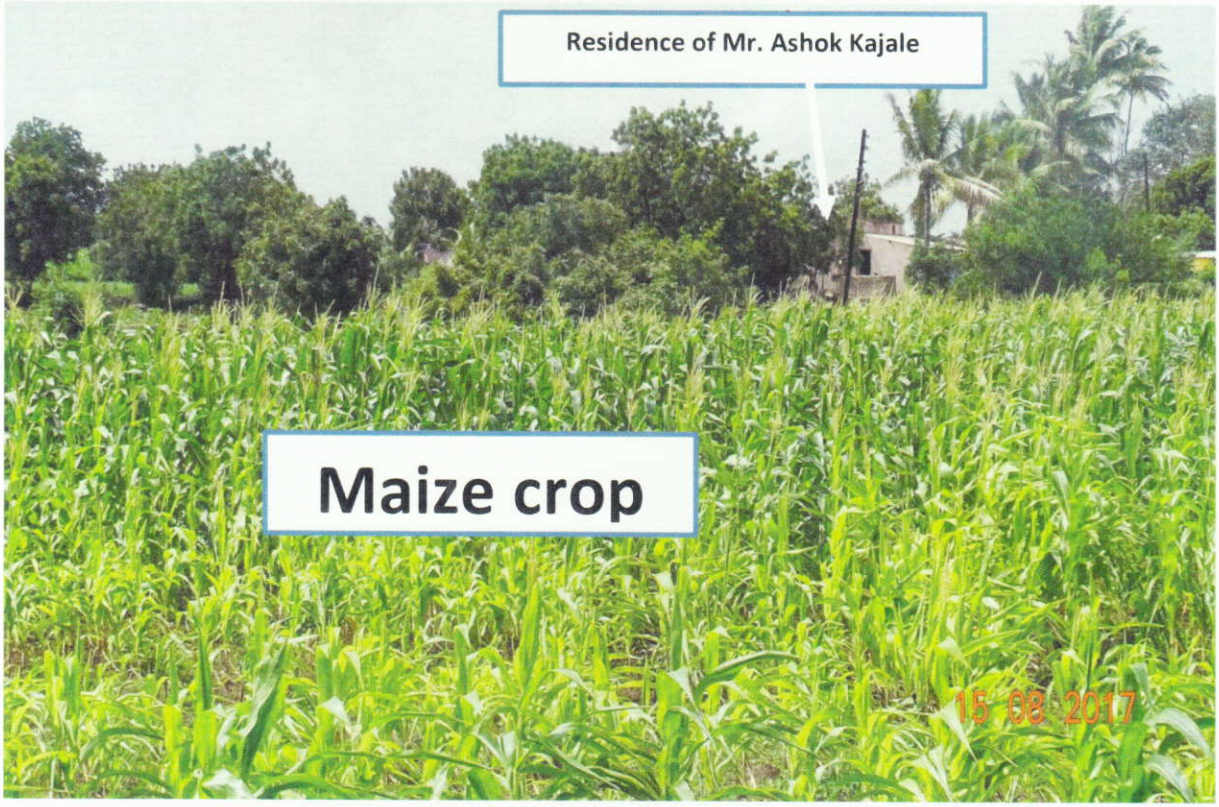
The Maize crop cultivated by Field owner: - Mr. Ashok Kajale is seen in the photo. This agricultural field is towards the North direction of lagoon area. (Legend: - Residence of Mr. Ashok Kajale)



The Maize crop cultivated by Field owner: - Mr. Ashok Kajale is seen in the photo. This agricultural field is towards the North direction of lagoon area. (Legend: - Residence of Mr. Ashok Kajale)



The Maize crop & Jowar crop cultivated by Field owner: - Mr. Ashok Kajale is seen in the photo. The growth of both crops seen luxuriant. (Legend: - Well of Mr. Ashok Kajale)



The Maize crop cultivated by Field owner: - Mr. Ashok Kajale, Luxuriant growth seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)

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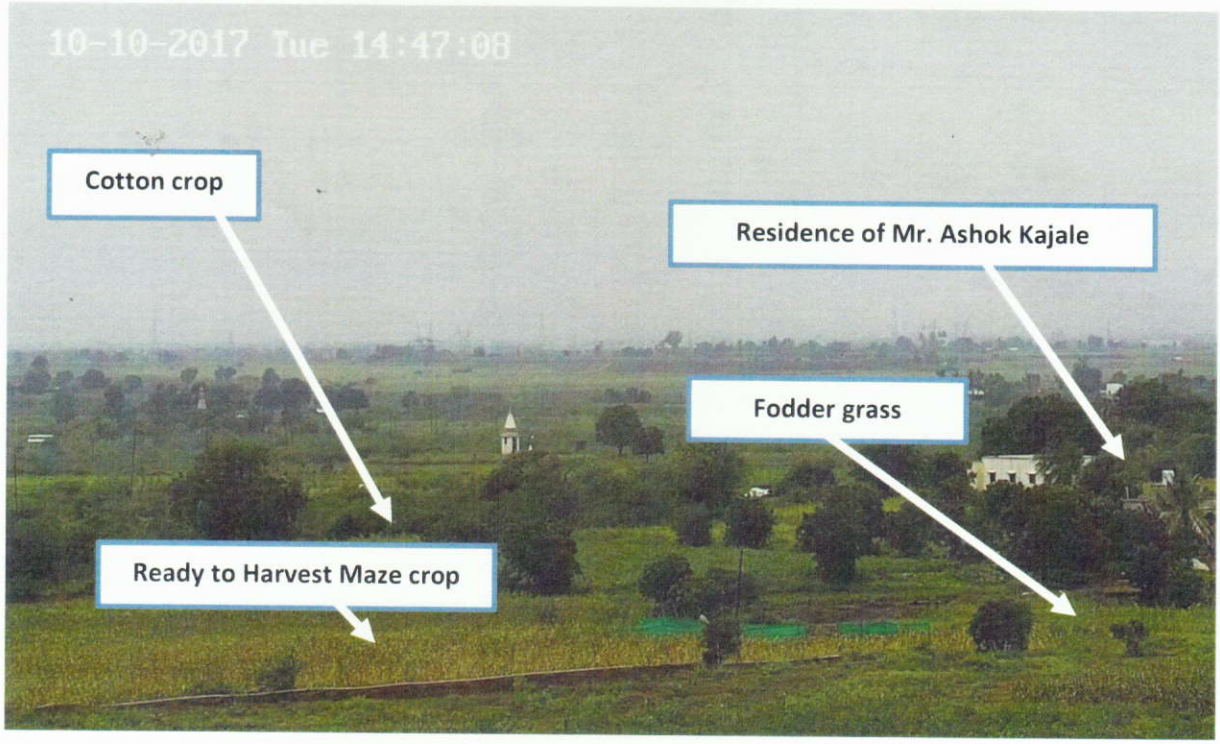
The Maize crop cultivated by Field owner: - Mr. Ashok Kajale, Luxuriant growth seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)



The ready to harvest Maize crop, cotton crop and fodder grass cultivated by Field owner: - Mr. Ashok Kajale, Luxuriant growth seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)

