INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT (IJSREM)
VOLUME: 05 ISSUE: 07 | JULY - 2021 ISSN: 2582-3930

Stubble Collection and Safe Disposal

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Abstract- the present problem which is faced by our India is crop burning which can also be referred as stubble burning .and we need to take quick action in order to monitor such stubble burns .and we also need to take effective measures inorder to protect the environment .

According to farmer and from his point of view .management of crop left over "crop residue "is a complex and time consuming task and they don't have enough time to prepare his fields for the next crop and they are very few ways to get rid of the crop stubble and only few of them can be adopted by the farmers. because they are cheap ,inexpensive way that is to "burn the stubble".

And this practice of stubble burning in the agriculture fields can releases approximately 70% carbon dioxide, 0.66% methane and 2.09% nitrous oxide in the air. the first two gases can remain for 100 years .and the third gas can remain for more than 170 years and if these gases stay in our environment they can destroy our environment and can impact our ecosystem in a bad way.

And inorder to overcome the above stated issue we need to automate and streamline the stubble collection .and we need to provide an alternative to the farmer .by also providing the stakeholder to directly interact with the farmer. There by reducing the burden on the farmer and prepare his field for next crop.

We will be creating an web application for formers which would help the farmer to connect directly with the stakeholders who wish to buy the stubble from him and also update the necessary information like the quantity of stubble that is present

A web application where we can manage database for farmers yield and that can help many firms who wish to buy the stubble for thermal power plant ,and packing industries ,and to produce the biodegradable plates and manufacture bags that is plastic free at very low cost by direct interaction with the former

The firm can even find the required quantity and negotiate directly with the formers without any intervention of the middleman there by easing the process

Keywords: web application ,stakeholder ,database ,quantity

I. INTRODUCTION

Stubble burning is the practice of intentionally setting fire to the straw stubble that remains after grains, such as rice and wheat, have been harvested. Farmers mainly in Punjab and Haryana burn an estimated 35 million tons of crop waste from their paddy fields after

harvesting as a low-cost straw-disposal practice to reduce the turnaround time between harvesting and sowing for the second (winter) crop. Smoke from this burning produces a cloud of particulates visible from space and has produced what has been described as a "toxic cloud" in New Delhi, resulting in declarations of an air-pollution emergency.

Farmers usually burn stubble due to shortage of labours and lack of time as they need to keep ready their land for next crop.

Apart from contributing to air pollution, stubble-burning deteriorates the soil's organic content, essential nutrients and microbial activity – which together will reduce the soil's long-term productivity.

In order to streamline and automate the process of stubble collection, transportation to the desired location, notification around stubble pickup and delivery. Which almost reduces the burden on the farmer and prepare his field for next crop.

We will be creating an web application for farmers which would help the farmer to connect directly with the stakeholders who wish to buy the stubble from him and also update the necessary information like the quantity of stubble that is present and the price that he is wishing for the stubble . A web application where we can manage database for farmers yield .

Website that can help many firms who wish to buy the stubble for thermal power plant ,and packing industries ,and to produce the biodegradable plates and manufacture bags that is plastic free at very low cost by direct interaction with the farmer.

The firm can even find the required quantity and negotiate directly with the farmers without any intervention of the middleman there by easing the process .

Steps taken in our project.

1. we will be Developing web based application which helps farmers to sell their product to stakeholders by updating the necessary information and the amount they wishing for their stubble as well.

2. Even this application is useful for stakeholders who want to buy the stubble for various uses like for thermal power plant ,and packing industries ,and to produce the biodegradable plates and manufacture bags that is plastic free at very low cost by direct interaction with the farmer.

3. Not only farmers and stakeholders also useful for society since by doing this process we can make pollution free environment as well.

4. As government taken steps as curbing the farmers as they burn stubble so this is not right to do because poor people cannot bear it. Since by using our web baseda application people can earn money as well for the amount of stubble he has at the same time people can also avoid loosing fertility of the soil of their respective land.

5.Even people can use money which gained from stubble for sowing their next crop and making their field ready as well.

III.METHODS AND MATERIALS

Agile software development methodology

In our project we have used Agile software development which also refers to a group of software development methodologies based on iterative development, where requirements and solutions evolve through collaboration between

self-organizing cross-functional teams. Agile methods or Agile processes generally promote a disciplined project management process that encourages frequent inspection and adaptation.

