**Wheat**

|  |  |
| --- | --- |
|  | |
| **Middle State To get more production at less cost Latest wheat production technology for** | |
| **National and regional scenario-**   |  |  |  |  | | --- | --- | --- | --- | |  | **Area (m.Heh.)** | **Production (M.tonnes)** | **Productivity (quin/hey.)** | | India | **29.7** | **93.5** | **31.5** | | Madhya Pradesh | **5.3** | **13.3** | **5.3** | | State Partner of | **18%** | **14%** | **18%** | | |
| **In the state Wheat  Problems related to productivity** | |
| **(a) From non-irrigated/limited irrigation areas Related-**   * Following are the average temperature details of the last seven years.           Low temperature increase 2 - 30 cm           Increase in high temperature 3 - 50 cm * More fluctuations in temperature by the first week of November * Real Lack of high temperature resistance varieties in the changing environment Can harmonize * Moisture loss during germination and high temperature during grain filling * Unirrigated Route night in the regions (Root Rot) (root rot) of Problem * Soybean - WheatHarvest Unirrigated/semiirrigated wheat in the system Of Delayed sowing (prevailing varieties are of long duration) * Popular varieties low ‘‘water use‘‘ and ‘‘nutrient use‘‘ capacity   **(b.) Related to irrigated areas**   * Rabi Short period of cold in weather Short Winter * Uncertain weather * Kalle Increase in temperature at the time of release and at the time of pollination due to which time Maturity comes in the previous crop * Result Less filling of grains * High Due to temperature, evaporation from the ground is more due to which the number of irrigation and Increase in the amount of irrigation water * Non-availability of water for timely irrigation even in command areas * In irrigated areas Sepage  And the problem of water logging * Multi Delayed sowing due to cropping system More area of | |
| **In the state Wheat Changing nature of the cash** | |
| **(a) Unirrigated in previous years More area**   * Now there is a significant reduction in completely unirrigated area * Accumulated Moisture (Conserved Moisture)  Farming is almost finished in * Sprinkler Irrigation system changed this scenario * Almost complete StateAt least in Use of one irrigation, hence completely unirrigated area is almost exhausted   **(b) Irrigated Wheat Actual in the field Limited irrigation availability in scenario**   * Irrigated The term gives the impression that there is an availability of 5 -6 irrigation * Real 5 - 6 Irrigation unavailability in the entire state in form * Here Even in wheat sown on time Only 3 irrigation availability in most areas * Only two irrigation availability in case of delayed sowing | |
| **Production technology** | |
| **Field preparation**   * Summer plowing * Deep plowing once in three years * Black heavy soil crumbly (Fine Tilth) Difficult to make * Rotavator is also used for suitable disc harrow Appropriate time for use appropriate sowing * Unirrigated: Mid-October to November Till the first week * Semi-irrigated: First fortnight of November * Irrigated (from time): Second fortnight of November * Irrigated (delayed): Of the month of December From the second week | |
| **Selection of suitable varieties** | |
| **(a) Malwa Zone: Ratlam, Mandsaur, Indore, Ujjain, Shajapur, Rajgarh, Sehore, Dhar, Dewas and Guna Southern partAverage rainfall of the area**: From 750 1250 min.m.**Soil:**Heavy black soil   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 17, J.W. 3269, J.W. 3288, H.I. 1500, H.I. 1531, H.D. 4672 (Kathiya) | J.W. 1201, J.W. 322, J.W. 273, H.I. 1544, H.I. 8498 (Kathiya), M.P.O. 1215 | J.W. 1203, M.P. 4010, H.D. 2864, H.I. 1454 |   **(b) Nimad Zone: Khandwa, Part of Khargone, Dhar and Jhabua** **Average rainfall of the region:** From 500 1000 min.m. **Soil:**Light black soil   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 3020, J.W. 3173, H.I. 1500, J.W. 3269 | J.W. 1142, J.W. 1201, G.W. 366, H.I. 1418 | Avoid delayed sowing in this area Timely sowing is preferred because there is shortage of water at the time of ripening. **Varieties:** J.W. 1202, H.I. 1454 |   **(c) Vindhya Plateau: Raisen, Vidisha, Sagar, part of Guna** **Average rainfall of the region:** 1120 1250 min.m. **Soil:**Heavy black from the middle Land   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 17, J.W. 3173, J.W. 3211, J.W. 3288, H.I. 1531, H.I. 8627(Kathiya) | J.W. 1142, J.W. 1201, H.I. 1544, G.W. 273, J.W. 1106 (Kathiya), H.I. 8498 (Kathiya), M.P.O. 1215 (Kathiya), | J.W. 1202, J.W. 1203, M.P. 4010, H.D. 2864, D.L. 788- 2 |   **(d) Narmada Valley: Jabalpur, Narsinghpur, Hoshangabad, Harda** **Average rainfall of the region:**1000 1500 min.m. **Soil:** Heavy black and alluvial Clay   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 17, J.W. 3288, H.I. 1531, J.W. 3211, H.D. 4672 (Kathiya) | J.W. 1142, G.W. 322, J.W. 1201, H.I. 1544, J.W. 1106, H.I. 8498, J.W. 1215 | J.W. 1202, J.W. 1203, M.P. 4010, H.D. 2932, |   **(y) Banganga Valley:  Balaghat and Seoni** **Average rainfall of the region:** 1250mm.m. **Soil:** Alluvial soil   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 3269, J.W. 3211, J.W. 3288, H.I. 1544, | J.W. 1201, G.W. 366, H.I. 1544, Raj 3067 | J.W. 1202, H.D. 2932, D.L. 788- 2 |   **(r) Mansion area: Rewa, part of Jabalpur, part of Narsinghpur** **Average rainfall of the region:** 1000 1375 min.m. **Soil:**Lightly pebbled Clay Rain water is stopped in the field through dam.   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 3020, J.W. 3173, J.W. 3269, J.W. 17, H.I. 1500, | J.W. 1142, J.W. 1201, J.W. 1106, G.W. 322, H.I. 1544, | J.W. 1202, J.W. 1203, H.D. 2864, H.D. 2932, |   **L. Satpura Plateau: Chhindwara and Betul** **Average rainfall of the region:** 1000 1250 min.m. **Soil:**Lightly pebbled Clay   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 17, J.W. 3173, J.W. 3211, J.W. 3288, H.I. 1531, | H.I. 1418, J.W. 1201, J.W. 1215, G.W. 366, | H.D. 2864, M.P. 4010, J.W. 1202, J.W. 1203, |   **(v) Surrounding area: Gwalior, Bhind, Morena and part of Datia** **Average rainfall of the region:**From 750 1000 min.m. **Soil:**Alluvial and light structure Lands containing   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 3288, J.W. 3211, J.W. 17, H.I. 1531, J.W. 3269, H.D. 4672 | H.I. 1544, G.W. 273, G.W. 322, J.W. 1201, J.W. 1106, J.W. 1215, H.I. 8498 | M.P. 4010, J.W. 1203, H.D. 2932, H.D. 2864 |   **(h) Bundelkhand Area: Datia, Shivpuri, Guna part of Tikamgarh, Chhatarpur and Panna Part** **Average rainfall of the region:** 1120 1250 min.m. **Soil:** Red and black mixed Land   |  |  |  | | --- | --- | --- | | **Unirrigated/semiirrigated** | **Irrigated (from time)** | **Irrigated (delayed)** | | J.W. 3288, J.W. 3211, J.W. 17, H.I. 1500, H.I. 153 | J.W. 1201, G.W. 366, Raj 3067, M.P.O. 1215, H.I. 8498 | M.P. 4010, H.D. 2864 | | |
| **Special: In case of extremely delayed sowing in all areas Varieties: H.D. 2404, M.P. 1202** | |
| |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | | **Madhya Pradesh  The state identified Kathia Wheat Agricultural Export Zone from the year 2003 Has gone.** | | | | Wheat production of the state 8 to 10 of Kathia varieties in Percentage contribution. | | | | |
| **Advanced Kathia variety** | |
| HD 8713 (Pusa Mars),H I 8381 (Malvashree),H I 8498 (Malvashakti),H I 8663 (Nutrition), M P O 1106 (Sudha), M P O 1215, H D 4672 (Malavaratna), H I 8627 (Malvarkiti) | |
| **Seed quantity** | |
| * 100 K in average form.Gra./Hey. (thousand grain weight Is up to 40 grams) * With thousand grain weight increased by 1 gram (above 40 grams), 2.5 K.Gra. Per/hey. Keep increasing * Unirrigated/semiirrigated Queue-to-queue distance from 25 in dasha.m. * Irrigated (from time) in sowing conditions from 23.m. * Do not mix the seeds with fertilizer * 32 on mixing Percentage germination deficiency (5 years of research) stats) * Because Every stage when there is favorable weather in the wheat crop Has the ability to keep compensation. * Therefore, use seed less fertilizer drill. | |
| **Seed treatment** | |
| * Seeds before sowing Sow only after treating it, carbaxin 75% for seed treatment, wp/carbondajim 50% wp 2.5-3.0 grams is sufficient for the drug/kg seed. * Tebukonojal 1 g/kg Treatment with seeds prevents tendon disease. * P S B culture 5 Phosphorus availability increases when treated with g/kg seed. | |
| **Use of nutrients** | |
| * Soil testing Must get it done * On the basis of testing, nitrogen, phosphate and Potash quantity Determination Recommendation - * Shortage of micro elements in almost all the districts of the state * 25 K.Gra./Hey. Use of zinc sulphate at the rate of * Use of zinc sulphate after 3 harvests (not each year)  |  |  |  |  | | --- | --- | --- | --- | |  | **Natarajan** | **Phosphorus** | **Potash** | | Unirrigated | 40 | 20 | 0 K.Gra./Hey. | | Semi-irrigated | 60 | 30 | 15 K.Gra./Hey. | | Irrigated | 120 | 60 | 30 K.Gra./Hey. | | Delayed | 80 | 40 | 20 K.Gra./Hey. |   **Irrigation -**   * Use sprinklers as far as possible * Of 5 - 6 irrigations in new varieties developed from the university No need * 3 - 4 irrigation sufficient (55 - 60quintal yield) * An irrigation: 40 - 45 days later * Two irrigations: Kirit stage, after flowering * Three irrigations: Kirit stage, when the entire bud comes out, to form a grain Time * Four irrigations: Kirit stage, when the entire flower emerges, when flowering occurs Milky stage | |
| **Cost reduction (new technology)** | |
| **Weir - drain Methodology** | * In seeds and fertilizers Weir-groove method to reduce expensive inputs (FIRB) Adopt seed rate Can be reduced by 30 - 35 percent * Reduction in fertilizer consumption * Sleep control easy * Water in irrigation Low quantity |
| **More Wheat  Various techniques of production** | |