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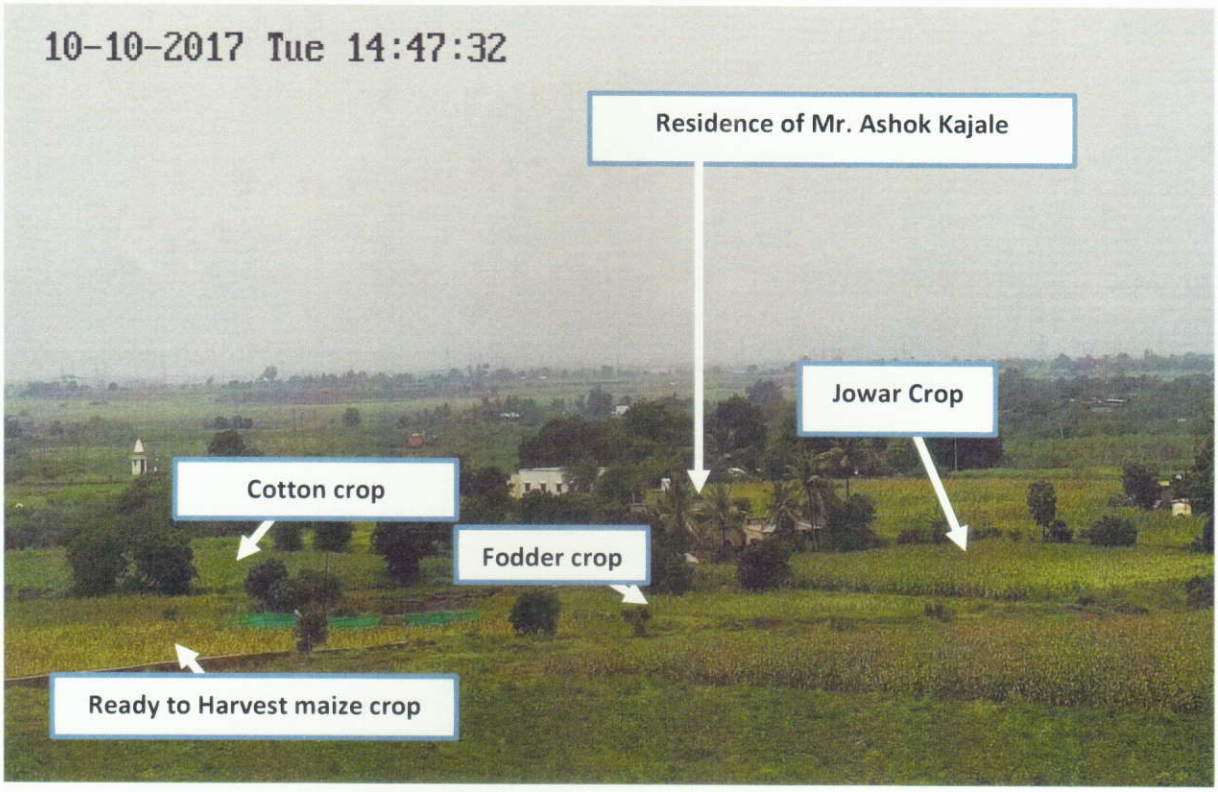
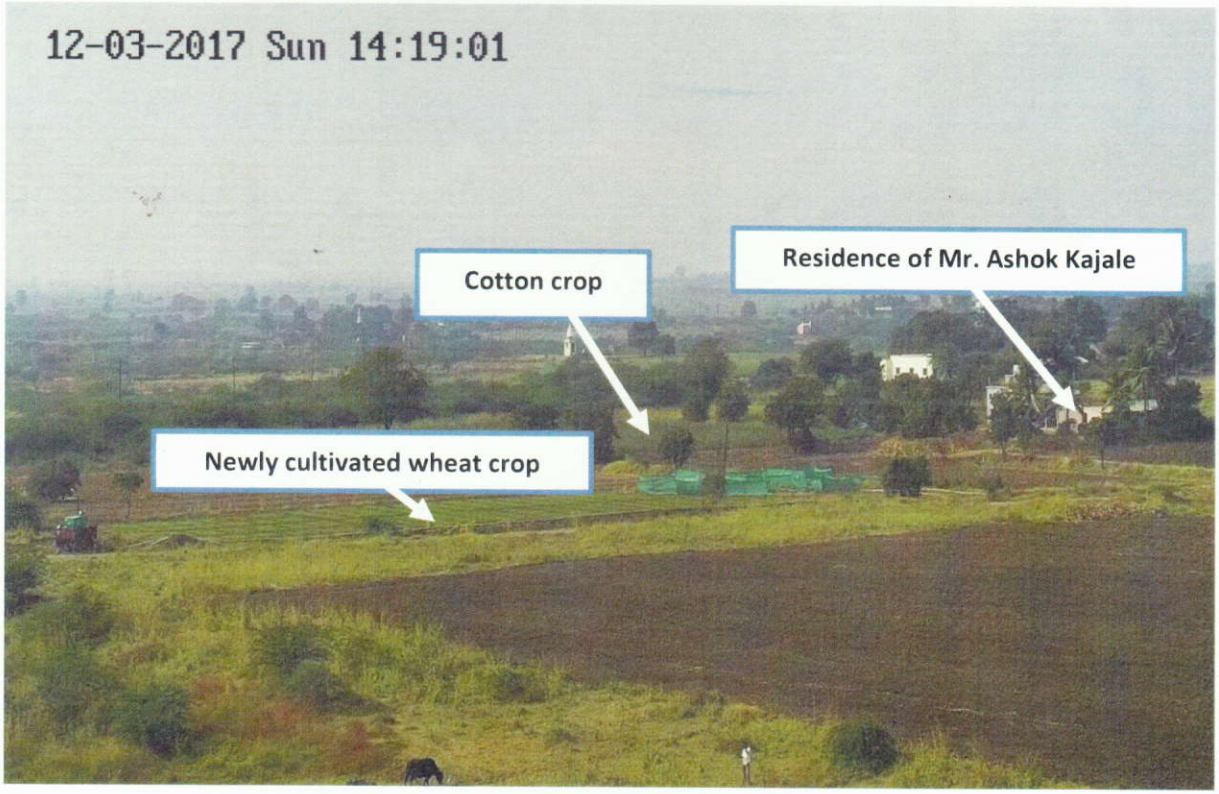
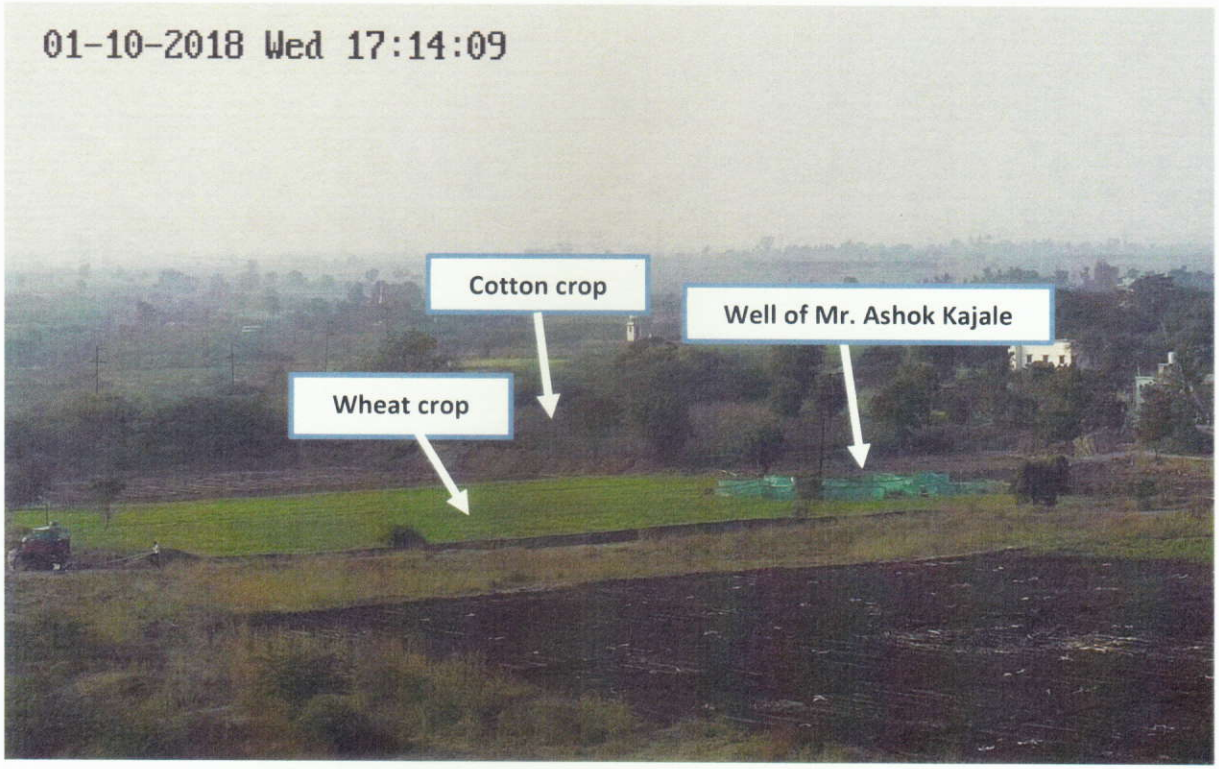


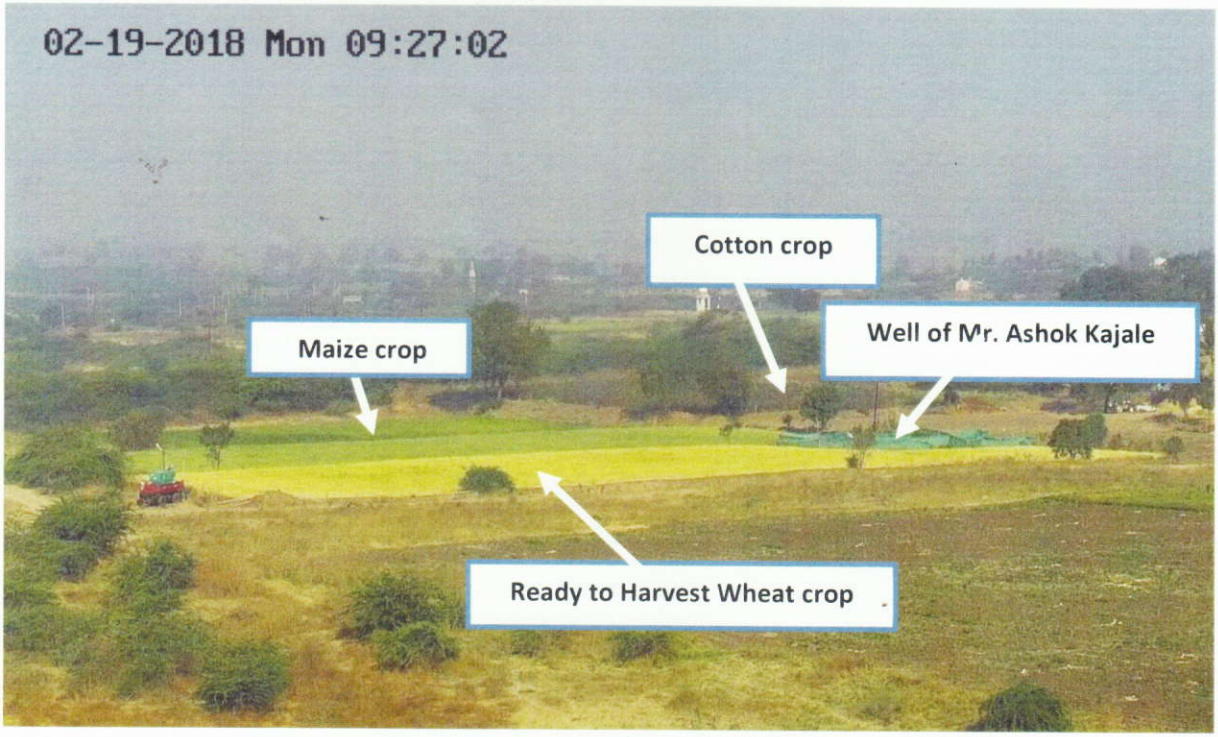
The ready to harvest Maize crop, cotton crop, jowar crop and fodder grass cultivated by Field owner: - Mr. Ashok Kajale, Luxuriant growth seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)



Newly cultivated wheat crop, cotton crop by Field owner: - Mr. Ashok Kajale, Good sprouting seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)



Wheat crop & cotton crop by Field owner: - Mr. Ashok Kajale, Luxuriant crop growth seen in the photo. (Legend: - Well of Mr. Ashok Kajale)



Newly cultivated wheat crop by Field owner: - Mr. Ashok Kajale, Good sprouting seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)

