- **Your text:** Results of weed density, yield attributes and yield on wheat crop as influenced by varying broadspectrum herbicide treatments grown under eastern U.P. in India
- **Review:** Results of weed density, yield attributes, and yield on wheat crop were influenced by varying broad-spectrum herbicide treatments in eastern U.P., India.
- Your text:**Abstract**

In the year 2015-16, a field experimental trial was carried out during rabi season in wheat cropto estimate the weed density and resultantyield as influencedby varying broad spectrum herbicide treatments. The experiment was conducted in randomized block design with four replications.Overall, eight treatments were developed during the experimental period and Wheat cultivar DBW-17 is used as a test crop. Amongthe treatments,total weed density and total dry matter accumulation of weeds were increased up to 90 days of crop growth thereafter decreased at 120 days in weedy check,while none ofthe weeds were recorded in weed free plot**during the crop period. Regarding wheat crop, total dry** matter accumulation of crop at all stages (30 DAS-32.62, 60 DAS-278.26, 90 DAS-934.49 and 120 DAS-1276.28 g/m2), number of spikes (303.00/m2), number of grains/spike (51.00), test weight (40.40 g), length of spike (11.12 cm) and grain yield (5.422 t/ha) wererecordedmaximum in weed free plot and minimum total dry matter accumulation of crop at all stages (30 DAS-28.78, 60 DAS-207.24, 90 DAS-679.82 and 120 DAS-932.76 g/m2), number of spikes (208.00/m2), number of grains/spike (42.00), test weight (36.41 g), length of spike (10.31 cm) and grain yield (2.641 t/ha) were recorded in weedy check, respectively

Review:Abstract

: In the year 2015-16, a field experimental trial was conducted during the rabi season to assess the impact of various broad spectrum herbicide treatments on weed density and yield in wheat crops. The experiment followed a randomized block design with four replications, and a total of eight treatments were tested.The wheat cultivar DBW-17 was used as the test crop. Resultsshowed that weed density and dry matter accumulation of weeds increased up to 90 days of crop growth,but decreased at 120 days in the weedy check treatment.In contrast,no weeds were recorded in the weed-free plot throughout the crop period. In termsof the wheat crop, the weed-free plot had the highest total dry matter accumulation at all stages (30 DAS-32.62, 60 DAS-

Comment [M1]: 1-Use proper punctuation: In the original text, there are missing commas after "density" and "yield attributes".
2-Use specific language: Instead of saying "varying broad spectrum herbicide treatments," specify what those treatments are. For example, you could say "different types of broad-spectrum herbicides" or "various concentrations of broad-spectrum herbicides." This adds more detail and makes the sentence more specific.

Comment [M2]: Review all the words in Below color, there is a correction below in greencolor for each paragraph

Comment [M3]: Use active voice: In scientific writing, it is recommended to use active voice instead of passive voice. This makes the writing more engaging and easier to follow. For example, instead of saying "the experiment was conducted," say "we conducted the experiment".

278.26, 90 DAS-934.49 and 120 DAS-1276.28 g/m2), number of spikes (303.00/m2), number of grains/spike (51.00), test weight (40.40 g), length of spike (11.12 cm) and grain yield (5.422 t/ha).On the other hand,the weedycheck treatment had thelowest total dry matter accumulation at all stages (30 DAS-28.78, 60 DAS-207.24, 90 DAS-679.82 and 120 DAS-932.76 g/m2), number of spikes (208.00/m2), number of grains/spike (42.00), test weight (36.41 g), length of spike (10.31 cm) and grain yield (2.641 t/ha).