| **Zero tillage technique:-** After harvesting the late paddy crop, timely sowing of wheat in the field There is no time left and the farmer has no option but to leave the fields empty In such a situation, a specially made seed and fertilizer drill would survive Machine Wheat can be sown from. In which plowing was done in the field There is no need without harvesting paddy Plowed Zero to the method of direct sowing of wheat by machine Called tillage. By adopting this method, sowing of wheat is delayed But the damage caused can be avoided and the field can be prepared Expenses can also be reduced. This technology can be done in all types of lands except clay soil Can. Zero tillage The machine is like an ordinary drill It is like a knife. This tines form a groove-shaped crack in the soil Due to which manure and seeds reach appropriate quantity and depth. Of this method Has the following benefit.:-  **Benefits of zero tillage technology** **:-**   * 85-90 from sowing by this machine Percentage fuel, energy and time Can be saved. * Adopting this method reduces the accumulation of weeds. * By this machine, 1-1.5 acres of land can be sown in 1 hour This is a low energy consumption technique, hence sowing on time Condition I from this Farm preparation costs 2000-2500 Rs. There would have been a saving of per hectare Is. * Timely sowing and saving 10-15 days field preparation time By doing this good production can be achieved. * Before starting sowing Calibrate the machine so that fertilizers and seeds can be obtained Appropriate quantity can be added. * In this machine, use only granular fertilizer so that it can be used in pipes There should be no obstruction. * Never apply Pata on the back of the machine.   **Pharo Irrigation Raised Bed (Farve) Sowing on the weir Technique:-**   * On the ridge Sowing technique: Sowing or sprinkling sowing in the queue prevalent among farmers It is completely different in this technique Tractor fired Roger less to wheat Through drill, seeds are sown in two or three rows on the ridges. With this technology Fertilizer and seeds are saved. And production is also not affected Is. With this technology more seeds can be produced of higher quality Is.   **Benefits of harvesting (ferv) crops on ridges**   * Reduction and saving in the quantity of seeds, fertilizers and water, preserved in medicines Moisture remains available to the crop for a long time and the growth of plants is good It happens. * Reduction in wheat production costs. * Wheat Cultivation is done on drains and ridges, hence there is no problem of crop fall Would have been. Having crops on the meds improves the growth of roots and roots Absorb moisture and nutrients deeply. * With this method, drains are used for irrigation in wheat production The same is done for drains and also for drainage of excess water Are helpful. * The productivity of pulse and oilseed crops increases. * Weeding can also be done by machines. * It is easy to remove unwanted plants. | |
| **Global heat** | |
| * Seasons of a century It is clear from the statistics that in 2009 - 10 the temperature was (low) 10 cm. More And high temperature 20 cm. Stayed higher * Jawaharlal Nehru Agriculture  J by University.W. 1142, J.Dvleu. 1201, J.W. 3211 & J.W. 3288 varieties developed high Even more so on temperature Has the ability to deliver production. | |
| **Water and nutrient utilization capacity** | |
| * Of continuous irrigation water Crops affected due to land degradation and lack of irrigation water * more ‘‘water usage Development of varieties with capacity‘‘ and ‘‘nutrient use capacity‘‘ Was done  |  |  |  |  | | --- | --- | --- | --- | | **Variety** | **State (yield quintile /ha)** | | | | **Unirrigated** | **An irrigation** | **Two irrigations** | | J.W. 17 | 18-20 | 30-32 | - | | J.W. 3020 | 18-20 | 32-34 | 40-42 | | J.W. 3173 | 18-20 | 34-36 | 40-42 | | J.W. 3211 | 18-20 | 37-39 | 43-45 | | J.W. 3269 | 18-20 | 37-39 | 43-45 | | |
| **Outbreak of new strain of black ochre (UG 99)** | |
| * Madhya Pradesh black Most favorable for ochre infestation * Of ochre resistant varieties Control due to development   Jawaharlal Nehru Agriculture  MPO 1215, MP 3336, MP 4010 varieties by university These varieties of developed were tested in ‘‘kinia‘‘. All Varieties resistant to Bhanh 99 and more Has the ability to deliver production.   |  |  | | --- | --- | |  |  | | |
| **Compilation of properties (Value Addition)** | |
| * M.Q. Ka Wheat country The best in quality in grain shine and weight of grains More * Protein content compared to other states 1 Percentage higher * Till now efforts have been made to increase the amount of protein * The currently developed varieties are rich in trace elements. * Varieties developed from university J.W. 1202 & J.W. In 1203, the expectation of other varieties developed in the country is the highest Proteins * At present  Most of the varieties developed by the university ‘‘vitamin a‘‘ * Most of all iron, zinc and manganese | |
| **J.Ne.Kr.V.V. In varieties developed by Quality command** | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Trent** | **Variety** | | | | | | **J.W1201** | **J.W1203** | **G.W. 173** | **D.L. 788-2** | **M.P.4010** | | Proteins Percentage | 12.64 | 13.50 | 12.20 | 12.4 | 12.43 | | Sedimentation value | 43 | 38 | 38 | 40 | 41 | | Extaxation rate | 70.6 | 70.9 | 70.4 | 69.5 | 69.9 | | Gluten Index | 63 | 52 | 51 | 56 | 48 | | B - Kerotene | 3.10 | 3.77 | 2.19 | 2.61 | 2.81 | | Iron (P.P.M.) | 42.2 | 33.9 | 37.0 | 37.1 | 40.5 | | Zinc (P.P.M.) | 41.9 | 35.3 | 33.9 | 33.6 | 34.4 | | Mangnij (p.P.M.) | 51.9 | 49.7 | 41.3 | 50.8 | 43.5 | | |
| **M.Q. Positive side of** | |
| * Unirrigated Reduction in area * Irrigation Facilities increased * Use of sprinkler method * Fertilizer Consumption increased * Subtle Use of elements also increased * New The pace and availability of development of varieties is satisfactory * Good Availability of quality seeds * Example As  university ‘‘first in the country in seed production‘‘ * Kathia Wheat ‘‘free from the wrath of karnal bunt, yellowberry, black spot‘‘ etc * So Export possibilities increased | |
| **Weed control** | |
| By weeds 25-35 There was a possibility of reduction in yield up to 100 percent Lives. This reduction depends on the concentration of weeds in the crop Apart from reduction in production, nutrients, water, light given to the crop And to use the place etc. by the weed plants themselves Is caused by Wheat  There are mainly three methods of sleep control measures Can be done from. The weeds in wheat crop were mainly divided into two parts Let's go.   * Broadleaf - Bathua, Senji, Dudhi, Kasni, Wild Spinach Akri, Wild peas, Krishnanil, Satyanashi Hirankhuri etc. * Sakri leaves - Motha, Kansa, wild oats, Chirayya millet and others Grasses. | |
| **Chemical method:-** | |
| From chemical method to sleep is preferred because it Time is saved. It is also beneficial in appearance. Sleep with this method Controls are as follows -  **Quantity and use of sleep-killing chemicals Time:-**   |  |  |  |  | | --- | --- | --- | --- | | **Sleep inducer** | **Weed** | **Rate/hey.** | **Time of use** | | Pandimethylene | Narrow and wide | 1.0 kg. | Immediately after sowing | | Sulfosulfuran | Narrow and wide | 33.5g. | Up to 35 days after sowing | | Metribusin | Narrow and wide | 250g. | Up to 35 days after sowing | | 2, 4 - D | Broad leaves | 0.4 - 0.5 kg. | Up to 35 days after sowing | | Isopropuran | Hybrid leaves | 750g. | Up to 20 days after sowing | | Isopropuran +2, 4 - D | Wide leaves and narrow leaves | 750g +750g. | Up to 35 days after sowing | | |
| **Prolific production of wheat Key essentials for:-** | |
| * Fertilizers after soil testing Use. Balanced quantity Give fertilizer on time. Of fertilizers Correct placement in increasing production and fertilizer use capacity Contributes to. Put the fertilisers 2-3 cm below the seeds. Make full use of organic and organic sources so that the soil Health and productivity increase. * Use seed rate in recommended quantity. According to the particular area Select pure, healthy, insect and disease resistant varieties. On time Sow. Do not sow seeds and fertilizers mixed together. Late Sowed In this situation, use resource management techniques like zero tillage. Sowing lines as much as possible Do it in, don't cross. Plant number recommendation Do not do more than. * Do weed control measures on time. Of herbicides While using, keep in mind the density and nests of the crop Select the chemical according to the type. Of weed-infectious medicine Use of adequate moisture in the soil Correct quantity and solution in the condition Use. * Wheat  Irrigation in soil type irrigation equipment, irrigation equipment Keeping this in mind, irrigation should be given at revolutionary stages. * Take pest and disease control measures on time. * Wheat After harvesting the crop, do not burn Narvai in the fields Degradation of beneficial microorganisms available in field soil It happens that Narvai fire also causes fire in people's houses. And people and There is also a possibility of livestock loss. Wheat  Adequate moisture in the fields after harvesting In this condition, by running a rotavator, the narvai gets cut and gets mixed with the soil It is also beneficial for. * In today's time, due to uncontrolled use of chemicals The production cost of farming is increasing. Require that this production cost should be reduced. Cheap and effective to reduce production costs The method is to adopt coordinated management measures. * Earth due to change in weather, global warming Due to increasing temperature and uncertainty, insects and The problem of diseases is increasing in crops. Their effective management It is absolutely necessary to adopt coordinated measures for this. * On time to get production in farming Efficient management and right decisions are necessary, many times farmer brothers are weeds Controllers adopt late measures due to which weeds crop The critical stage goes away and the weed plants become stronger Then their control is more difficult than chemicals. | |