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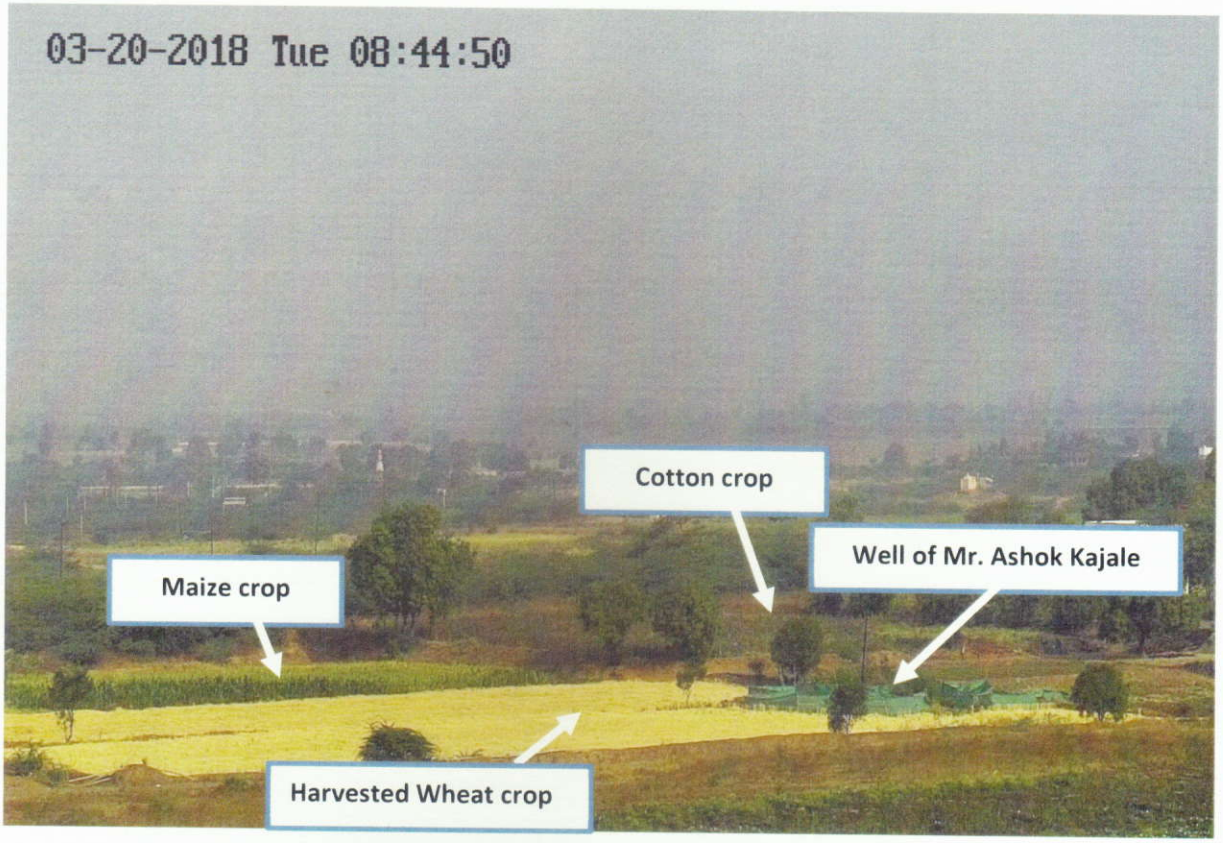
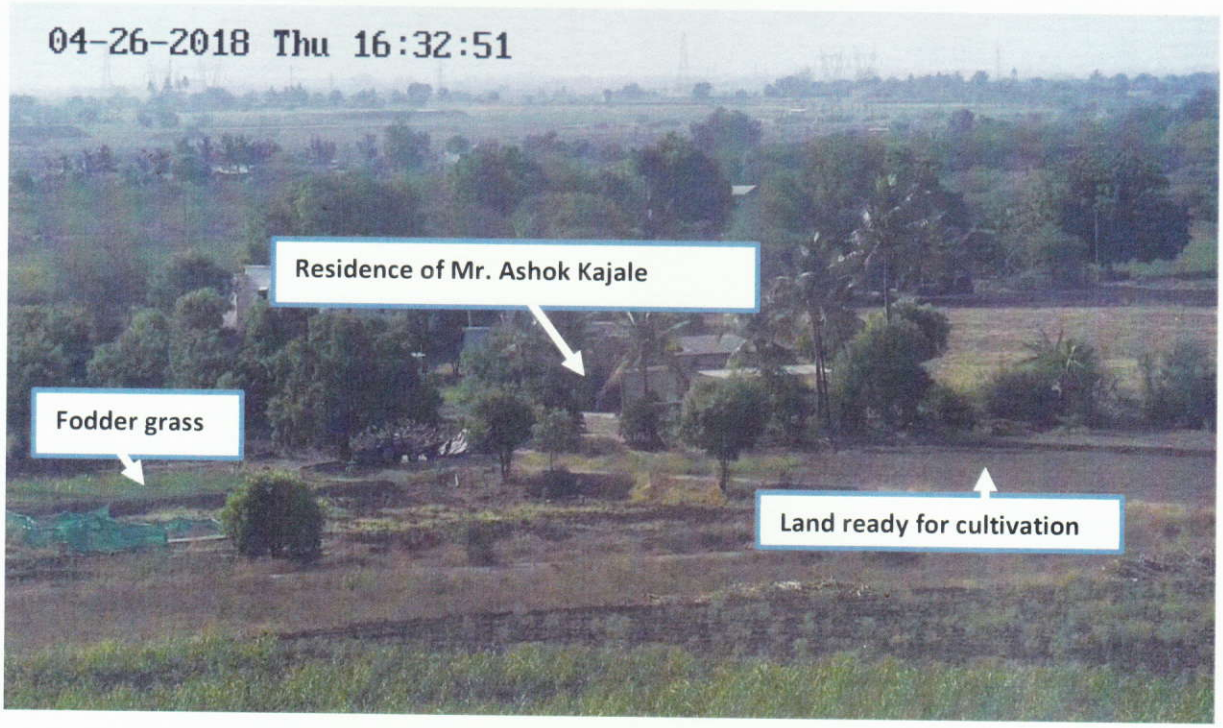
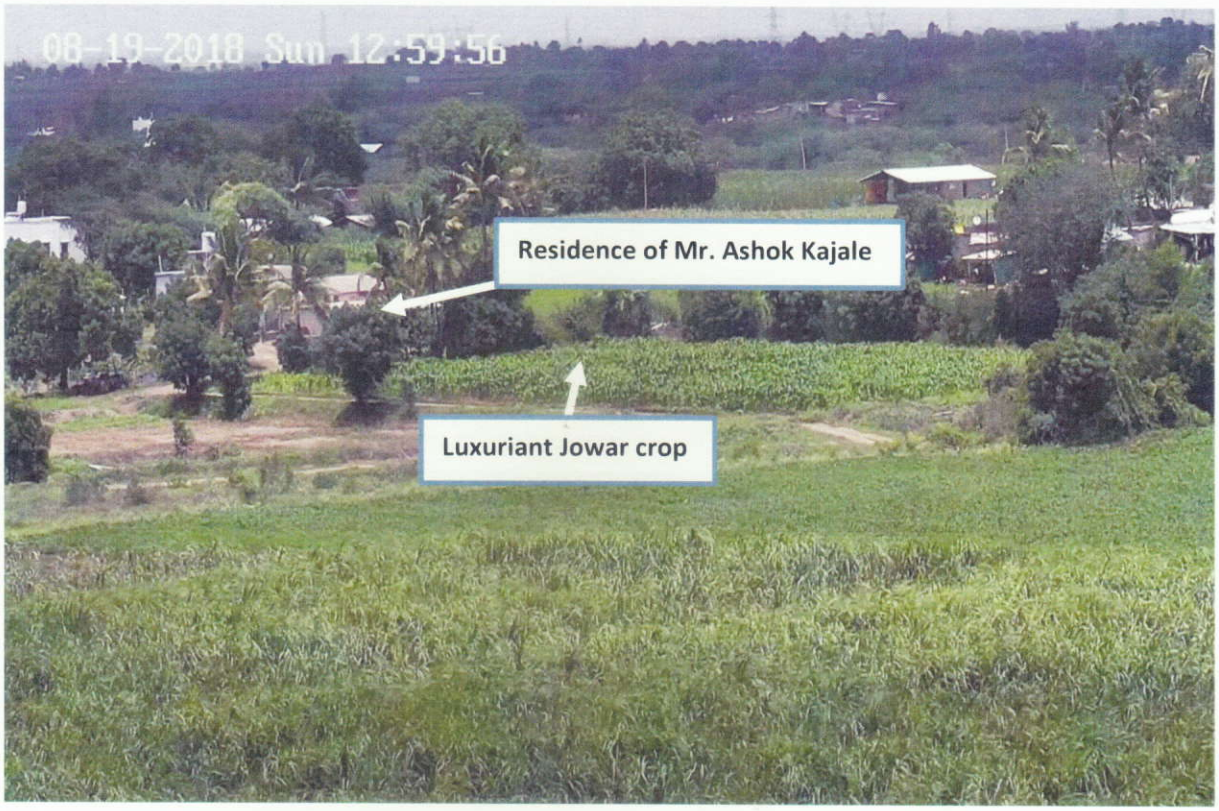


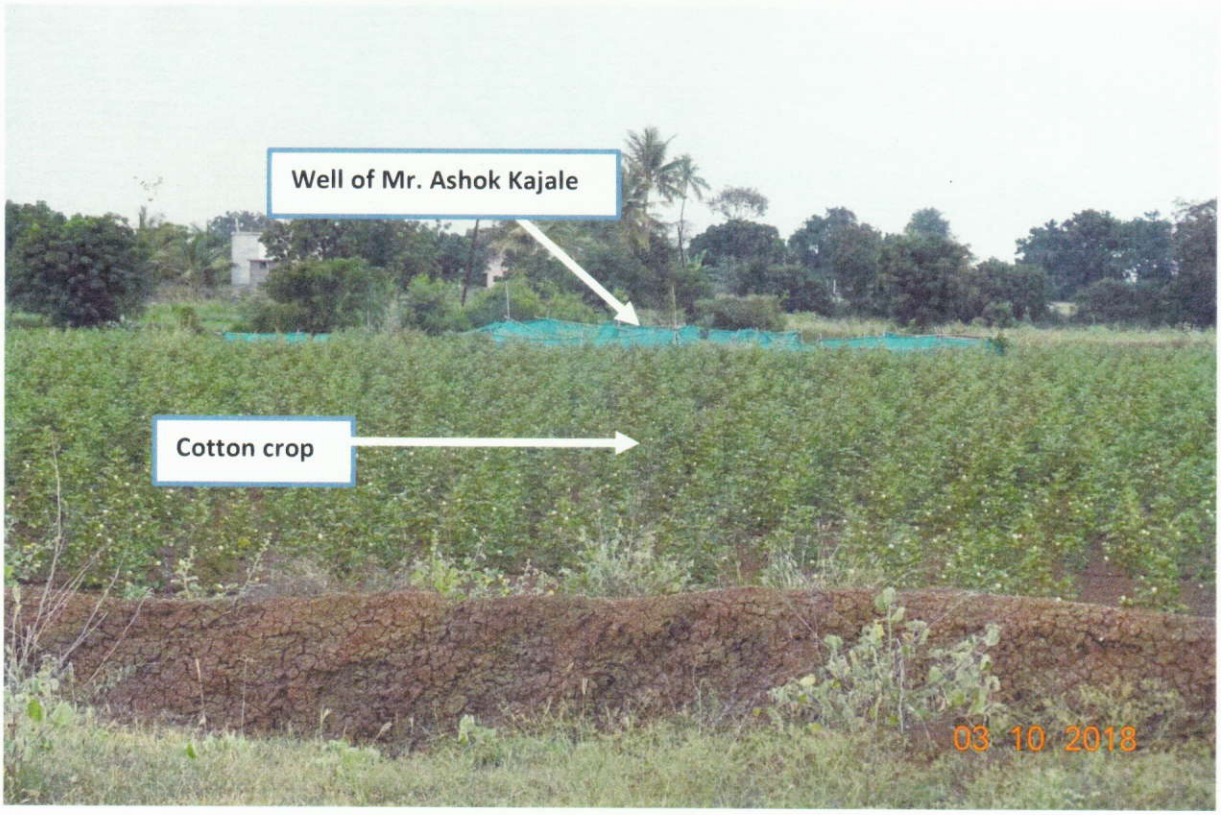
Harvested wheat crop, cotton crop and maize crop by Field owner: - Mr. Ashok Kajale. (Legend: - Well of Mr. Ashok Kajale)



Newly cultivated wheat crop by Field owner: - Mr. Ashok Kajale, Good sprouting seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)



Jowar crop by Field owner: - Mr. Ashok Kajale, Luxuriant crop growth seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)



Cotton crop by Field owner: - Mr. Ashok Kajale, Very Luxuriant crop growth seen in the photo. (Legend: - Well of Mr. Ashok Kajale)