Materials that we have used for development of web application are

- Python
- Javascript
- Mongo database
- react

IV.RESULTS AND DISCUSSIONS

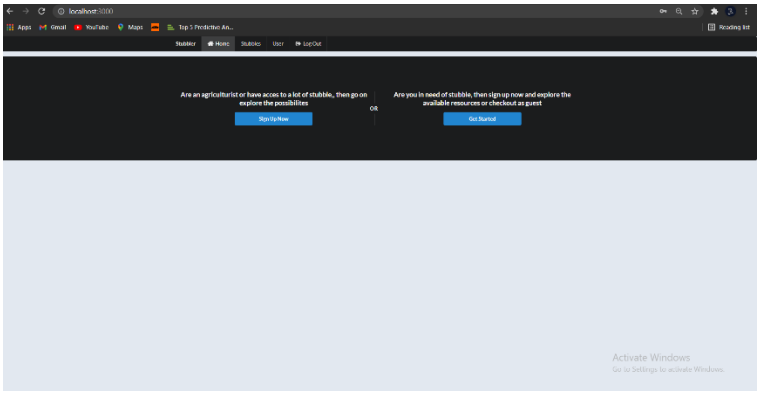

Fig. I This is the home page to the website

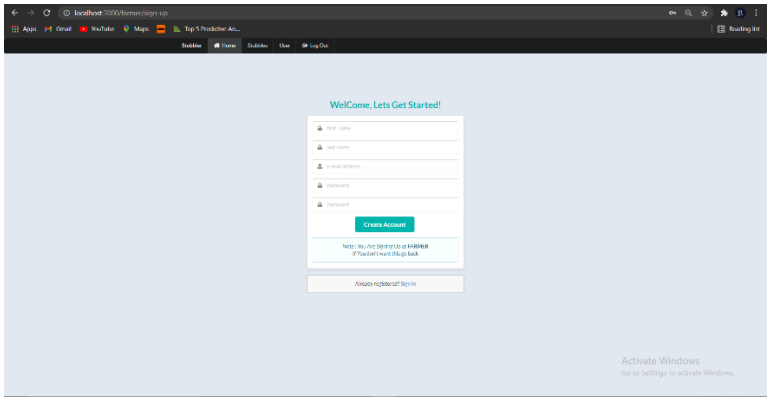

Fig. II This is the page for farmer to register

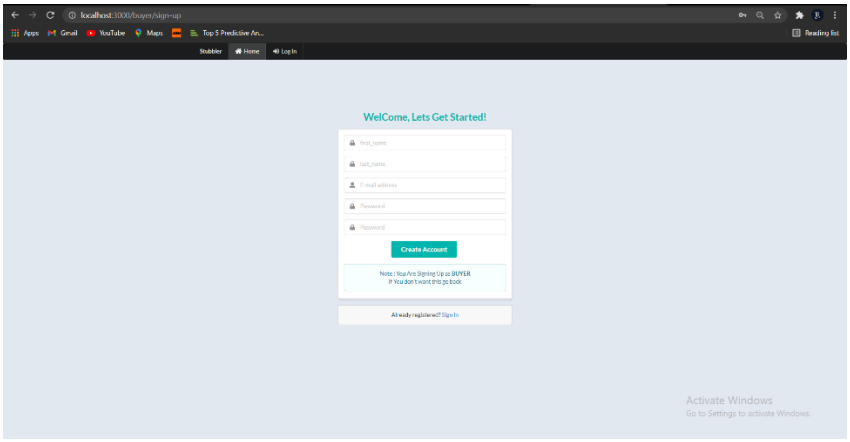

Fig. III This is the page where buyer can register

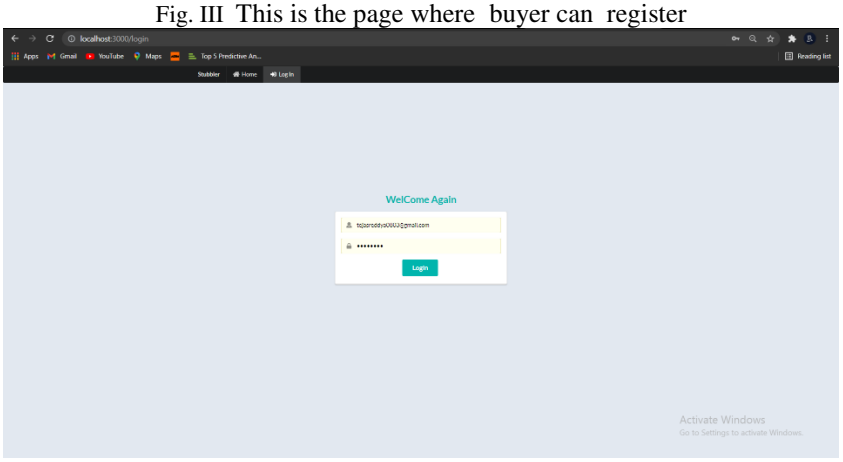

Fig. IV This is the login page for both farmer and buyer

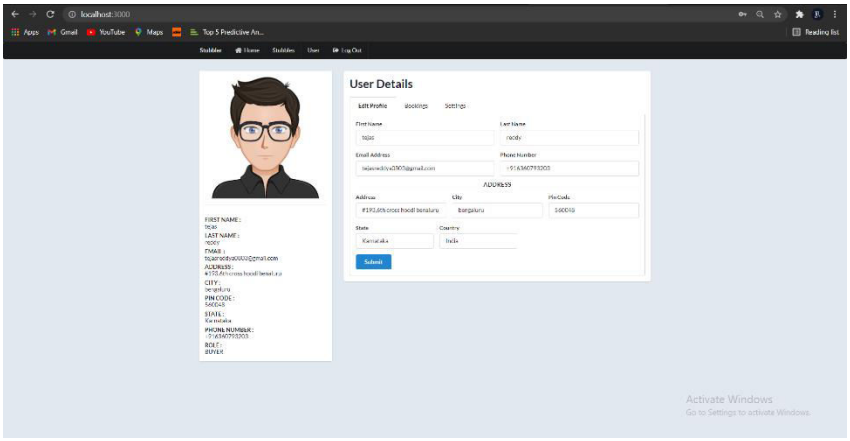

Fig.V This is the buyer home page