**Crop Recommendations  
Rabi crop - wheat**

**Fertilizer Management**

* Add 15-20 tonnes of rotten manure of dung to the field every two years.
* Applying cow dung manure improves land structure and increases yield.
* Fertilizer tips for high varieties
* 40 that nitrogen be added at a rate of per hectare
  + ... 20 that phosphorus be added at the rate of per hectare
  + ... 20 that potash be poured at a rate of per hectare
* Fertilizer tips for irrigated dwarf varieties
  + ... 50-60 that nitrogen be added at a rate of per hectare
  + ... 25-30 that phosphorus be added at a rate of per hectare
  + ... 25-30 that put potosh at a rate of per hectare
* Add the entire amount of nitrogen phosphorus potash to the unirrigated system
* Fertilizer tips for irrigated early ripening varieties
  + ... 80-120 that nitrogen be added at a rate of per hectare
  + ... 60 that phosphorus be added at a rate of per hectare
  + ... 30 that potash be poured at a rate of per hectare.
  + ... If paddy, sugarcane, maize or linseed have been harvested in the Kharif season, add nitrogen at the rate of 120 kg per hectare.
* Fertilizer tips for irrigated early ripening varieties
  + ... 60-80 that nitrogen be added at a rate of per hectare
  + ... 30-40 that phosphorus be added at a rate of per hectare
  + ... Add 25-30 that potosh at a rate of per hectare.
* Nitrogen should be used in three parts
  + ... Do half the amount of nitrogen at the time of sowing.
  + ... Add the remaining 1/4 at the time of the first irrigation.
  + ... Add the remaining 1/4 at the time of second irrigation.
* If the entire amount of phosphorus is added in Kharif season, then add half the amount of phosphorus in Rabi season
* Ashink irrigation should be available and if maximum two irrigations are done, add the amount of nitrogen phosphorus potosh of 80:40:20 per hectare.
  + ...Add a nitrogen phosphorus potash content of 60:30:15 K/hectare with a maximum of one irrigation available.