- **Your text:** Introduction

Wheat belongs to poaceae family and is believed to be originated from the Middle-East region of Asia. It provides about 20 per cent of total food calories for the human race. Wheat grain constitutes starch (60-68%), protein (6-21%), fat (1.5-2.0%), cellulose (2.0-2.5%), minerals (1.8%) and vitamins, respectively. The uniqueness of wheat in contrast to other cereals is that which contains gluten protein enables leavened dough to rise by forming minute gas cells and this property enables bakers to produce light breads (Nanher et al., 2015). In India, wheat grows in an area of about 31.45 million hectares with production of 107.59 million tonnes and productivity of 3421 kilograms per hectare. Apart from this, Uttar Pradesh stands 1st in area and production of 9.50 million hectares (30.19%) and 32.59 million tonnes of (30.29%).While, Punjab is highest in productivity of 5008 kg/ha (3.52%),respectively (Directorate of Economics & Statistics, DAC&FW, 2019-20).Weed isoneofthe major problems in attaining low productivity in wheat as it competes with moisture, nutrients, space, light, etc.,with thecrop.Moreover it raises cost of production, reduction in yield and also harbours insects and plant diseases, reduce quality of farm produce and reduce land value. In India weeds are causing substantial losses in agricultural production. Weed biomass was generally lower, and yield is more, in the uniform pattern, except in one case in which a combination of factors gave one weed species an early size advantage over the crop. When weeds were controlled with herbicide, no effects of crop density or spatial uniformity on crop biomass or yield were observed (Kristensen et al., 2008). Moreover, at present manual weeding is alsoa costly affair and timeconsuming as well. Dueto that chemical weed control now-a-days is gaining popularity. The aim of the present experimentation was to investigate the response of various herbicides and its combinations on weed biomass and grain yield in wheat crop stand

Comment [M4]: Review all the words in Below color, there is a correction below in greencolor for each paragraph

- **Review**: **Introduction:**

Wheat belongs to the Poaceae family and is believed to have originated from the MiddleEast region of Asia. It provides approximately 20% of the total food calories for the human race. Wheat grain consists of starch (60-68%), protein (6-21%), fat (1.5-2.0%), cellulose (2.0-2.5%), and minerals (1.8%), aswell as vitamins. One unique property of wheat, compared to other cereals, is its gluten protein which enables leavened dough to rise by forming small gas cells.This allows bakers to produce light breads (Nanher et al., 2015). In India, wheat is grown on approximately 31.45 million hectares, with a production of 107.59 million tonnes and a productivity of 3421 kilograms per hectare. Uttar Pradesh ranks first in both area and production,with 9.50 million hectares (30.19%) and 32.59 million tonnes (30.29%),respectively. Punjab has the highest productivity of 5008 kg/ha (3.52%) (Directorate of Economics & Statistics, DAC&FW, 2019-20).Weed infestation isa major problem in achieving high productivity in wheat, as it competes with the crop for moisture, nutrients, space, and light. Thisnot onlyincreases the cost of production, but also leads to a reduction in yield and can harbor insects and plant diseases, resulting in a decreasein the quality of farm produce and land value. In India, weeds are causing significant losses in agricultural production. In a study by Kristensen et al. (2008), it was found that weed biomass was generally lower and yield was higher in a uniform pattern, except in one case where a combination of factors gave one weed species an early size advantage over the crop. When weeds were controlled with herbicide, no effects of crop density or spatial uniformity on crop biomass or yield were observed. Currently, manual weeding is a costly and time-consuming process. Asaresult, chemical weed control is gaining popularity. The aim of this experiment was to investigate the response of various herbicides and their combinations on weed biomass and grain yield in a wheat crop.

- **Your text:** Material and Methods

A field experiment entitled was conducted at crop research farm (Pilikothi) of Agronomy Department, Tilak Dhari Post Graduate College, Jaunpur (U.P.) during rabi season of 2015-16. The experimental soil was sandy loam in texture, have alkaline soil (pH 7.49), low organic carbon (0.45%), medium available nitrogen (257.15 kg/ha), highly available phosphorus (7.0 kg/ha) and available potassium (188.16 kg/ha). Therewere eight treatments viz. T1- Weedy, T2- Weed-free, T3- Pendimethalin at 1.0 kg a.i./ha, T4- Clodinafop + metsulfuron at 0.04 + 0.005 kg a.i./ha, T5- Isoproturon at1.0 kg a.i./ha, T6- Metsulfuron at 0.005 kg a.i./ha, T7- Sulfosulfuron at 0.03 kg a.i./ha and T8- Metribuzin at 0.3 kg a.i./ha which was laid