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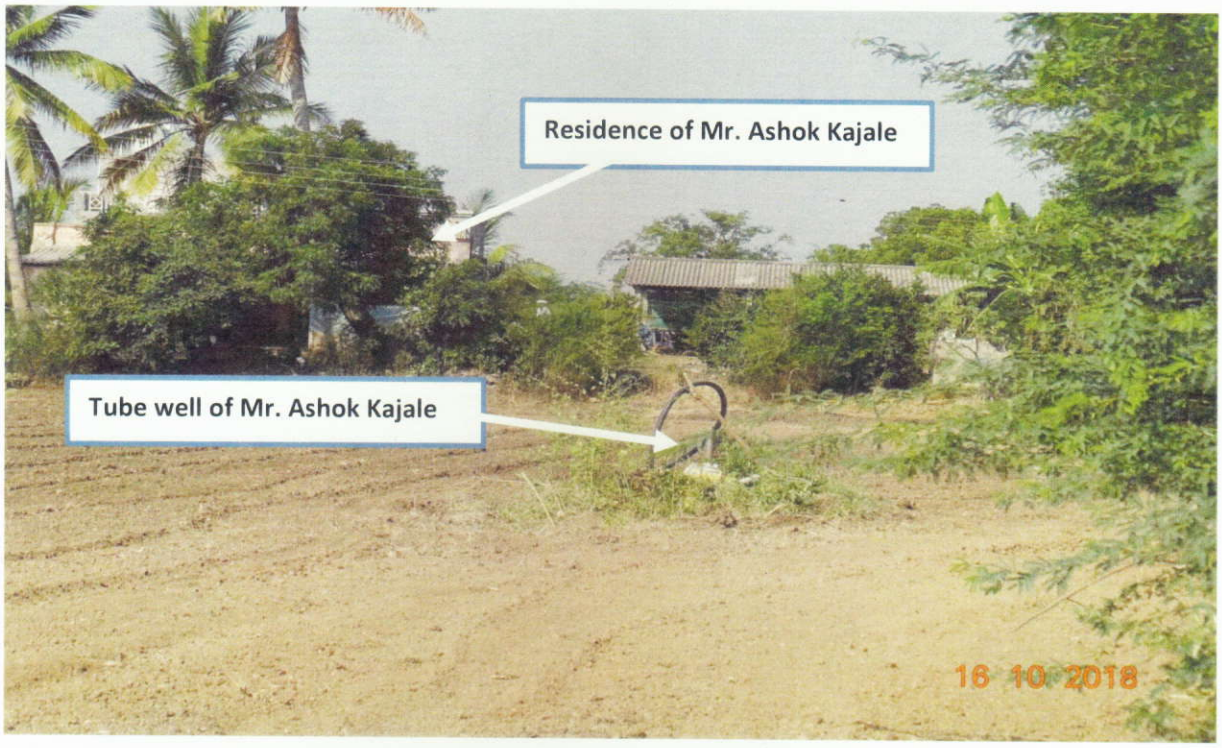
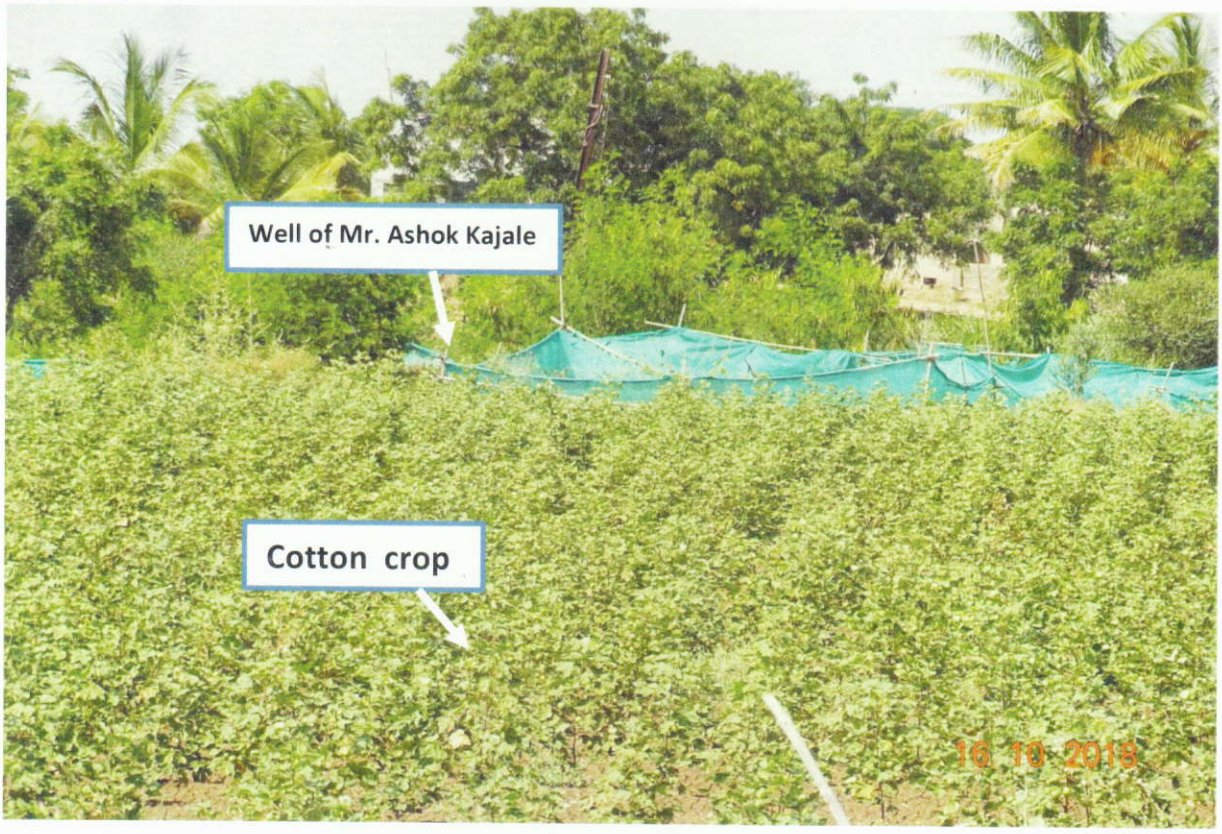


Tube well of Mr. Ashok Kajale in front of his residence, tube well water used for cultivation. (Legend: - Residence of Mr. Ashok Kajale)



Cotton crop by Field owner: - Mr. Ashok Kajale, Good growth seen in the photo. (Legend: - well of Mr. Ashok Kajale)

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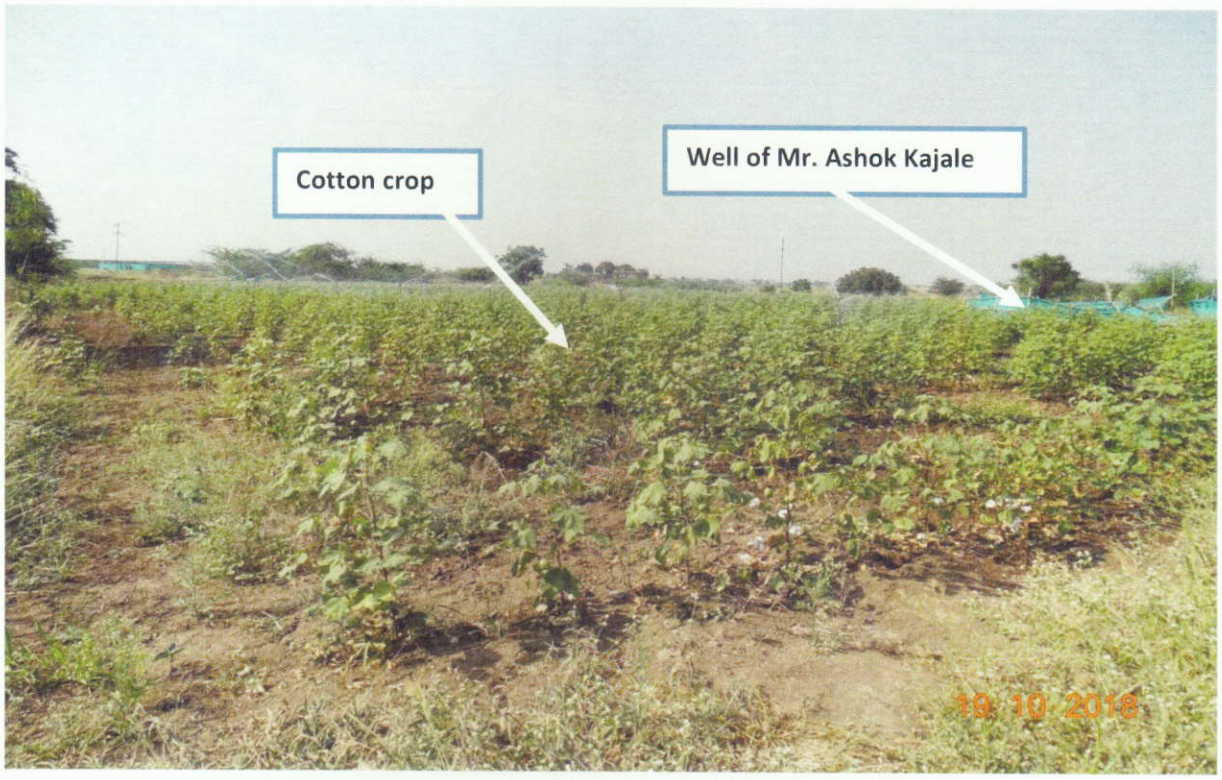
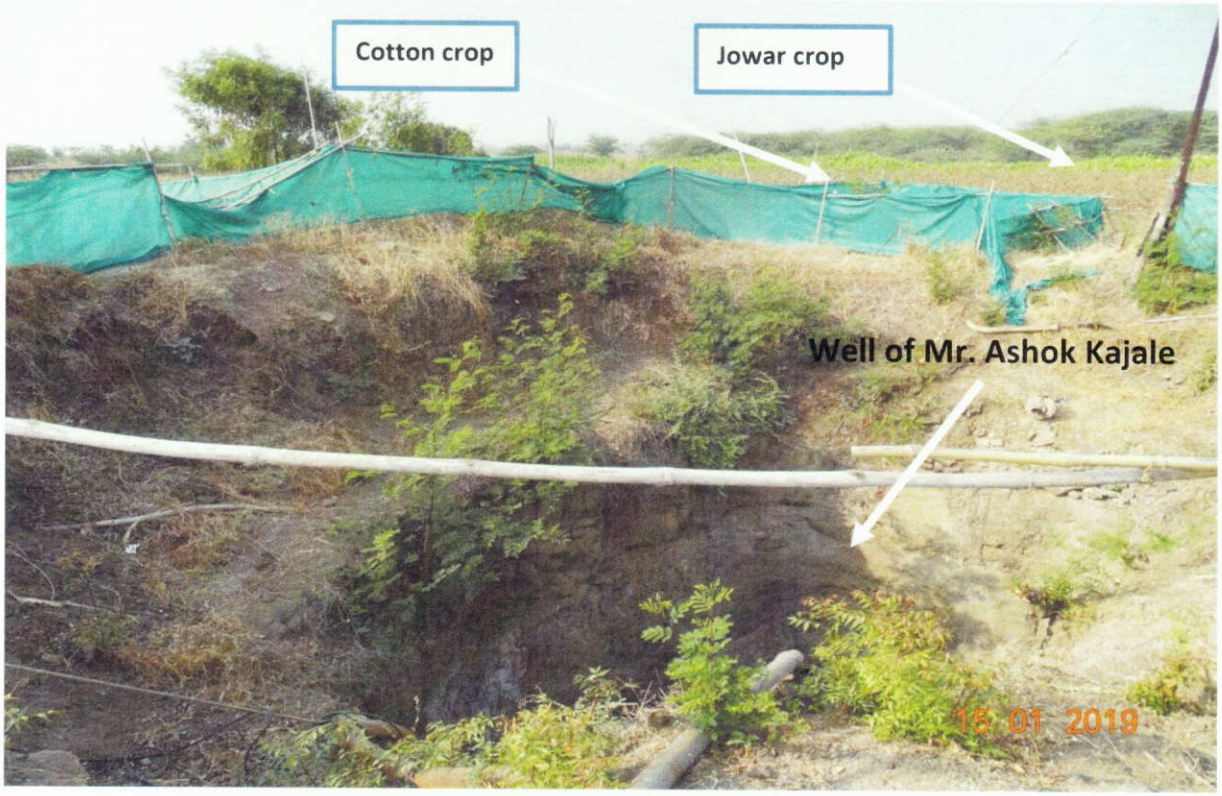


Cotton crop by Field owner: - Mr. Ashok Kajale, watering through sprinkler system (Legend: - Well of Mr. Ashok Kajale)



Cotton crop, Jowar crop by Field owner: - Mr. Ashok Kajale, (Legend: - Well of Mr. Ashok Kajale)