**Crop Recommendations**

**Pest Management - Rabi Crop - Wheat**

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| --- | --- | --- |
| Insect | Might |  |
| Popular name | Different species |
| Damage | * These are juice suckers who have a Mr.m. Length remains. * Silwari makes stains on the leaves. * A net is formed on the leaves. * Plants whose earrings remain stiff It becomes weak and becomes white in colour. * Plants diseased in later stages Is visible. |
| I.P.M | * Resistive varieties such as W.H.-147, Raj-3836 sow. * Sow on time. * Take good care of the crop. * Sow resistant varieties. |
| Control | * Using chemical pesticides at that time When the number of insects should cross the economic threshold level. * Use of the following pesticides from 600 Do with 750 liters. * 200-250 grams of dimethate per hectare Spray. * 200-250 grams of monachrotophos per Spray hectares. * 200-250 grams of oxydecimitan Spray methyl per hectare. * Use Hollow Connozzle for spraying. |
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| Insect | Different species |  |
| Popular name | Stinkbug |
| Damage | * Light cold temperature and low rainfall of this insect Is conducive to growth and reproduction. * Adult scent bugs cause damage to the stem Eats. * Bug saliva is poisonous which kills the stem Can. * If the colonel eats in the initial stage When they go, the grains are completely destroyed. * If attack occurs in the later stage then rash Let's shrink. |
| I.P. M | * Do not sow late. * Excessive use of nitrogen fertilizers Do it. * Take good care of the crop. * Spray pesticide on the side of the field. |
| Control | Use of the following pesticides from 600 Do with 750 liters.   * 330 Mr.Lee. Dimethate (AD 30.C.) Spray at the rate of. * 650 Mr.Lee. 25 E per hectare.C. At the rate of methyl dimaton Spray. |
|  | | |
|  | | |
| Insect | Various Species |  |
| Popular name | Wireworm |
| Damage | * These wire-shaped, 20-30 min.m. Of Are of length. * They eat the seed kernel and peel it Remains. * The stem appears chewed. Brown The colored grub also lives in the soil. |
| I.P. M | * Do sowing on time. * Destroy the lumps around the fields. * Do not use raw cow dung manure. |
| Control | * Using chemical pesticides at that time When the number of insects should cross the economic threshold level. * Use sysmatic pesticides. * Use of the following pesticides from 600 Do with 750 liters. * In case of attack on standing crops Chloropyrifos 1200 min.Li/hectacare irrigation water Support. Or 50 by dissolving the same amount in 5 liters of water That.Gra.Treat sand and sprinkle it in the field before irrigation. |
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| Insect | Various Species |  |
| Popular name | Aphid |
| Damage | * This insect is active in the months of November to February Lives. * Its on unirrigated and late sown crops Outbreaks remain high. These are juice sucking insects. * These had transparent, small and soft bodies Is. * The leaf dies due to excessive sucking of juice Or increases prematurely. * The new leaves turn yellow. * Yellowish brown aphids appeared at the base of the roots Fall. |
| I.P. M | * Do not sow late. * Excessive use of nitrogen fertilizers Do it. * Take good care of the crop. * Spray pesticide on the side of the field. |
| Control | * Using chemical pesticides at that time When the number of insects should cross the economic threshold level. Use the following pesticides with 600 to 750 litres. 200-250 g/o dimethate or oxydesmitan methyl or Monocrotophos |
|  | | |
|  | | |
| Insect | Various Species |  |
| Popular name | Military insect |
| Damage | * Its outbreak was seen in paddy and wheat crops Is. * Saw outbreaks in the early stages of the crop Has gone. * Insects cause harm by chewing leaves. * All the leaves of the plant due to insect attack Is destroyed. * Newborn larvae eat leaves and then stems But attack. * The larvae attack mostly at night Not during the day. * These are complete if the weather is wet or cloudy Days attack. * Cut and eat the entire adult plant part Goes. |
| I.P. M | * Excessive use of nitrogen fertilizers Do it because it attracts military insects. * Do not sow late. |
| Control | * Using chemical pesticides at that time When the number of insects should cross the economic threshold level. Economic sill level 4 to 5 larvae/litre row for soldier moth Is. Spray the following in the evening.   Spray at a rate of 750 grams of phenytrotheon per hectare. Of 400 grams of cunalphos per hectare Spray at rate. 750 grams of trichlorophone per hectare Spray at the rate of. Pesticide spraying 600 to 700 litres of water Dissolve it in. |
|  | | |
|  | | |
| Insect | Different species |  |
| Popular name | - |
| Damage | * This cuts and chews the crop Causes harm. * Adult insects cause more harm. * Insects cut the stem near the ground. * Insects eat leaf stripes. * The greater the number of insects The greater the loss. Do not sow late. Do not use nitrogen fertilizers excessively. Take good care of the crop. Spray pesticide on the side of the field. |
| I.P. M | * Do not sow late. * Excessive use of nitrogen fertilizers Do it. * Take good care of the crop. * Spray pesticide on the side of the field. |
| Control | * Using chemical pesticides at that time When the number of insects should cross the economic threshold level. Use the following pesticides with 600 to 750 litres. 30 E.C. Dimethate 330 min.Spraying at the rate of m per hectare Do it. 25 E.C. Methyl Demoton 650 min.m per hectare rate Spray with. |
|  | | |
|  | | |
| Insect | Different species |  |
| Popular name | Thips |
| Damage | * These are brown and black insects. * These are juice suckers and piercers. * They eat the stems and leaves of the plant Suck the juice. * Leaf light coloured by insect attack It happens. |
| I.P. M | * Do not sow late. * Excessive use of nitrogen fertilizers Do it. * Take good care of the crop. * Spray pesticide on the side of the field. |
| Control | * Using chemical pesticides at that time When the number of insects should cross the economic threshold level. Use the following pesticides with 600 to 750 litres. 30 E.C. Dimethate 330 min.Spraying at the rate of m per hectare Do it. 25 E.C. Methyl Demoton 650 min.m per hectare rate Spray with. |
|  | | |
|  | | |
| Insect | Holotrichia conseguenia Different species |  |
| Popular name | Name White Grubb/Guvrel/Kurmul/Bhidola |
| Damage | * The roots are partially destroyed. * Plants become stiff and hair does not grow. * Broken and dead plants were seen in the field Is. * Withered and dead plants at many places in the field Can be seen. |
| I.P. M | * Do not sow late. * Excessive use of nitrogen fertilizers Do it. * Take good care of the crop. * Spray pesticide on the side of the field. |
| Control | * Control use of chemical pesticides Should be done at the time when the insect Number of economic threshold levels Cross it. Use the following pesticides with 600 to 750 litres.  30 E.C. Dimethate 330 min.m per Spray at the rate of hectares. 25 E.C. Methyl Demoton 650 min.Me Spray at the rate of per hectare. |
|  | | |
|  | | |
| Insect | Termites |  |
| Popular name | Turmite |
| Damage | * Termites eat grains and parts of plants Is. * The roots are cut off some above the soil surface. * The plant gets uprooted. |
| I.P. M | * Use rotten manure thoroughly. * Treat the seeds. * Termite bombs around the fields were destroyed Do it and kill termite queens. |
| Control | * Control the use of the following pesticides Do with 600 to 750 liters. Bonnie's first4 min.Lee. Chloropyrifos per kg Treat. Treat before sowing. |
|  | | |
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| Insect | Mice |  |
| Popular name | Retus |
| Damage | * Rats cause the most damage to crops Is. * They eat grains and feed them on their bills Let's take it to keep it. * Rats cut the plant a little above the ground Then take the entire plant or its earring in your hole. * About 25 bills in one hectare in wheat Live and damage about 2 percent of earrings. |
| I.P. M | * Plough the field so that the burrow is destroyed. * Fill the holes filled with water or soil. |
| Control | * Use of chemical pesticides at that time Must do when insect count economic damage level (e.T.L.) Cross it. Use of the following pesticides with 600 to 750 litres Do it. 0.005 Bomobiolone (15 g) in burrow. 2 To 2.5 per cent zinc fascafide in 10 grams every bill Keep. |
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| Insect | Olina Malonpa |  |
| Popular name | Leafbeetle |
| Damage | * Wheat plants with irrorated leaves Otherwise, they are more affected. * Both adults and larvae cause harm Is. * Adult insect black head, pale brown beech Is part of. * They have blue-green wings. * Adults 4 to 5 min.m. Were of length Is. * The larva shines and is yellow in colour. * Stripes are visible in the leaves. |
| I.P. M | * Plow deep in summer. * Use resistant varieties. * Do not sow late. * Use well rotten manure. * Use approved quantity of fertilizer. |
| Control | * Using chemical pesticides at that time Should when insect numbers economic damage level (e.T.L.) Cross to Do it. Use the following pesticides with 600 to 750 litres. 30 E.C. Dimethate 330 min.Spraying at the rate of m per hectare Do it. 25 E.C. Methyl Demoton 650 min.m per hectare rate Spray with. |
| [A white arrow in a blue circle  AI-generated content may be incorrect.](https://mpkrishi.mp.gov.in/Englishsite_New/krishi_pranaliya_rabi_gehu_keet.aspx#top) | | |
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| Insect | Ethigona Vituberculeta |  |
| Popular name | Tanamakhi |
| Damage |  |
| I.P. M | * Do not sow late. * Excessive use of nitrogen fertilizers Do it. * Take good care of the crop. * Spray pesticide on the side of the field. |
| Control | * Use of chemical pesticides at that time Must do when insect count economic damage level (e.T.L.) To Cross it. Use the following pesticides with 600 to 750 litres. 30 E.C. Dimethate 330 min.Spraying at the rate of m per hectare Do it. 25 E.C. Methyl Demoton 650 min.m per hectare rate Spray with. |
|  | | |
|  | | |
| Insect | Shoot spread |  |
| Popular name |  |
| Damage |  |
| I.P. M | * Between mid-November and December Sow. |
| Control | * Using chemical pesticides at that time Should when insect numbers economic damage level (e.T.L.) Cross Do it.  Use the following pesticides with 600 to 750 litres.  Spray at a rate of 50 gam cypermethrene per hectare and If necessary, spray again. |
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| Insect | Miromyzespecies |  |
| Popular name | Tanamengat |
| Damage | * Larvae cause more harm. * The larvae pierce the stem and eat from inside Due to which the thirst falls. * If the outbreak is severe the plant dies. * The adult fly would have been pale green to yellow Is and 6 min on that.m. There are stripes of. |
| I.P. M | * Do not sow late. * Excessive use of nitrogen fertilizers Do it. * Take good care of the crop. * Spray pesticide on the side of the field. |
| Control | * Using chemical pesticides at that time Should when insect numbers economic damage level (e.T.L.) Cross Do it.  Use the following pesticides with 600 to 750 litres.  30 E.C. Dimethate 330 min.Spraying at the rate of m per hectare Do it. 25 E.C. Methyl Demoton 650 min.m at the rate of per hectare Spray. |
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| Insect | Maytia Destructor |  |
| Popular name | Hessian fly |
| Damage | * Larvae cause the most damage. * The larvae suck the sap of the plant from the stem. * If the anger is severe then the plant becomes stiff. * The yield decreases. * Hesian fly length 3 to 4 min.m. Would have happened Is. * The head is black and has a pinkish yellow belly Is. * Attack occurs at the time of formation of lumps * So in the ripening stage the stems can fall apart Is. |
| I.P. M | * Plow deep in summer. * Use resistant varieties. * Do not sow late. * Use well rotten manure. * Use approved quantity of fertilizer. |
| Control | * Using chemical pesticides at that time Should when insect numbers economic damage level (e.T.L.) Cross to Do it. Use the following pesticides with 600 to 750 litres. 30 E.C. Dimethate (Roger) 330 min.m at the rate of per hectare Spray. 25 E.C. Methyl Demoton 650 min.m per hectare Spray at the rate of. |
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| Insect | Stem Borer |  |
| Popular name | Stem borer insect |
| Damage | * This insect is unirrigated in the months of November to December Attacks the crop. * The larva makes holes on the stem. * Crop growth stops. * The adult insect invades the leaves. |
| I.P. M |  |
| Control | * Use of the following pesticides from 600 Do with 750 liters.  Methyl Demedan 25 E.C. 600 min.Lee. Or 36 S. L. Monocrotophos or 50 E.C. Melathion 600 min.Lee. Spray at the rate of /ha. |