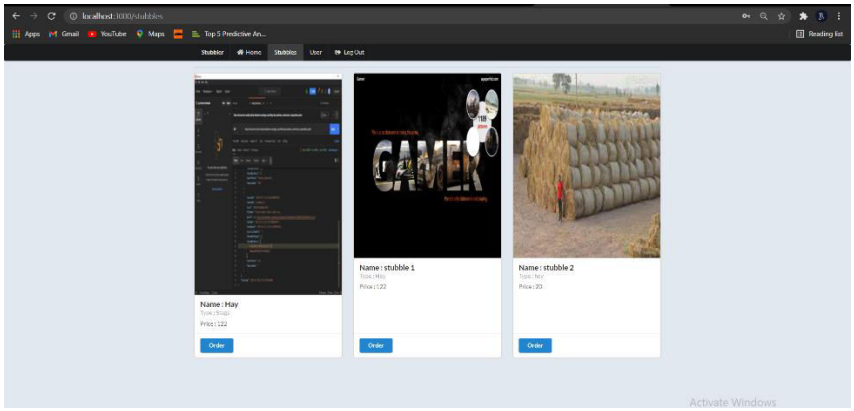

Fig. VI This is the stubble page from where buyer can order

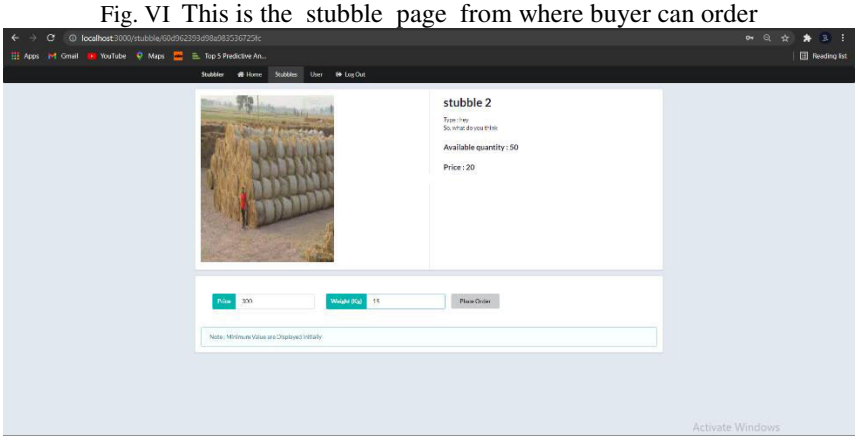

Fig. VII age where buyer is placing order

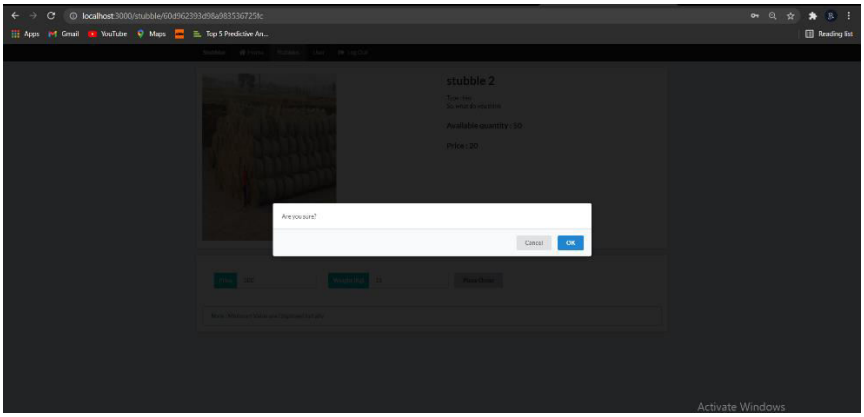

Fig. VIII This is confirmation page before placing order

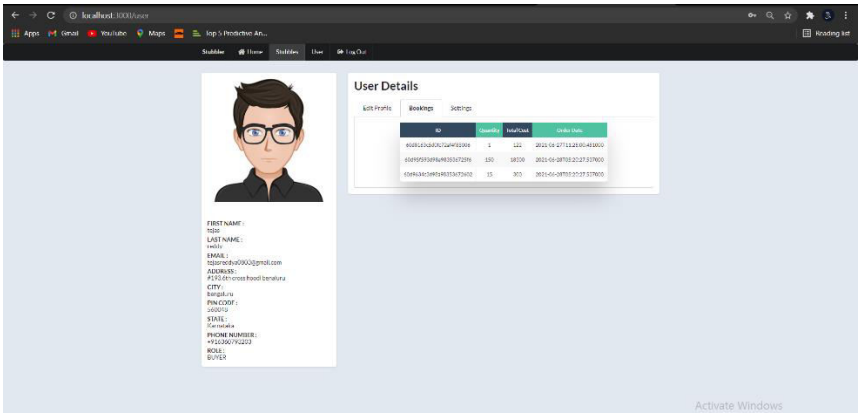

Fig. IX This is the page for buyer order list

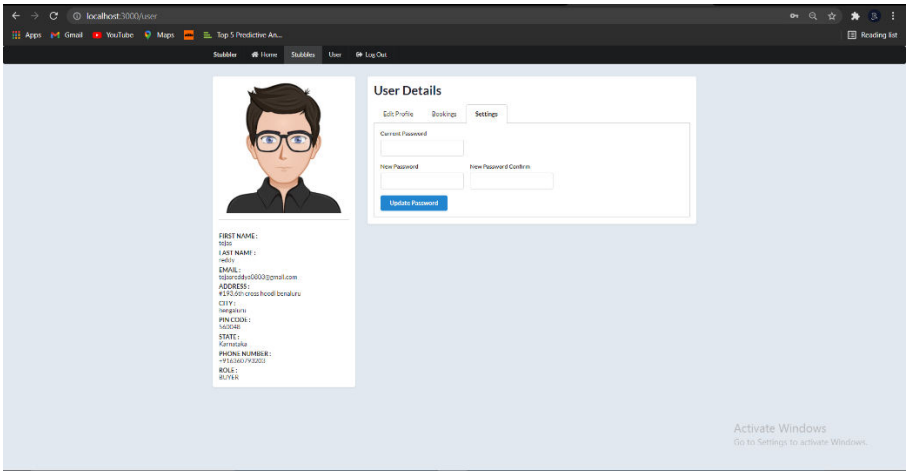

Fig. X This is the page where buyer can change is password and id

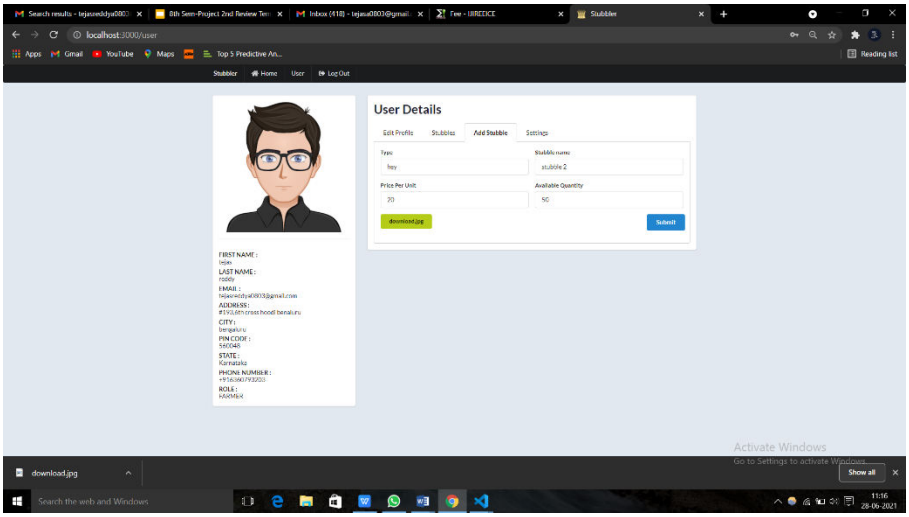

Fig. XI This is page where farmer can add stubble