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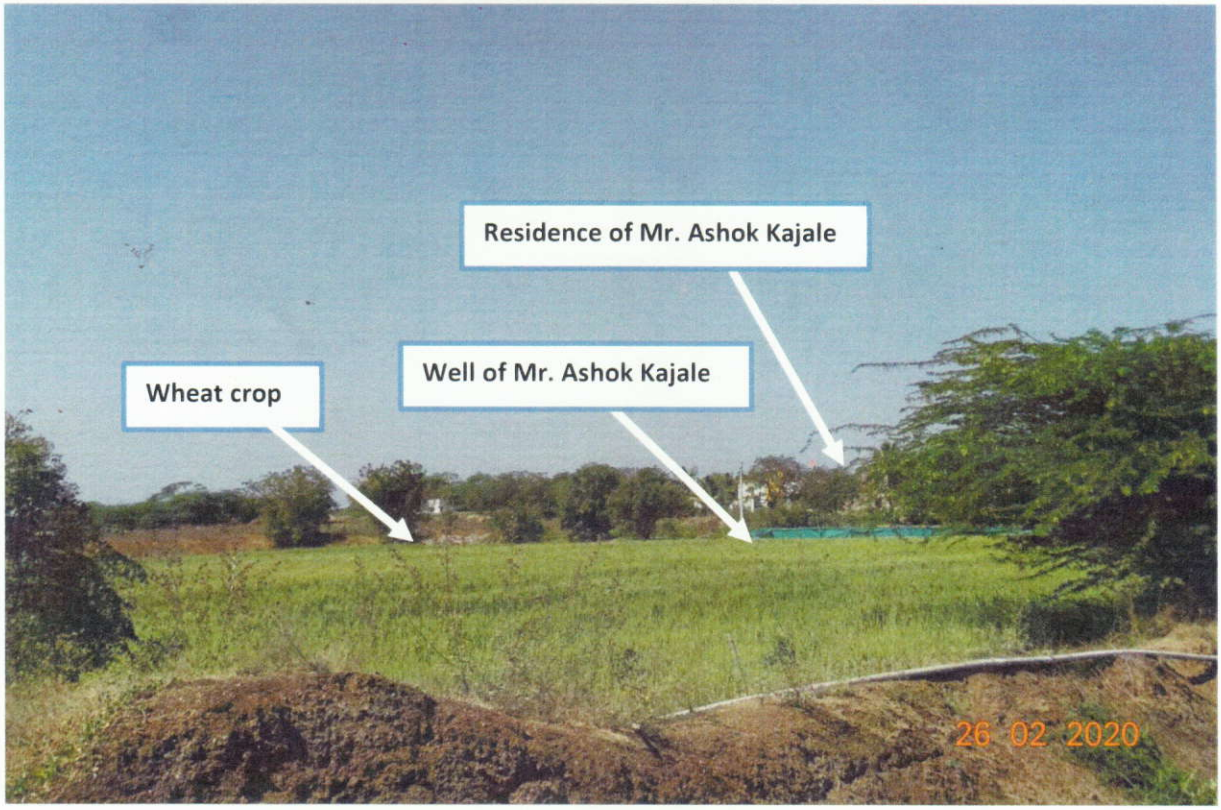
Jowar crop by Field owner: - Mr. Ashok Kajale, Luxuriant growth seen in the photo. (Legend: - well of Mr. Ashok Kajale)



Newly cultivated wheat crop by Field owner: - Mr. Ashok Kajale, Good sprouting seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)

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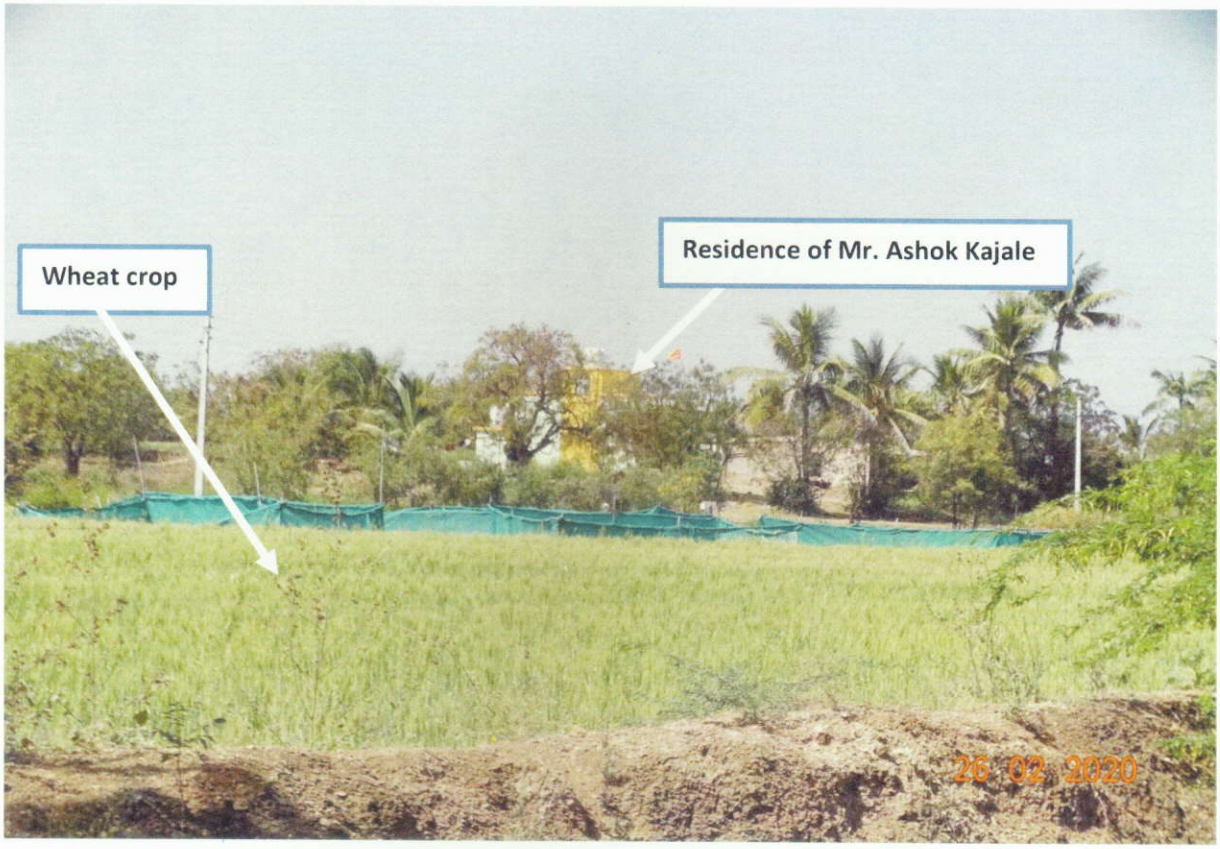
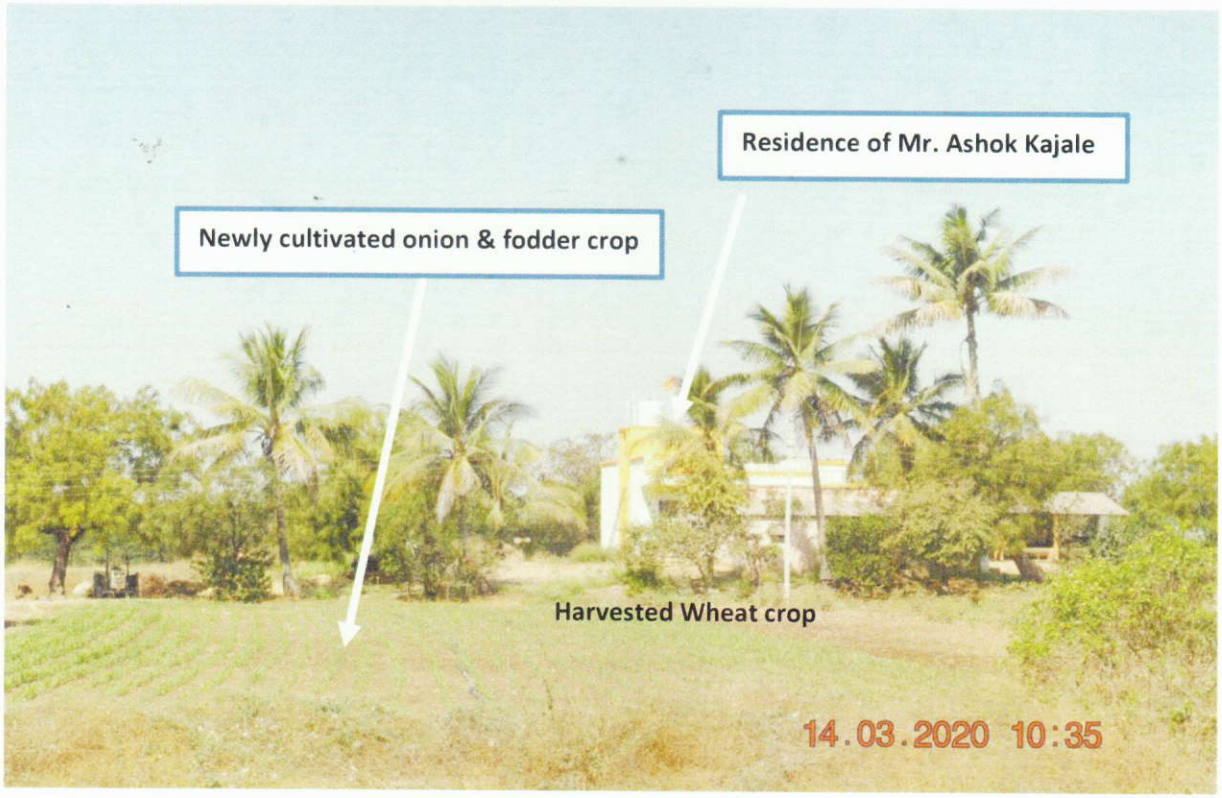
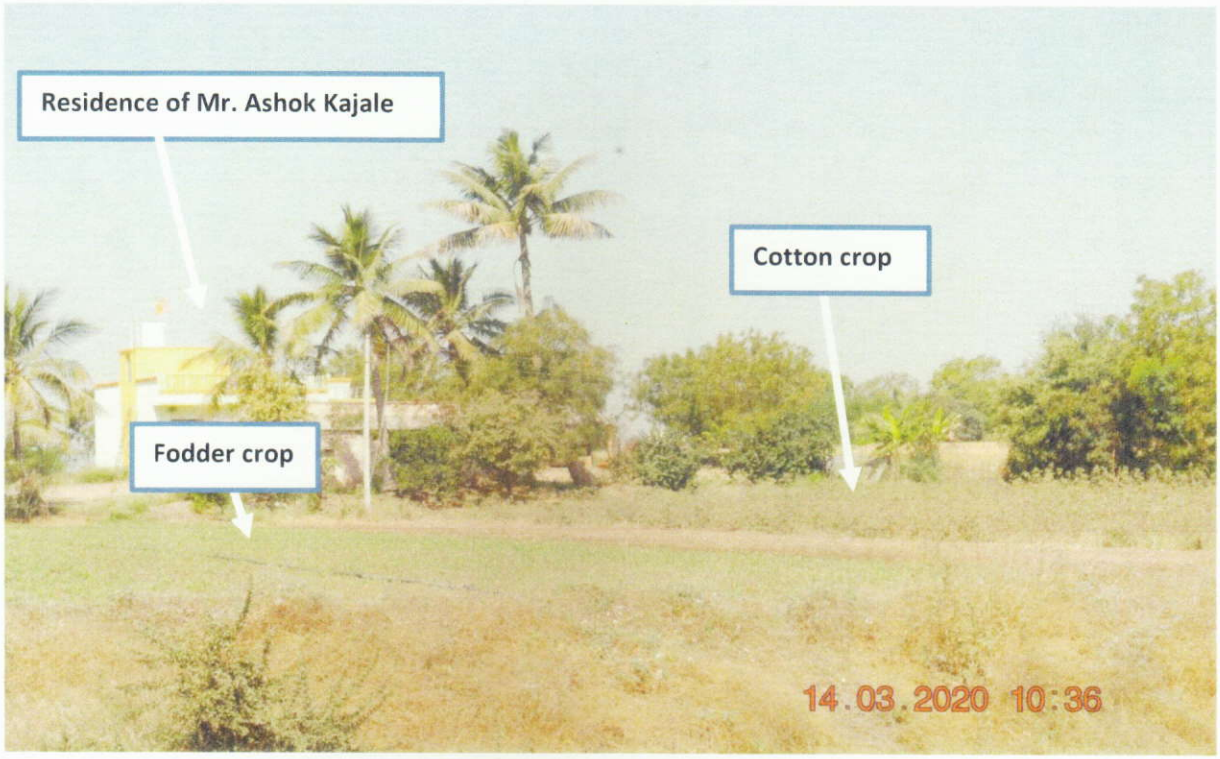