**Crop Recommendations**

**Disease Management - Rabi Crop - Wheat**

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| --- | --- | --- |
| Disease | Alternaria blight |  |
| Hindi name | Alternaria blight |  |
| Causative bacteria | Alternaria trietisina |  |
| Symptoms & Damage | 1. High humidity, good irrigation and temperature 22 D. 28 di from. This Is conducive to disease. 2. Initially spots are visible on the leaves. 3. The spots are small, round and purple in colour. 4. Later the spots increase in size and scatter irregularly Is. Lower leaves fall. |  |
| Control | 1. Spray gram per liter per hectare of mencojeb. Or spray 1.5 grams per liter of carbadizim. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. 7. Care should be taken that the seed does not lose its pickling capacity. |  |
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| Disease | Altaneria leaf ring |  |
| Hindi name | Altaneria leaf scorch |  |
| Causative bacteria | Altaneria leaf scorch |  |
| Symptoms & Damage | 1. Initially round spots are visible on the upper part of the leaves. 2. These spots are spread irregularly. 3. The spots are brown to black in colour. 4. The histothelial area is surrounded by a bright yellow color. 5. The spots get bigger and become bigger spots. 6. Black powder materials develop into conidia and conidia Is. 7. Similar symptoms are seen on earrings and leaves. |  |
| Control | 1. 3 grams per liter Spray Menkojeb or Carbadjim 1.5 grams per litre. Or 8 of zeneb or meneb or copper oxychloride at a rate of 0.25 Spray in 10-15 day intervals. 2. Use certified seeds. 3. Uproot and destroy disease affected plants. |  |
| I.P. M | 1. Resistive varieties such as N.P.-4, N.P.-52, N.p. -100, N.Sow P.-824. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Janthomonas kempestrus |  |
| Hindi name | Bacteria Angamari and Kadua diseases |  |
| Causative bacteria | Janthomonas kempestrus |  |
| Symptoms & Damage | 1. The bacterium can also spread from seeds. 2. This disease can spread through rain and insects. 3. The pods are filled with black powder instead of grains. 4. The disease occurs in the initial stage of the crop. 5. This disease does not occur in India. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Bacterial disease |  |
| Hindi name | Bacteria Disease |  |
| Causative bacteria | - |  |
| Symptoms & Damage | - |  |
| Control | - |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Yellow Rot |  |
| Hindi name | Yellow rot |  |
| Causative bacteria | Coronibacterium trietc |  |
| Symptoms & Damage | 1. This disease is also spread by insects 2. This bacterium is related to Nguvina trityc. 3. Yellow matter accumulates on the chaos. 4. The substance turns white when dry. 5. Later earrings come in like a sticky substance. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Tushabh rot and bacterial organ failure |  |
| Hindi name | Tushabh rot And bacterial organelle |  |
| Causative bacteria | Sudomonas |  |
| Symptoms & Damage | 1. This disease occurs in moist areas. 2. The disease can spread through seeds, insects and rain. 3. Dark green spots are visible on leaves, stems and pods. 4. Later the spots turn dark brown to black. 5. If the weather is wet, a white discharge is visible. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Sooty Mould |  |
| Hindi name | Sooty Mould |  |
| Causative bacteria | Altaneria,clodosporium,stemphyllum,epicoccum |  |
| Symptoms & Damage | 1. This disease occurs in areas with moisture and rain. 2. This disease occurs due to attack of aphid. 3. Due to accumulation of fungus the pod turns black. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Bhure Ochreous disease |  |
| Hindi name | Bhure Ochreous disease |  |
| Causative bacteria | Pucinea Recondita |  |
| Symptoms & Damage | 1. This disease in tropical areas It is more. 2. The yield decreases significantly. 3. Spots on the upper part of the leaf Are visible. 4. The spots are round or elliptical. 5. The spots neither spread nor meet Is. 6. Spots in the upper part of the leaf Are found. |  |
| Control | 1. Well controlled with 3 g#litre mencojeb or tridymephon Can go. 2. Take care of the cleanliness of the field. 3. Use resistive strands. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Of barley Yellow vamanta disease |  |
| Hindi name | Barley yellow Dementia disease |  |
| Causative bacteria | - |  |
| Symptoms & Damage | 1. It spreads through aphids. 2. The disease spreads at temperatures of 20 to 22 di. 3. The leaf turns yellow or red. 4. Root development stops. 5. Due to fungus, the affected plants become straight and turn black Is. Becomes colorless due to ripening and sapropitic fungus. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Use pesticides to control aphids. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Telysia keris, Telysia phytida, Telysia kantroversa |  |
| Hindi name | Vamanata Bunt |  |
| Causative bacteria | Kk |  |
| Symptoms & Damage | 1. This disease occurs at low temperature during contraction. 2. They get divided due to the attack of this disease. 3. These bunts are spherical and smell like fish. 4. Legumes turn black or blue-green. 5. The height of the plant decreases. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Vitavex 2 grams per ki.Gra. Treat seeds with. |  |
| I.P. M | 1. Use anti-antithesis varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May-June when there is strong sunlight, seed for 4 hours in the morning After soaking in water, dry it thoroughly in the sun. |  |
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|  | | |
| Disease | Telysia keris, Telysia phytida |  |
| Hindi name | Vamanata Bunt 2 |  |
| Causative bacteria | Kk |  |
| Symptoms & Damage | 1. This disease occurs at low temperature during contraction. 2. They get divided due to the attack of this disease. 3. These bunts are spherical and smell like fish. 4. Legumes turn black or blue-green. 5. The height of the plant decreases. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Vitavex 2 grams per ki.Gra. Treat seeds with. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | [-](https://mpkrishi.mp.gov.in/Englishsite_New/krishi_pranaliya_rabi_gehu_rog.aspx" \l "corwnsaran) |  |
| Hindi name | Crown Rot |  |
| Causative bacteria | - |  |
| Symptoms & Damage | - |  |
| Control | - |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Downey Mildieu |  |
| Hindi name | Muduromil Asita, Haritbali |  |
| Causative bacteria | Isliropythora macrospora |  |
| Symptoms & Damage | 1. This disease occurs in humid areas, where water accumulation is high. 2. The favorable temperature for this disease remains 10-25 di centigrade. 3. The nodes remain small, irregular, crooked and greenish yellow. 4. The leaves become thick and become clusters. 5. Earrings do not form in the basement and die. 6. Grains are not formed and become like leaves. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Wheat Argut disease of |  |
| Hindi name | Wheat Argut disease of |  |
| Causative bacteria | Clovicep Parpuriya |  |
| Symptoms & Damage | 1. Dry sandy soil, low temperature and moisture are favorable for this disease. 2. Mold lives in soil or plant remains. 3. This disease is prevalent in fields where grains have been grown for a long time There is an effect. 4. Spots are visible on the base petiole. 5. Due to disease, plants can break and the number of plants reduces. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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|  | | |
| Disease | Rhizotonia solani |  |
| Hindi name | - |  |
| Causative bacteria | - |  |
| Symptoms & Damage | 1. This disease occurs at low temperature during contraction. 2. They get divided due to the attack of this disease. 3. These bunts are spherical and smell like fish. 4. Legumes turn black or blue-green. 5. The height of the plant decreases. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Vitavex 2 grams per ki.Gra. Treat seeds with. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May-June when there is strong sunlight, seed for 4 hours in the morning After soaking in water, dry it thoroughly in the sun. |  |