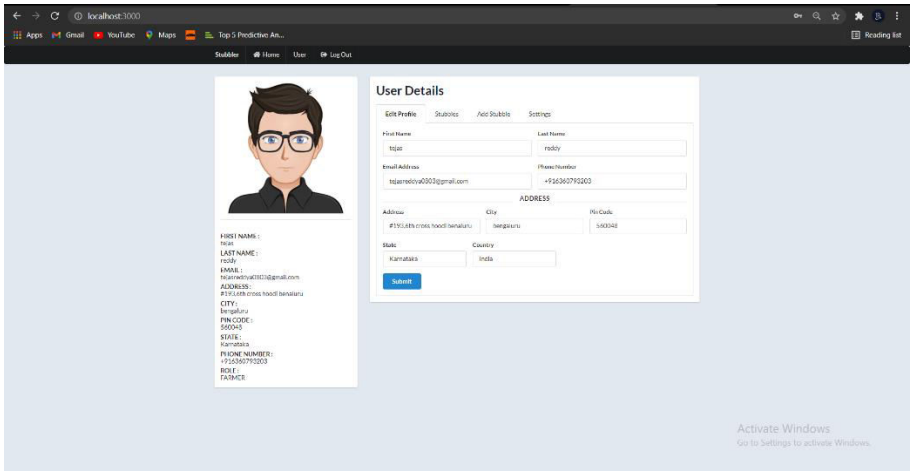

Fig. XII This is farmer home page

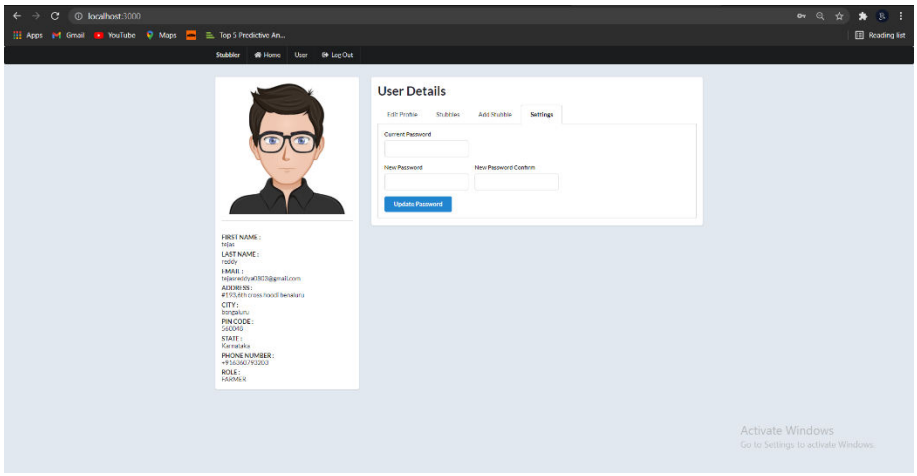

Fig. XIII This is page where farmer can change his password and id

CONCLUSION

- The web application that has been developed by us "stubbler" may resolve the issue of the farmers who is struggling to sell their stubble and the problems of the stakeholders who is wishing to buy the stubble.there by allowing them to sow the next crop without burning the stubble

- In the context of business value, our application provides a lot of business opportunities. First of all the application is based on the use of stubble (considered as agricultural waste) to create a trend of buying and selling of stubble

- There is no such application across the internet that is used to utilize Stubble, actually an asset that is considered as waste. Currently there are applications on internet that are used by the govt to monitor the stubble burning across the states and impose fines on the farmers ,but this is not the way how farmers should be treated ,and this is not a solution for preventing the environment by "stubble burning".