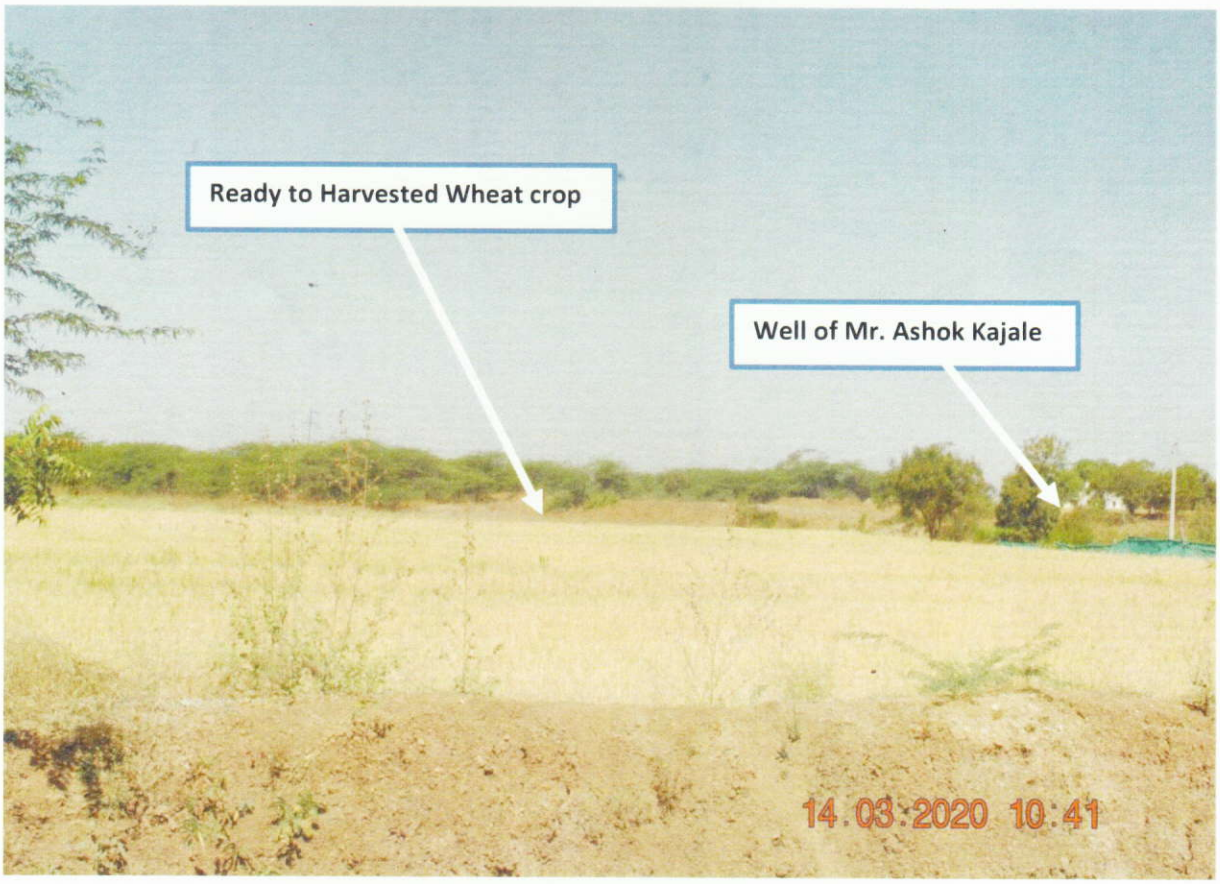
Wheat crop by Field owner: - Mr. Ashok Kajale, Nice growth seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)



Onion crop & fodder crop by Field owner: - Mr. Ashok Kajale, (Legend: - Residence of Mr. Ashok Kajale)



Cotton crop, onion & fodder crop by Field owner: - Mr. Ashok Kajale, Luxuriant growth seen in the photo. (Legend: - Residence of Mr. Ashok Kajale)



Ready to harvest wheat crop by Field owner: - Mr. Ashok Kajale. (Legend: - Well of Mr. Ashok Kajale)