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| Disease | Altaneria, Helminthosporium and Phyuzorium |  |
| Hindi name | Black dot |  |
| Causative bacteria | - |  |
| Symptoms & Damage | 1. The disease occurs in humid weather. 2. The grains become colourless. 3. The earrings become dark brown or black. |  |
| Control | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
| I.P. M | - |  |
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| Disease | Flegg Kadua disease |  |
| Hindi name | Flag Kadua Disease |  |
| Causative bacteria | Eurocystis TriTC |  |
| Symptoms & Damage | 1. This disease affects the leaves. 2. Gray-black sori were visible on the leaf sheath between the heads Is. 3. In the initial stage the sori is covered with epidermis After breaking it, black matter is visible. |  |
| Control | 1. Use certified, registered and disease free seeds. 2. Treat seeds with fungicides. 3. Seed to 1.5 K.Gra.Vitavex # carbadygym per ki.Gra seeds Treat with. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May-June when there is strong sunlight, seed for 4 hours in the morning After soaking in water, dry it thoroughly in the sun. |  |
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| Disease | Fusarium leaf spot and snow puff |  |
| Hindi name | Faugerium Leaf spot and snow puff |  |
| Causative bacteria | Kelonetryria nevelis |  |
| Symptoms & Damage | 1. This disease affects Kathia varieties of wheat more. 2. Infection spreads through wind or rain. 3. Cold or humid weather helps in the spread of this disease. 4. Symptoms are visible in case of lump formation. 5. In the curving area of the leaf, round to elliptic grey Appears disturbed. 6. These spots with light gray center grow. 7. The entire leaves of the plant fall and the weight of the grains decreases Is. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Helminthosporium foliar spot |  |
| Hindi name | Helminthosporium foliar spot |  |
| Causative bacteria | Helminthosporium setivum |  |
| Symptoms & Damage | 1. Different round spots are visible on the leaf blade and petiole. 2. The spots increase from light brown to dark brown and become lifeless Let's go. 3. These spots together become very irregular spots. |  |
| Control | 1. Use certified, registered and disease free seeds. 2. Use resistant varieties. |  |
| I.P. M | 1. Use resistant varieties. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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|  | | |
| Disease | Karnal Bunt |  |
| Hindi name | Of wheat Karnal Bunt |  |
| Causative bacteria | - |  |
| Symptoms & Damage | 1. The color of the grain turns black. 2. The spores are scattered by the wind. 3. If there is excessive infection, the grain is no longer edible. |  |
| Control | 1. The control of this disease is not yet known. 2. Propiconazole 0.1 percent E.C. of disease by spraying Infection can be reduced. |  |
| I.P. M | 1. More varieties of Kathia wheat than soft varieties Is resistant. 2. Take care of the cleanliness of the field. 3. Use resistant varieties. 4. Irrigation before flowering reduces the severity of the disease. 5. Use disease free seeds in healthy fields. 6. Waterfall during arrival in Bali can cause gurgling. |  |
| [A white arrow in a blue circle  AI-generated content may be incorrect.](https://mpkrishi.mp.gov.in/Englishsite_New/krishi_pranaliya_rabi_gehu_rog.aspx#top) | | |
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| Disease | - |  |
| Hindi name | Of seed Karnal Bunt |  |
| Causative bacteria | - |  |
| Symptoms & Damage | 1. The color of the grain turns black. 2. The spores are scattered by the wind. 3. If there is excessive infection, the grain is no longer edible. |  |
| Control | 1. The control of this disease is not yet known. 2. Sow on time. 3. Propiconazole 0.1 percent E.C. of disease by spraying Infection can be reduced. 4. More varieties of Kathia wheat than soft varieties Is resistant. 5. Take care of the cleanliness of the field. |  |
| I.P. M | 1. More varieties of Kathia wheat than soft varieties Is resistant. 2. Take care of the cleanliness of the field. 3. Resistive varieties such as P.B.Use W -299. 4. Pay attention to the cleanliness of the field. 5. Use certified seeds. 6. Do not sow late. 7. Remove the remains of affected plants from the field and destroy them. 8. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
| [A white arrow in a blue circle  AI-generated content may be incorrect.](https://mpkrishi.mp.gov.in/Englishsite_New/krishi_pranaliya_rabi_gehu_rog.aspx#top) | | |
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| Disease | Unveiled condom |  |
| Hindi name | Peasade Kaduva disease |  |
| Causative bacteria | Oostaligo TriTC |  |
| Symptoms & Damage | 1. Cold and humid weather is favorable for this disease. 2. Affects bunches of buds. 3. This disease can occur at any stage of the plant. 4. This is a seed borne disease. 5. The entire bunch of buds is affected by the disease. 6. Except for the rachis, the entire bunch turns into black and fine material Is. |  |
| Control | 1. Use certified, registered and disease free seeds. 2. Use resistant varieties. |  |
| I.P. M | 1. Use disease free seeds. 2. 1 to 1.5 grams at the time of sowing Treat the seeds with carbocene or carbodegem. |  |
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| Disease | Bhabhutiya |  |
| Hindi name | Dahiya Disease |  |
| Causative bacteria | - |  |
| Symptoms & Damage | 1. 14 to 25 D. Temperature is favorable for this disease. 2. Cold and humid weather is favorable for this disease. 3. White or gray on the petiole and upper part of the leaf Fine powder is visible. 4. The infective area is yellow in color which can be rubbed with the fingers Can. 5. The infecting areas of the leaves become green and then Become lifeless. 6. Black goblet-shaped kelestothecia in case of severe infection Which are visible through the eyes. |  |
| Control | 1. Use certified, registered and disease free seeds. 2. Use resistant varieties. 3. Spray 1.5 grams # liter of carbadgym. |  |
| I.P. M | 1. Use certified, registered and disease free seeds. 2. Use resistant varieties. |  |
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| Disease | Scoroshiam wilt |  |
| Hindi name | Of wheat Schoroscium ukata disease |  |
| Causative bacteria | Scoroshium rolfsai |  |
| Symptoms & Damage | 1. Acidic soil,20 di. Over temperature, and excessive moisture this disease Is favorable for. 2. In the initial stage, this disease occurs due to which the plant becomes damp Goes. 3. Feather-like mycelia live on the surface of the fiber. 4. Newborn sclerosia are white in color and later brown to dark Become brown in colour. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. |  |
| I.P. M | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Use certified seeds. |  |
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| [A white arrow in a blue circle  AI-generated content may be incorrect.](https://mpkrishi.mp.gov.in/Englishsite_New/krishi_pranaliya_rabi_gehu_rog.aspx#top) | | |
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| Disease | Gymonomycis Graminis |  |
| Hindi name | Of wheat Apocalyptic disease |  |
| Causative bacteria | Gymonomycis graminis |  |
| Symptoms & Damage | 1. The possibility of this disease remains in those fields where plowing and weeding are fine Not from. 2. The roots, parts of the lower stem rot and turn black. 3. If infection occurs in the initial stage, the plant becomes stiff. 4. If the weeds are properly grown in an infectious plant, the earrings do not bear fruit. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Use certified or registered seeds. |  |
| I.P. M | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Use certified or registered seeds. |  |
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| **Disease** | Gymonomycis graminis |  |
| **Hindi name** | Of wheat Apocalyptic diseases 2 |  |
| **Causative bacteria** | Gymonomycis graminis |  |