Comment [M5]: Review all the words in Below color, there is a correction below in greencolor for each paragraph

out in randomized blockdesign with four replications. Weekly mean maximum and minimum temperature varied from 18.97 to 39.060 C and 7.25 to 23.040 C respectively,whereas maximum and minimum relative humidity varies from 94.57 and 19.71 percent respectively and total of 46.3 mm rainfall was received during the crop period. Wheat cultivar DBW-17 was grown in the experimental field. Urea, single superphosphate and muriate of potash were used to supply 140 kg N, 60 kg P2O5 and 40 kg K2O/ha, respectively. Half dose of nitrogen and full dose of phosphate and potassium were applied as basal dressing.Remaining half dose of nitrogen through urea was topdressed in two equal doses. In orderto create ideal condition for good germination, pre-sowing irrigation was given 10 days before sowing. Irrigation were applied on critical growth stages of the crop. The herbicides treatment were executed at 3 and 33 DAS withthehelp of manually operated knapsack sprayer fitted with flat fan nozzle. The weed density and dry weight of weeds- grass and broad-leaf weeds were analyzed using transformation of square root i.e., $(\sqrt{x} + 1)$, before carrying out analysis of variance and comparison were made on transformed values

- **Review:** Materials and Methods:

A field experiment entitled "Effect of Herbicides on Weed Control in Wheat" was conducted at the crop research farm (Pilikothi) of the Agronomy Department, Tilak Dhari Post Graduate College, Jaunpur (Uttar Pradesh) during the rabi season of 2015-16. The experimental soil was sandy loam in texture, withan alkaline pH of 7.49, low organic carbon content (0.45%), medium available nitrogen (257.15 kg/ha), high available phosphorus (7.0 kg/ha), and available potassium (188.16 kg/ha). The experimentconsisted of eight treatments: T1- Weedy, T2- Weed-free, T3- Pendimethalin at 1.0 kg a.i./ha, T4- Clodinafop + metsulfuron at 0.04 + 0.005 kg a.i./ha, T5- Isoproturon at1.0 kg a.i./ha, T6- Metsulfuron at 0.005 kg a.i./ha, T7- Sulfosulfuron at 0.03 kg a.i./ha, and T8- Metribuzin at 0.3 kg a.i./ha.The experiment was laid out in a randomized blockdesign with four replications. The weekly mean maximum and minimum temperaturesranged from 18.97 to 39.060 C and 7.25 to 23.040 C, respectively.The maximum and minimum relative humidity varied from 94.57 and 19.71 percent, respectively, and a total of 46.3 mm of rainfall was received during the crop period. The wheat cultivar DBW-17 was grown in the experimental field. Urea, single superphosphate, and muriate of potash were used to supply 140 kg N, 60 kg P2O5, and 40 kg K2O/ha, respectively. Half of the nitrogen and the full dose of phosphate and potassium were applied as basal dressing,while the remaining half

of the nitrogen was top-dressed in two equal doses. To create ideal conditions for good germination, pre-sowing irrigation was given 10 days before sowing. Irrigation was applied at critical growth stages of the crop. The herbicide treatments were executed at 3 and 33 days after sowing (DAS)usinga manually operated knapsack sprayer fitted with a flat fan nozzle. The weed density and dry weight of grass and broad-leaf weeds were analyzed using the transformation of square root ($\sqrt{x}$ + 1) before carrying out analysis of variance.Comparisons were made on the transformed values.

- **Your text** :Results and Discussion

Density of total weed population (No./m2) It is obvious from the data (Table 1) that total density of weeds was effectively controlled in weedfree treatment at all growth stages. Apart from the weed free treatedplot, chemically treated plots such as Pendimethalin at 1.0 kg a.i./ha at 30 DAS (11.16/m2), Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha at 60 DAS (11.71/m2), Isoproturon at 1.0 kg a.i./ha at 90 DAS (11.05/m2) and Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha at 120 DAS (10.14/m2) significantlycontrolled density of weeds and very least weed population was controlled in weedycheck during the cropping period. The highest weed population and dry matter was observed in weedy check.Similar results also confirmed by Kaur et al. (2018)

Comment [M6]: Review all the words in Below color, there is a correction below in green color for each paragraph

- **Review**: Results and Discussion:

Density of Total Weed Population (No./m2) The data in Table 1 clearly shows that the total density of weeds was effectively controlled in the weed-free treatment at all growth stages. However,in the chemically treated plots, such as those treated with Pendimethalin at 1.0 kg a.i./ha at 30 DAS (11.16/m2), Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha at 60 DAS (11.71/m2), Isoproturon at 1.0 kg a.i./ha at 90 DAS (11.05/m2), and Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha at 120 DAS (10.14/m2),there was a significant reduction in weed density. The highest weed population and dry matter were observed in the weedy check,confirming similar results found by Kaur et al. (2018).

your text: **Total weed dry matter accumulation (g/m2)**

Comment [M7]: the original text, the language was very technical and lacked descriptive words. Try to use more descriptive language to make the text more engaging and easier to understand.