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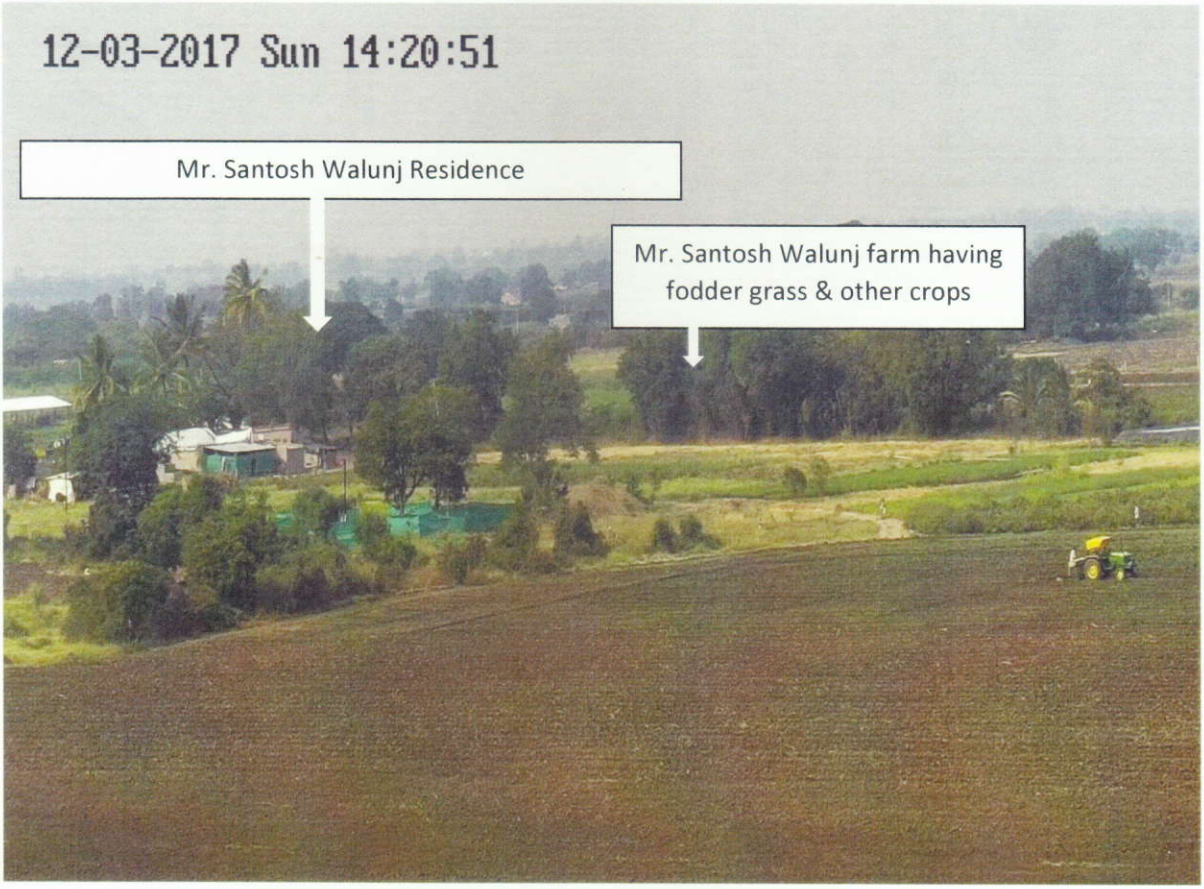
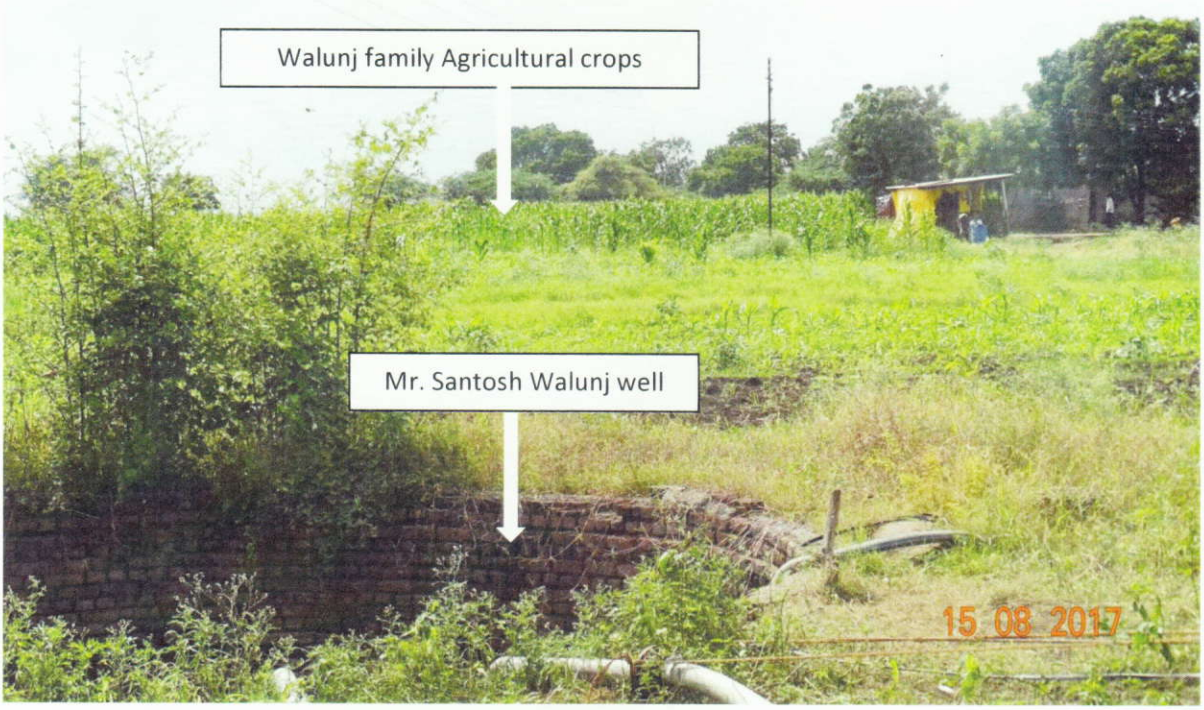
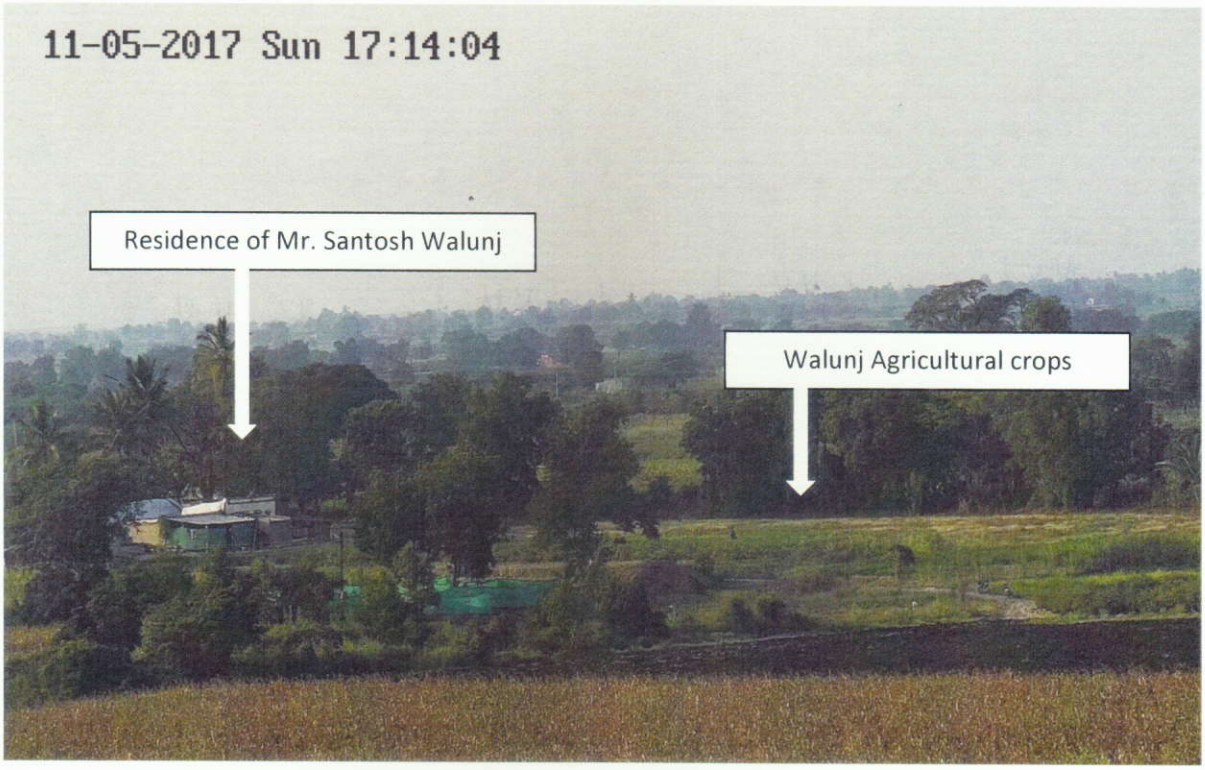
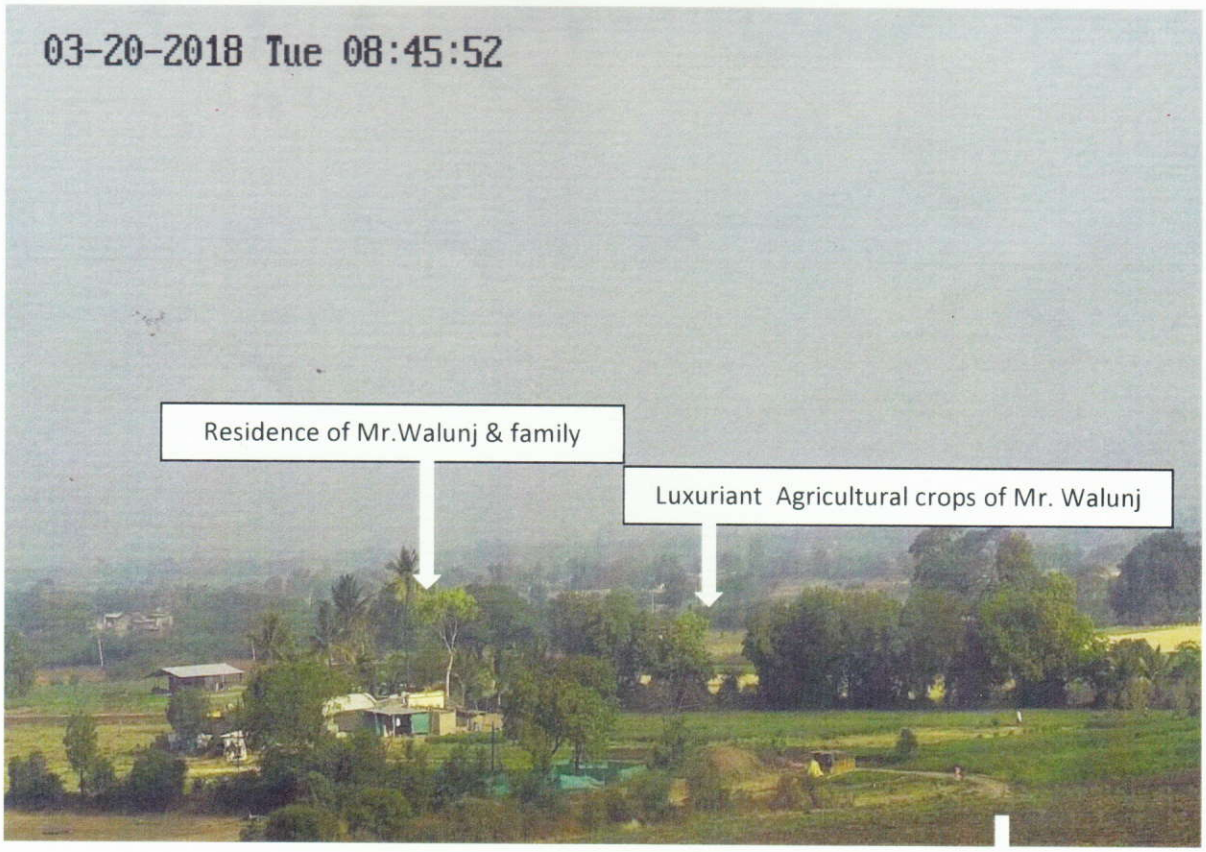
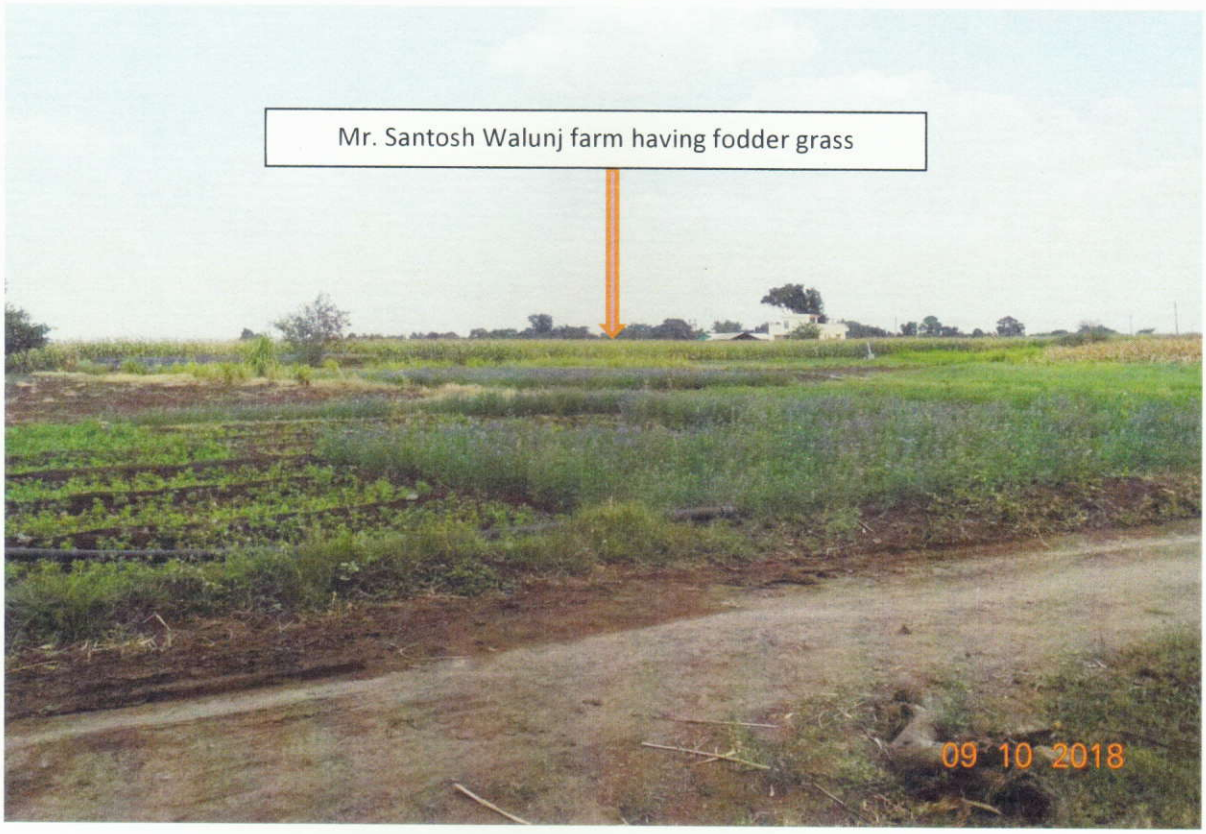
Farmland Photographs of Mr. Santosh Walunj (well No-2)

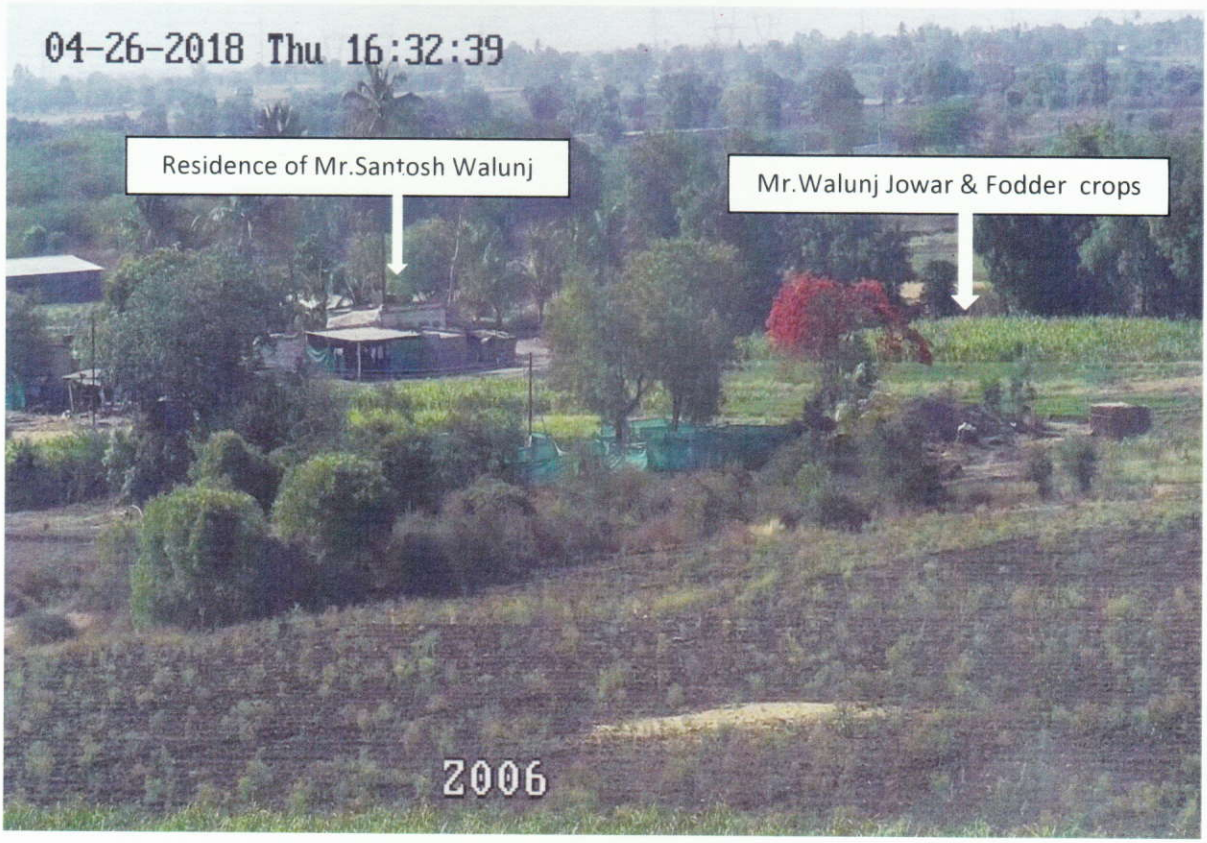





11-05-2017 Sun 17:14:04
Residence of Mr. Santosh Walunj
Walunj Agricultural crops