| **Symptoms & Damage** | 1. The possibility of this disease remains in those fields where plowing and weeding are fine Not from. 2. The roots, parts of the lower stem rot and turn black. 3. If infection occurs in the initial stage, the plant becomes stiff. 4. If the weeds are properly grown in an infectious plant, the earrings do not bear fruit. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Use certified or registered seeds. |  |
| **I.P. M** | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Use certified or registered seeds. |  |
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| **Disease** | Pyrinophora tychostopa or Duchslera tatyckai-riepens |  |
| **Hindi name** | Ten yellow Leaf spot |  |
| **Causative bacteria** | Pyrinophora tychostopa or Duchslera tatyckai-riepens |  |
| **Symptoms & Damage** | 1. This disease occurs in cold producing areas of wheat. 2. Brown spots are visible in the leaves. 3. Later they spread and become very round and yellow or green Let's go. |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Use certified or registered seeds. |  |
| **I.P. M** | - |  |
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| **Disease** | Tundu Disease |  |
| **Hindi name** | Tundu Disease |  |
| **Causative bacteria** | Ingeuna Titi |  |
| **Symptoms & Damage** | - |  |
| Control | 1. Take care of the cleanliness of the field. 2. Use resistive strands. 3. Use certified or registered seeds. |  |
| **I.P. M** | - |  |
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| **Disease** | Luce Smut |  |
| **Hindi name** | Unveiled Kand |  |
| **Causative bacteria** | - |  |
| **Symptoms & Damage** | 1. All the eggs turn into dark matter. 2. In the initial stage, silvery cover remains on the dark substance. 3. Later the membrane breaks, the spores of dark matter are blown away by the wind Go and remain restless. 4. A black condon develops on the first or next leaf. 5. There is no effect on the earrings. 6. The spores are light yellow in color, round to elliptical in shape Whose outer edge is thorny. |  |
| Control | 1. Use disease free seeds. 2. Use resistant varieties. 3. Seeds 50 to 54 D for six hours. From water at centrifuge temperature Treat. 4. Dry the soaked seeds in direct sunlight for about four hours. 5. At a rate of 2.5 to 3 grams of VitaVex or Benlet per kilo Treat. |  |
| **I.P. M** | 1. Resistive varieties such as P.W.D.-233, p.W.D.-34,p.W.D.-138, T.L. Use 1210. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. |  |
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| Disease | Sehu Disease |  |
| Hindi name | Sehu disease |  |
| Causative bacteria | Gegla, Mamani, Inguana TriTC |  |
| Symptoms & Damage | 1. This disease is caused by nematodes. 2. In Pitika on the plant, the plant grows on the soil surface for some time Later it grows directly. 3. Swelling appeared on the lower part of the plant 20 to 25 days after sowing Gives. 4. When the plant comes, the leaves turn inside out. 5. The sick plant remains dwarf. 6. Sterilized earrings are produced on the affected plant. 7. Patient earrings have blisters instead of grains which last for a long time Remain green. 8. If these blisters fall into the soil at the time of harvesting, then this will be the next crop Also affects. 9. Outbreaks of this disease are very high and yield up to 80 percent Can reduce. |  |
| Control | 1. Tritycale is a host of durum and bed nematodes. 2. Use seeds free from pitika. 3. Use certified or registered seeds. 4. Adopt crop rotation principles. 5. Do not use the same variety again and again. 6. Uproot the affected plant. 7. Do not use diseased crop seeds for sowing. |  |
| I.P. M | 1. Pay attention to the cleanliness of the field. 2. Use certified seeds. 3. Do not sow late. 4. Remove the remains of affected plants from the field and destroy them. 5. In the months of May - June when there is strong sunlight, water the seeds for 4 hours in the morning After soaking it, dry it thoroughly in the sun. 6. If the seeds of diseased crops are to be used then they Dip in ordinary water, the diseased seeds are mild Swim and separate them. |  |
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| Disease | Black Kitt |  |
| Hindi name | Black kit |  |
| Causative bacteria | Paciniya graminis trityc |  |
| Symptoms & Damage | 1. Spots are visible on the stem, glans and earrings. 2. There are dark brown spots on the stem which contain torn epidermis Is. 3. The seed's ability to shrink is lost. 4. The grains become colourless. |  |
| Control | 1. Spray 3 grams #litre of menkozeb. Or Spray 1.5g #litre of carbadgym. |  |
| I.P. M | 1. Resistive varieties such as W.H. 147, G.W- 190, H. USE 1977. 2. Pay attention to the cleanliness of the field. 3. Use certified seeds. 4. Do not sow late. 5. Remove the remains of affected plants from the field and destroy them. 6. When there is strong sunlight in the months of May-June Ho, in the sun after soaking the seeds in water for 4 hours in the morning Dry well. |  |
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| Disease | - |  |
| Hindi name | Sutra worm |  |
| Causative bacteria | - |  |
| Symptoms & Damage | - |  |
| Control | 1. Chemical pesticides should be used when the number of insects Cross the economic threshold level.  Use the following pesticides with 600 to 750 litres.  8 30 AD.C. Dimethate 330 min.m per Spray at the rate of hectares. 8 25 E.C. Methyl Demoton 650 min.Me Spray at the rate of per hectare. |  |
| I.P. M | - |  |
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| Disease | Melodogny species |  |
| Hindi name | Root knot Niematodes |  |
| Causative bacteria | - |  |
| Symptoms & Damage | 1. This nematode forms blisters or lumps near the root. 2. Due to this, more branches develop in the roots. 3. The plant becomes green and stiff. |  |
| Control | Use the following pesticides with 600 to 750 litres.   1. 8 30 AD.C. Dimethate 330 min.m at the rate of per hectare Spray. 2. 8 25 E.C. Methyl Demoton 650 min.m at the rate of per hectare Spray. |  |
| I.P. M | 1. Use certified seeds. 2. Plow deep in heat when temperature 40 D. Be close to which there is sunshine This helps in the destruction of nematodes etc. 3. Pay attention to the cleanliness of the field. |  |
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| Disease | Ngwena TriTC |  |
| Hindi name | Seed Gaul Nematodes |  |
| Causative bacteria | - |  |
| Symptoms & Damage | 1. Moist weather and wet soil help gall nematodes grow Does. 2. The nematode penetrates into the area of the stem, the apex. 3. Scattered leaves and stem indicate its attack. 4. At the stage of ripening, blisters are visible on the flower. 5. These are dark in color which take up the middle space. 6. As soon as these blisters get wet, the larvae start doing their work Is. |  |
| Control | 1. Chemical nematodicides should be used when nematodes The number should cross the economic threshold level. 2. Economic sill level for nematodes healthy from 1 per cent gall seed The percentage of seeds is. 3. 30 E.C. Dimethate 330 min.Spraying at the rate of m per hectare Do it. 4. 25 E.C. Methyl Demoton 650 min.m at the rate of per hectare Spray. |  |
| I.P. M | 1. Use certified seeds. 2. Put the infecting seeds 2 percent of the salts in water. 3. The galls float in water, separate them, then with clean water Wash and then dry. |  |
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| Disease | - |  |
| Hindi name | Serial Cyst sutra |  |
| Causative bacteria | Heterodera avni |  |
| Symptoms & Damage | 1. It attacks all varieties. 2. There are many branches in the roots of infectious plants and in them It becomes mabad. 3. The mabad is white in color and then becomes dark brown. |  |
| Control | 1. Chemical nematodicides should be used when nematodes The number should cross the economic threshold level. 2. Economic sill level for nematodes 2 eggs per 2 larvae # Village is soil. 3. 1.5 K at Bonnie's time.Gra. 3 G. Carbafuran per hectare Spray. |  |
| I.P. M | 1. Use resistant varieties. 2. Grow crops like gram or mustard. 3. Plow deep in summer. 4. Bonnie hurry up. |  |
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**Croprecommendations**