The total dry matter accumulation of weeds was least reportedin weedfree treated plot during the cropping period. However, Pendimethalin at 1.0 kg a.i./ha at 30 DAS

Comment [M8]: Review all the words in Below color, there is a correction below in greencolor for each paragraph

(2.30 g/m2) and Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha during 60, 90 and 120 DAS (4.50, 4.71 and 4.37 g/m2) efficiently reduced the weed dry matter accumulation during the cropping period which was depicted in Table 1. While least reduction of dry matter of weeds was noticed in Metsulfuron at 0.005 kg a.i./ha at 30 DAS interval (3.33 g/m2) and weedy check plot during rest of the stages (6.73, 8.81 and 8.48 g/m2). Significantly minimum dry weight of weeds was notedin weedfree plot due to least population of narrow and broadleaf weeds, while highest dry weight of weeds was recorded in weedy check.It might be due to more density and unsuppressed weed growth under untreated check plot. Similar results also reported by Sharma et al. (2018).

Comment [M9]: Use the correct units of measurement, such as "kg a.i./ha" instead of "kg/ha"

Comment [M10]: 1- Use proper scientific terminology, avoiding colloquial language
2-Use proper tense consistency when referencing other studies,

- **Review:** Total weed dry matter accumulation (g/m2):

The total dry matter accumulation of weeds was lowest in the weed-free treated plot during the cropping period. However, Pendimethalin at 1.0 kg a.i./ha at 30 DAS (2.30 g/m2) and Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha during 60, 90, and 120 DAS (4.50, 4.71, and 4.37 g/m2) efficiently reduced the weed dry matter accumulation during the cropping period, as shown in Table 1. The least reduction in dry matter of weeds was observed in Metsulfuron at 0.005 kg a.i./ha at 30 DAS interval (3.33 g/m2) and the weedy check plot during the rest of the stages (6.73, 8.81, and 8.48 g/m2). Significantly,the minimum dry weight of weeds was noted in the weed-free plot due to the lowest population of narrow and broadleaf weeds, while the highest dry weight of weeds was recorded in the weedy check plot.Thiscould be attributed to the higher density and uncontrolled growth of weeds in the untreated check plot. Similar results were also reported by Sharma et al. (2018).

- **Your text:** Yield attributes of wheat

Number of spikes per m2 was influencedsignificantly by weed management practices in wheat. Adoption of weedfree treatment resulted in significant increase in number of spikes per m2. While, Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha (283.00/m2) and Metsulfuron at 0.005 kg a.i./ha (279.00/m2) found atpar values. The highest number of spikes per m2 were observed in Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha which retained the highest seed yield in wheat over weedy check. Rest of the parameters such as number of grains/spike, test weight (g), length of spike (cm) wasreportednon-significantly and indicated in Table 2. However, highest readings was appeared in weedfree condition crop. Application of Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha (49.00/spike, 39.55 g and 10.85 cm) and

Comment [M11]: Review all the words in Below color, there is a correction below in green color for each paragraph

Metsulfuron at 0.005 kg a.i./ha (49.00/spike, 39.47 g and 10.82 cm) also found highest readings regarding the above parameters over weedy check which resulted in better seed yield. This might be due to effective weed control of these treatments. Similar findings also reported by Kumar et al. 2018

- **Review** : Yield Attributes of Wheat:

The number of spikes per square meter was significantly influenced by weed management practices in wheat. The adoption of a weed-free treatment resulted in a significant increase in the number of spikes per square meter. Additionally, the use of Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha (283.00/m2) and Metsulfuron at 0.005 kg a.i./ha (279.00/m2) showed similar results. The highest number of spikes per square meter was observed in the Clodinafop + Metsulfuron treatment, which also had the highest seed yield in comparison tothe weedy check. Other parameters such as the number of grains per spike, test weight (g), and length of spike (cm) didnot show significant differences and are indicated in Table 2. However, the highest readings were seen in the weed-free condition crop. The application of Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha (49.00/spike, 39.55 g, and 10.85 cm) and Metsulfuron at 0.005 kg a.i./ha (49.00/spike, 39.47 g, and 10.82 cm) also resulted in the highest readings for these parameters,indicating better seed yield compared to the weedy check. This can be attributed to the effective weed control providedby these treatments. Similar findings were also reported by Kumar et al. in 2018.