03-20-2018 Tue 08:45:52
Residence of Mr.Walunj & family
Luxuriant Agricultural crops of Mr. Walunj


Mr. Santosh Walunj farm having fodder grass
09 10 2018


04-26-2018 Thu 16:32:39
Residence of Mr.Santosh Walunj
Mr.Walunj Jowar & Fodder crops
2006

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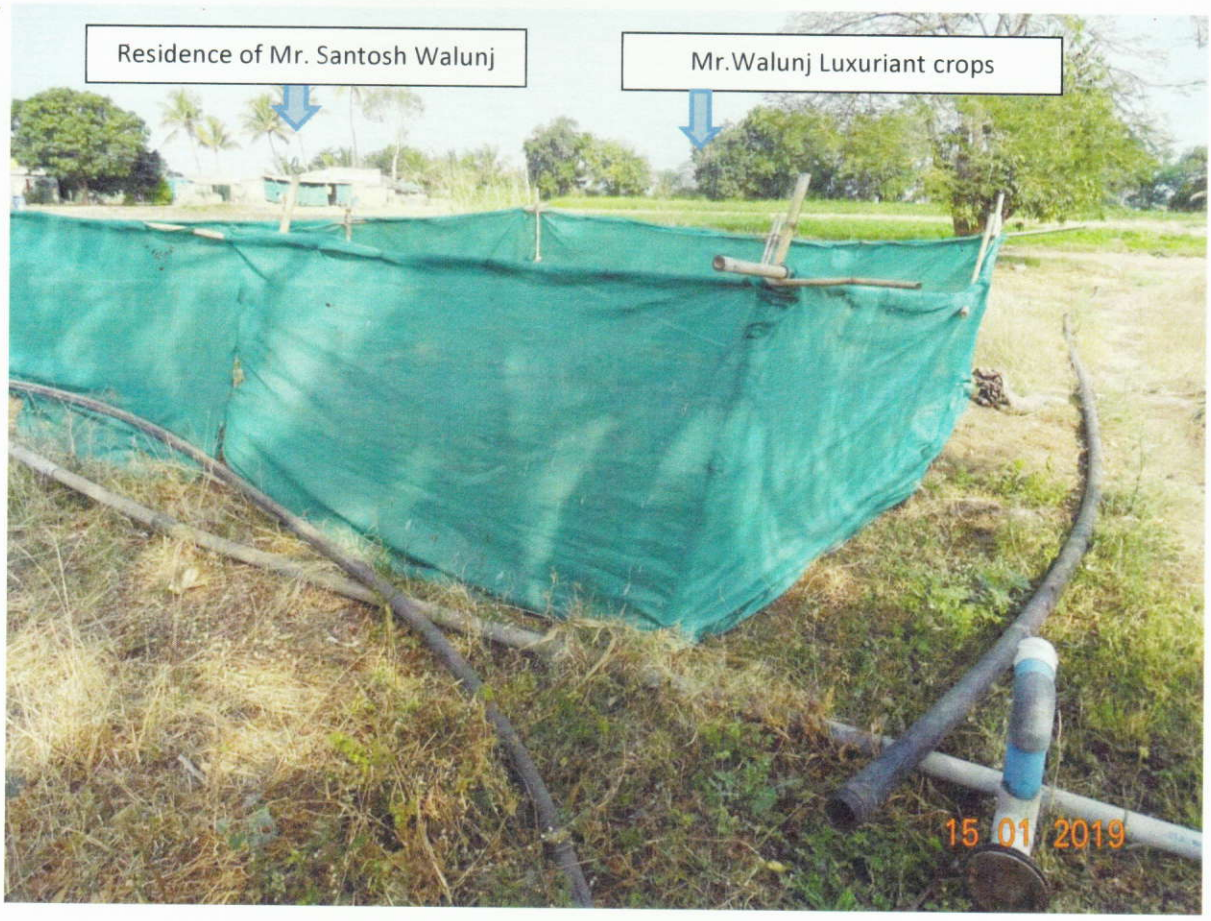
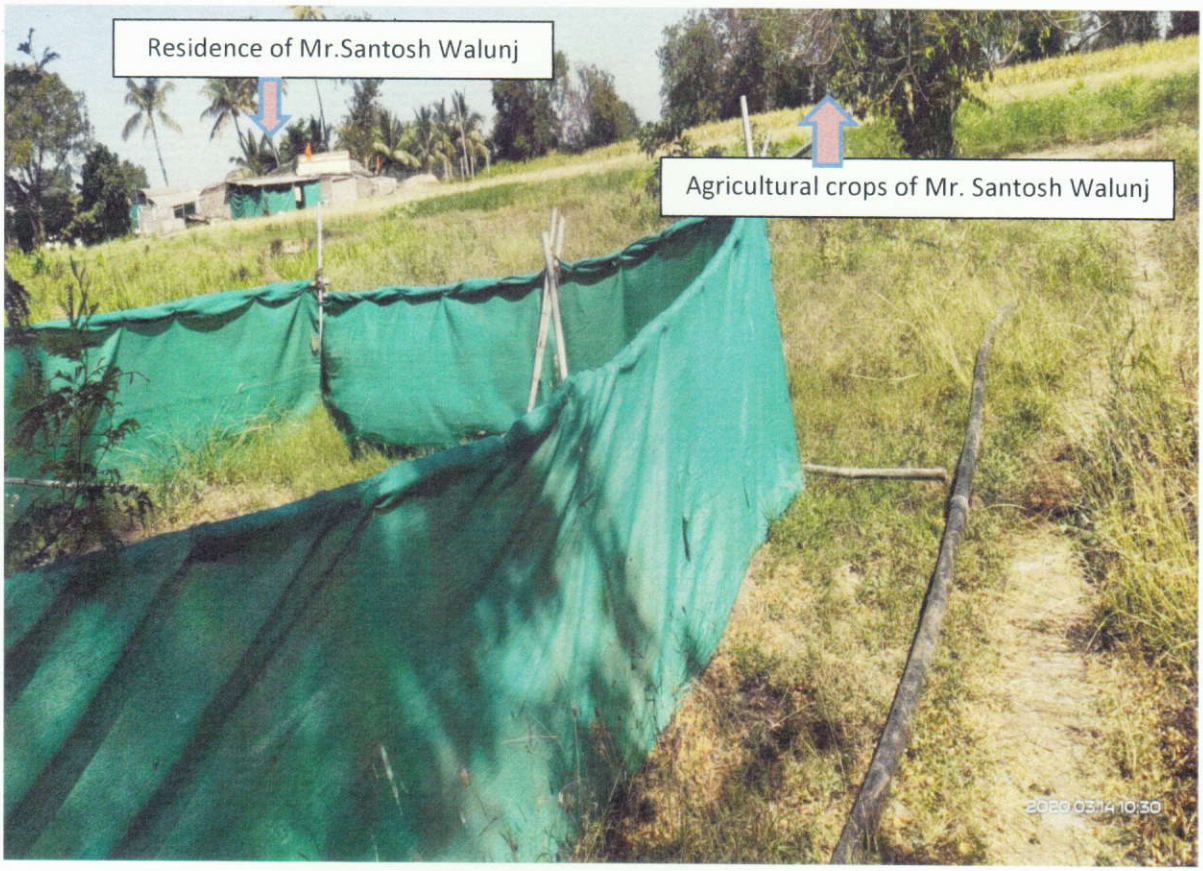
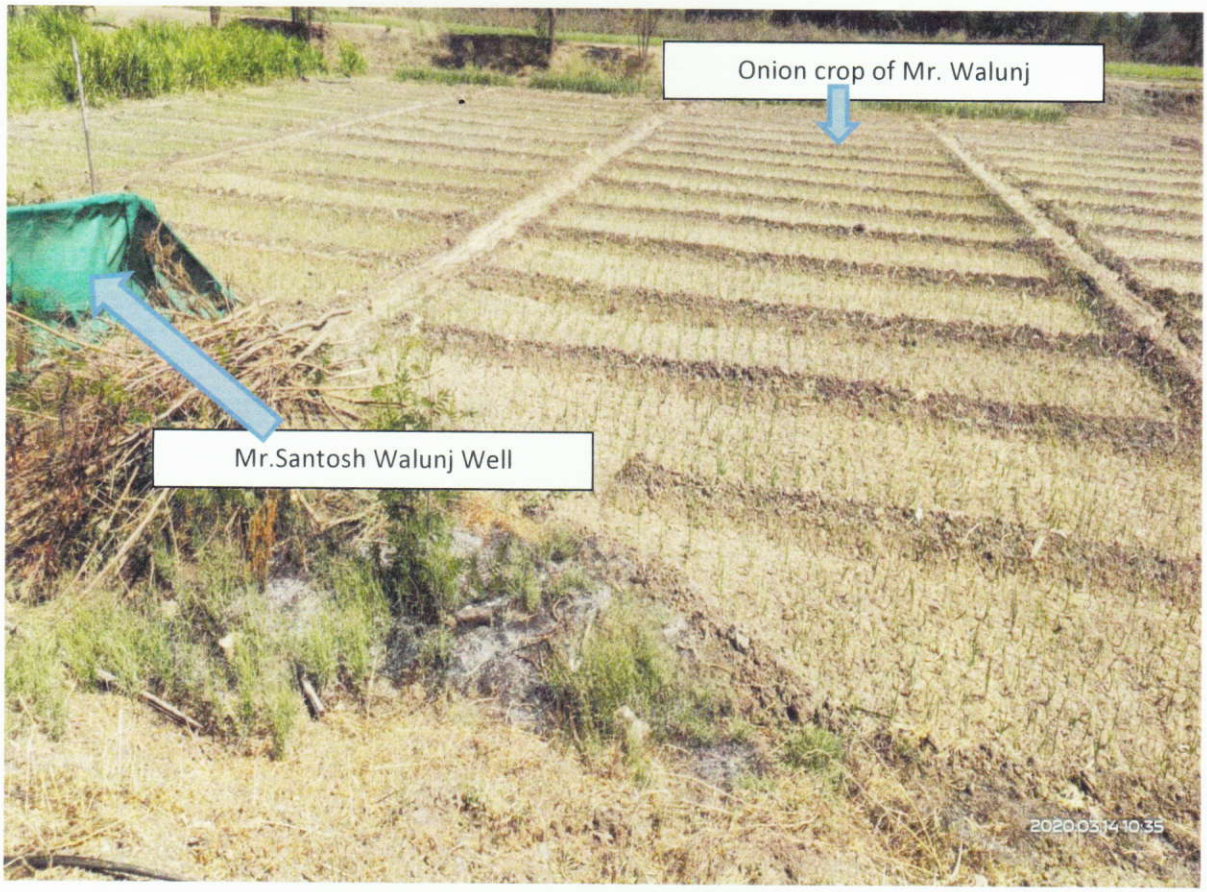
Residence of Mr.Santosh Walunj
Mr.Walunj Jowar & Fodder crops
Mr.Santosh Walunj Well Recharge pits made by Respondent No-1 crops
26 04 2018


Residence of Mr. Santosh Walunj
Mr.Walunj Luxuriant crops
15 01 2019


Residence of Mr.Santosh Walunj
Agricultural crops of Mr. Santosh Walunj
2020/03/14 10:30


Onion crop of Mr. Walunj
Mr.Santosh Walunj Well
2020/03/14 10:35