**I. P. M - Rabi crop - wheat**

1 K for weed control.Gra. Spray isoproton per hectare 30-35 after sowing.

**To control pests:-**

* Use certified seeds.
* Use resistant castes.
* In case of continuous problem of field insects etc., instead of wheat, gram, mustard or other crops which are not infested by insects should be grown for three years.
* Don't sow late.
* To contact the sun rays, do deep plowing in the month of May-June so that the eggs and larvae of nematodes and insects die.
* In case certified seeds are not available, seed in water containing 2 percent salts for separation of spoiled seeds. The peels float and remove them, wash the seeds with good water, dry them and then sow.
* Inspect the field from time to time and if you see attack from insects etc. then take control measures.

**To control diseases**

* Use certified seeds.
* Use resistant castes.
* Don't sow late.
* Clean the field thoroughly.
* In the summer months, soak the seeds in cold water, place them in the daytime sun at 8 to 12 and dry them in the afternoon.
* If the plants are suffering from disease, uproot them and throw them away.
* Before sowing, treat the seeds with fungicide.
* 4 min for control of termite problem in farm.Lee. Claropyriphos per ki.Gra. Treat with seeds.
* 175 grams A if termite infestation occurs at Akunran.Mix it in indosulfan soil and spray it.

**Rat control**

* Break the bills around the field.
* Use a mousetrap.
* Zinc Phosphide Medicine: Flour: Make oil tablets, treat them and put them around the hole in the field.