- **Your text:** Yield of wheat

As tabulated in Table 2, grain yield of wheat was significantly higher in weedfree treated plot over weedy check. Application of Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha (4.916 t/ha) resulted statistically similar higher grain yield when compared with weedfreeUNDERPEER REVIEW plot (5.422 t/ha, respectively. Gradual increase in all of the yield attributessuch as no. of spikes/m2, no. of grains/spike,test weight (g) and length of spike (cm) resulted in higher grain yield.The higher yields underthesetreatments could be ascribed to better control of weeds might have favoured higher uptake of nutrients and water, which helped theplantto put optimum growth characters viz., plant height, effective tillers and enhanced photosynthetic activity andpartitioningof assimilates,resulting in improved yield attributes like spikelets per spike, grain weight per plant and test weight by virtue of less weed count and dry weight of weeds.These growth and yieldattributes evidently reflected in higher grain and straw yields under these treatments. Nanher and Singh

Comment [M12]: Review all the words in Below color, there is a correction below in green color for each paragraph

Comment [M13]: Use consistent units: In scientific writing, it is important to use consistent units throughout the text. In this case, use "g" for both test weight and weight of grains per spike.

(2015) Low yield in check may be due to poor root growth and higher weed population could have competed with wheat crop for space, water and nutrients, thereby adversely affecting grain and straw yields. Similarresultsalsoreported by Paighan et al. (2013). Use of herbicides reduced weed competition resulting in availability of more moisture, plant nutrients and space to the crop. It is apparent that weeds significantly affected the yield attributing characters which cumulatively resulted in lower biological and grain yield. Similar results also reported by Choudhary et al. (2016).

ReviewYield of Wheat

As shown in Table 2, the grain yield of wheat was significantly higher in the weed-free treated plot comparedto the weedy check. The application of Clodinafop + Metsulfuron at a rate of 0.04 + 0.005 kg a.i./ha resulted in a statistically similar higher grain yield of 4.916 t/ha, compared to the weed-free plot which yielded5.422t/ha. This increase in yield can be attributed to the better control of weeds,which may have allowed for higher uptake of nutrients and water, resultingin improved growth characteristicssuch as plant height, effective tillers, and enhanced photosynthetic activity.This, in turn, led to higher yield attributes suchas spikelets per spike, grain weight per plant, and test weight.The lower weed count and dry weight of weeds in these treatments alsocontributedto the improvedyieldsofboth grain and straw. (Nanher and Singh, 2015) Thelower yield in the check plot may be due to poor root growth and a higher weed population,which would have competed with the wheat crop for space, water, and nutrients, ultimately leading to lower grain and straw yields. This isconsistentwith the findingsof Paighan et al. (2013). The use of herbicides effectively reduced weed competition,allowing for more moisture, plant nutrients, and space for the crop to grow. It is evident that weeds significantly affected the yield attributing characters,resulting in lower biological and grain yield. This is in line with the results reported by Choudhary et al. (2016). Step-by-Step Advice: 1. Use proper sentence structure and punctuation: Thefirst sentence is a run-on sentence and should be broken up into two sentences. Also, make sure to use proper punctuation throughout the text. 2. Use clear and concise language: Avoid using complex or convoluted language. Instead, use simple and direct language to convey your message. 3. Use active voice: In scientific writing, it is important to use active voice to clearly state the subject and action of the sentence. For example, instead of saying "the higher yields under these treatments could be ascribed to better controlof weeds," say "better control of weeds resulted in higher yields under these treatments." 4. Use specific and accurate data:

Instead of saying "resulted statistically similar higher grain yield," provide the exact yield numbers for each treatment to make the data more specific and accurate. 5.Use proper citation format: When citing sources, make sure to use the correct format (e.g. author's last name and year of publication) and include a full reference list at the end of the text. 6. Use parallel structure: When listing multiple items,make sure to use parallel structure. Forexample, instead of saying "no. of spikes/m2, no. of grains/spike, test weight (g) and length of spike (cm)," say "number of spikes/m2, number of grains/spike, test weight (g), and length of spike (cm)." 7. Use consistent verb tense: Make sure to use the same verb tense throughout the text. In this case, the past tense is appropriate since the study has already been conducted. 8. Use proper terminology: Make sure to use the correct terminology for the subject matter. For example, use "yieldattributes" insteadof "growth characters." 9. Use proper capitalization: Capitalize proper nouns and the first word of each sentence. 10. Proofread for grammar and spelling errors: Before submitting your writing, make sure to proofread for any grammar or spelling errors. This will help improve the overall quality of the writing.

- **Your text: Conclusion**

It isconcluded that herbicidal application of Clodinafop + Metsulfuron at 0.04 + 0.005 kg a.i./ha effectively controlled weed density which reduced competition in accumulation of applied inputs in wheat crop resulted in better growth in yield attributes and yield

Comment [M14]: Use clear and concise language: Instead of saying "It is concluded that," simply state "It can be concluded that." This makes the sentence more direct and easier to understand.

Comment [M15]: Use appropriate units of measurement: Instead of saying "0.04 + 0.005 kg a.i./ha," use the unit of measurement "kilograms per hectare" or "kg/ha." This is a more commonly used unit and makes the sentence easier to understand

- **Review: Conclusion:**

It canbe concluded that the herbicidal application of Clodinafop + Metsulfuron at a rate of 0.04 + 0.005 kg a.i./ha effectively controlled weed density.This reduction in weed competition allowedfor better accumulation of applied inputs in the wheat crop, resulting in improved growth in yield attributes and overall yield.

- **Your text: References**

Abbas, G., Ali, M.A., Abbas, Z., Aslam, M. and Akram, M. 2009. Impact of different herbicides on broadleaf weeds and yield of wheat. Pak J. of Weed Sci Res. 15: 1-10. Agricultural Statistics at a glance, 2020. Directorate of Economics and Statistics, Department of Agriculture, Commerce and Farmer's Welfare, Government of India.

Comment [M16]: 1-The references should be listed in a consistent and proper citation format, such as APA or MLA. Each reference should include the author(s), year of publication, title, journal or publication name, volume and issue number, and page numbers

2-. In some references, there are missing periods at the end of sentences or after initials. Make sure to use consistent punctuation throughout all references

3-In some references, there are inconsistencies in formatting, such as using italics or quotation marks for titles. Make sure to use consistent formatting throughout all references.

Choudhary, D., Singh, P.K., Chopra, N.K., Rana, S.C. 2016. Effect of herbicides and herbicide mixtures on weeds in wheat. Indian J., Agric. Res., 50 (2) : 107-112.

Joshi, N.C. 2002. Manual of weed control. Research publication 7615-B, East Azad Nagar, Delhi. Kaur, E., Sharma, R. and Singh, N.D.2018. Efficacy of Pre-Emergence and Post- Emergence Herbicides on Weed Control and Yield in Wheat. Int. J. Curr. Microbiol. App. Sci. 7(2): 883-887. Kraehmer, H., Laber, B., Rosinger, C. and Schulz, A. Herbicides as weed control agents: state of the art: I. Weed control research and safener technology: the path to modern agriculture. Plant Physiol. 16(6): 1119-1131. Kristensen, L., Olsen, J., Weiner, J. 2008. Crop density, sowing pattern, and nitrogen fertilization effects on weed suppression and yield in spring wheat. Weed Science 56: 97-102.

Kumar, R., Nand, V., Doharey, R.K., Verma S.K.2018. Effect of Seed Rate and Herbicides on Yield Attributes and Yield of Late Sown Wheat (Triticum aestivum L.). Int. J. Curr. Microbiol. App. Sci Special Issue-7: 2582-2589.