- In our web - application, we provide them with the best possible solution inorder to minimize it. And we created our application by considering all the problems of farmers. We researched for the primary root cause of stubble burning and also we arrive at this conclusion. people don't have the right platform to get rid of the stubble and there is no proper system of stubble management and no proper market to sell their stubble.

- And this web-application can be completely used in our real-life issues as well which are related to Stubble management. This is built by considering all major and minor problems of farmers and government. This is the final step towards the utilization of stubble in an efficient way. our application has features needed to save the environment from Stubble burning.

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany a successful completion of any task would be incomplete without the mention of people who made it possible, success is the epitome of hard work and perseverance, but steadfast of all is encouraging guidance.

So, with gratitude we acknowledge all those whose guidance and encouragement served as beacon of light and crowned our effort with success.

We are thankful to our principal Dr. P Mahabaleswarappa, for his encouragement and support throughout the project work.

We are also thankful to our HoD, Dr. Sanchari Saha for her incessant encouragement & all the help during the project work.

We consider it a privilege and honour to express our sincere gratitude to our guide Dr. Muzammil Hussain, Assistant Prof, Dept. of ISE for his valuable guidance throughout the tenure of this project work, and whose support and encouragement made this work possible.

It's also a great pleasure to express our deepest gratitude to all faculty members of our department for their cooperation and constructive criticism offered, which helped us a lot during our project work.

Finally, we would like to thank all our family members and friends whose encouragement and support was invaluable.

REFERENCES

1. *Geeta Anand, "Farmers unchecked burning fuel's India's Air pollution", The New York Times, 2 November 2016. Retrieved 9 November 2017.*
2. *Sanjeev Miglani and Aditya Kalra, "New delhi declares emergency as toxic smog thickers by the hour", Reuters, 9 November 2017. Retrieved 9 November 2017.*
3. *Joydeep Thakur, Brace for air pollution delhi as crop burning starts in neighbouring states: Agricultural stubble running into millions of tonnes is burnt by farmers in northern India every October. An estimated 35 million tonnes are set afire in Punjab and Haryana alone. Hindustan times, 28 September 2017. Retrieved 9 November 2017.*
4. *Shagun kapil "Advanced air pollution warning system to predict stubble burning areas near new delhi" published by DownToEarth in Tuesday 08 october 2019.*
5. *Soumitra Nandi "Now app based technology to curb stubble burning" by MillenniumPost in 7 June 2020.*
6. *Sponsered link by Taboola "Punjab launches 3 mobile apps to check stubble burning" by NDTV October 11 2018.*
7. Ferrandez-Garcia; García-Ortuño; Ferrández García; Ferrández-Villena; Ferrandez-Garcia (28 September 2017). "Fire resistance,physical and mechanical characterization of binderless rice straw particleboards". BioResources. (inactive 9 January 2021). *Retrieved 1 December 2020.*
8. *Andrews, Susan S. (22 February 2006). "Crop residue removal for biomass energy production:effects on soil and resources" .Natural Resource Conservation Service Agriculture. Retrieved 3 January 2021.*
9. *Ellison, Amelia (24 August 2013)."Stubble burn causes headache for forebridges". The Wimmera Mail Times. Retrieved 24 August 2013.*
10. *Zhang, H.; Hu, D.; Chen, J.; Ye, X.; Wang, S. X.; Hao, J. M.; Wang, L.; Zhang, R.; An, Z. (2011). "Particle size distribution and polycyclic aromatic hydrocarbons emissions from agricultural crop residue burning". Environmental Science & Technology.*
11. *By Akshitha Sharma "Stubble burning should be seen through behavioural lens:providing cost,time-effective alternatives key to ending practice" by FirstPost in December 02 2020.*

12. *By NEWS "Stubble burning in northern india has long been a major cause of air pollution, but efforts to stop it fail every year" in 30 November 2020.*
13. *By THE HINDU "Delhi air pollution: prepare scheme to stop stubble burning,says supreme court" in November 06 2019.*
14. *Tasker, Johann (30 May 2012). "Farmers step up stubble burning campaign",Retrieved 24 August 2013.*