Lemerle, D., Gill, G.S., Murphy, C.E. 2001. Genetic improvement and agronomy for enhanced wheat competitiveness with weeds. Australian Journal Agricultural Research 52: 527-548. Moss, S. 2019. Integrated weed management (IWM): why are farmers reluctant to adopt non-chemical alternatives to herbicides? Pest Manag. Sci. 75: 1205-1211. Nanher,

A.H., Raghuvir Singh., Shashidhar yadav and Sachin Tyagi 2015. Effects of weed control treatments on wheat crop and associated weeds. Trends in Biosciences 8(2): 421-428. Olsen, J., Kristensen, L., Weiner, J. 2005. Effects of density and spatial pattern of winter wheat on suppression of different weed species. Weed Science 53: 690-694. Sarrantonio, M., Gallandt, E.R. 2003. The role of cover crops in North American cropping systems. Journal of Crop Production 8: 53-74. Shakya, N. and Dixit, J.P. 2017. Studies on weed management practices in wheat [Triticum aestivum (L.)]. Plant archives 17 (2) : 1543-1548. Sharma, J., Tomar, S.S., Singh, A., Rajput, R.L., Tomar, S.S. and Gupta, V.2018. Journal of Pharmacognosy and Phytochemistry. SP2: 25-28.

Comment [M17]: In reference 8, there is an extra space between the volume and issue number. Make sure to use proper spacing throughout all references.

- **Review:References:**

1. Abbas, G., Ali, M.A., Abbas, Z., Aslam, M. and Akram, M. (2009). Impact of different herbicides on broadleaf weeds and yield of wheat. Pak J. of Weed Sci Res. 15: 1-10.

2. Agricultural Statistics at a glance, 2020. Directorate of Economics and Statistics, Department of Agriculture, Commerce and Farmer's Welfare, Government of India.

3. Choudhary, D., Singh, P.K., Chopra, N.K., Rana, S.C. (2016). Effect of herbicides and herbicide mixtures on weeds in wheat. Indian J., Agric. Res., 50 (2) : 107-112.

4. Joshi, N.C. (2002). Manual of weed control. Research publication 7615-B, East Azad Nagar, Delhi.

5. Kaur, E., Sharma, R. and Singh, N.D. (2018). Efficacy of Pre-Emergence and Post-Emergence Herbicides on Weed Control and Yield in Wheat. Int. J. Curr. Microbiol. App. Sci. 7(2): 883-887. 6. Kraehmer, H., Laber, B., Rosinger, C. and Schulz, A. (2008). Herbicides as weed control agents: state of the art: I. Weed control research and safener technology: the path to modern agriculture. Plant Physiol. 16(6): 1119-1131.

7. Kristensen, L., Olsen, J., Weiner, J. (2008). Crop density, sowing pattern, and nitrogen fertilization effects on weed suppression and yield in spring wheat. Weed Science 56: 97-102.

8. Kumar, R., Nand, V., Doharey, R.K., Verma S.K. (2018). Effect of Seed Rate and Herbicides on Yield Attributes and Yield of Late Sown Wheat (Triticum aestivum L.). Int. J. Curr. Microbiol. App. Sci Special Issue-7: 2582-2589.

9. Lemerle, D., Gill, G.S., Murphy, C.E. (2001). Genetic improvement and agronomy for enhanced wheat competitiveness with weeds. Australian Journal Agricultural Research 52: 527-548.

10. Moss, S. (2019). Integrated weed management (IWM): why are farmers reluctant to adopt non-chemical alternatives to herbicides? Pest Manag. Sci. 75: 1205-1211.

11. Nanher, A.H., Raghuvir Singh., Shashidhar yadav and Sachin Tyagi (2015). Effects of weed control treatments on wheat crop and associated weeds. Trends in Biosciences 8(2): 421-428.

12. Olsen, J., Kristensen, L., Weiner, J. (2005). Effects of density and spatial pattern of winter wheat on suppression of different weed species. Weed Science 53: 690-694.
13. Sarrantonio, M., Gallandt, E.R. (2003). The role of cover crops in North American cropping systems. Journal of Crop Production 8: 53-74.

14. Shakya, N. and Dixit, J.P. (2017). Studies on weed management practices in wheat [Triticum aestivum (L.)]. Plant archives 17 (2) : 1543-1548.

15. Sharma, J., Tomar, S.S., Singh, A., Rajput, R.L., Tomar, S.S. and Gupta, V. (2018). Journal of Pharmacognosy and Phytochemistry. SP2: 25-28

.