# Gandum ki Kaasht

**Taaruf:**

Gandum Pakistan mein kasht ki jane wali ahm ghizaai fasalon mein se ek fasal hai. Ye (Poaceae) ghas ke khandan se talluq rakhti hai aur ghizai zaroorat ko poora karne ka aik bara zariya samjha jata hai. Gandum ka nabataati naam Triticum aestivum hai. Pakistan ki zameen aur aab o hawa

gandum ki paidawar ke liye nihayat mozoon hai. Pakistan riquba aur paidawar ke hawalay se duniya mein gandum paidah karne wale mumalik mein aathween number par hai. Aabpash

ilaqon mein kapas, chawal ya kammad ke baad kasht hoti hai, jabke kuch ilaqon mein warial

(khaali) zameenon par bhi iski kasht hoti hai. Ilawa azin, barani ilaqon mein bhi wasee riqbay par kasht ki jati hai.

# Ghizaai Ahmiyat:

Gandum buniyadi tor par carbohydrates par mushtamil hoti hai lekin is mein mutadil (darmiyani) miqdaar mein protein bhi hoti hai. 3.5 ounce (100 gram) gandum ke aate ke ghizaai ajza ye hain:

|  |  |
| --- | --- |
| **Ghizaai Ajza** | **Miqdaar** |
| Kilories | 360 |
| Pani | 11% |
| Protein | 23.15 gram |
| Carbohydrate | 51.8 gram |
| Vitamin B (C) | 1.3 mg |
| Thiamine B1 | 1.88 mg |
| Feeber | 13.2 gram |
| Charbi | 9.72 gram |

Zaraye: NARC Islamabad

# Iqtisadi Ahmiyat:

Gandum duniya bhar mein ugayi jane wali fasal hai. Gandum makai ke baad doosra sab se zyada paidah hone wala anaj hai, aur gandum ki aalami tijarat degar tamam fasalon se zyada hai.

2021 mein gandum ki kul aalami paidawar 774.8 million ton thi. Cheen, Bharat aur Russia duniya ke teen sab se baray individual (akelay) gandum paidah karne wale mumalik hain, jo

duniya ki gandum ki kul paidawar ka taqriban 41% hissa paidah karte hain. America duniya ka choutha sab se bara individual gandum paidah karne wala mulk hai. Saal 2021-22 ke doran,

Pakistan ne 8.9 million hectare ke riqbay par taqriban 26 million metric ton (MMT) gandum ki paidawar hasil ki. Jaisa ke United States Department of Agriculture (USDA) ki saalanaa anaj aur khoraak ki offeecial report mein shaaya kiya gaya hai. Pakistan riqba aur paidawar ke hawalay se duniya mein gandum paidah karne wale mumalik mein aathway number par hai.

# Paidawari Akhrajat aur Amdan:

Is waqt zaati zameen ki soorat mein gandum paidah karne ka fee ekar average 40 se 45 hazar

rupees kharch aata hai. Behtar paidawari technology par amal parhane ke sath-sath agar mosemi halaat bhi sazgar rahein to 45 se 50 mann gandum fee ekar aur 55 se 62 mann fee ekar bhosa paidah ho sakta hai. Jis se majmoi tor par kul amdani aik se sawa aik lakh rupees hasil ki ja sakti hai.

Government ne sooba Punjab aur Sindh mein gandum ka rate is saal 3900 rupees fee mann muqarar kiya hai.

# Gandum ke Zair-e-Kasht Raqba aur Paidawar:

Saal 2021-22 mein Pakistan mein gandum ki fasal 8976 hazar hectare se zayad riqba par kasht ki gayi, jismein 26394 hazar metric ton paidawar hasil hui (Pakistan Economic Survey 2021-22).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subon ke Lihaaz se Gandum ki Paidawar 2014-2015 se 2019-2020 tak (Paidawar - Ton mein):** | | | | | |
| **Pakisatn** | **Balochistan** | **Khyber Pakhtunkhwa** | **Sindh** | **Punjab** | **Saal** |
| 25086.10 | 870.10 | 1259.90 | 3672.20 | 19281.90 | 2014-15 |
| 25633.10 | 871.30 | 1400.50 | 3834.60 | 19526.70 | 2015-16 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 26673.60 | 931.80 | 1365.10 | 3910.40 | 20466.30 | 2016-17 |
| 25076.10 | 935.40 | 1322.70 | 3639.50 | 19178.50 | 2017-18 |
| 24358.10 | 865.30 | 1336.70 | 3778.90 | 18377.20 | 2018-19 |
| 25249.50 | 867.20 | 1130.40 | 3850.00 | 19401.90 | 2019-20 |

## Makhoz: Agricultural Statistics of Pakistan

Punjab mein pichlay paanch salon mein gandum ka zair kasht raqba aur paidawar mandarja zail hain:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Punjab mein pichlay paanch salon mein gandum ka raqba, kul paidawar aur ausat**  **paidawar:** | | | | | |
| **Ausat Paidawar** | | **Kul Paidawar** | **Raqba** | | **Saal** |
| (Kilogram fee Hectare) | (Mann fee Akar) | (Hazar Metric Ton) | (Hazar Hectere) | (Hazar Acre) |  |
| 3073 | 31.09 | 20466 | 6660.19 | 16458 | 2016-17 |
| 2924 | 29.58 | 19178 | 6559.83 | 16210 | 2017-18 |
| 2829 | 28.62 | 18377 | 6496 | 16052 | 2018-19 |
| 2978 | 30.13 | 19402 | 6515 | 16100 | 2019-20 |
| 3098 | 31.34 | 20900 | 6746 | 16670 | 2020-21 |
| 3053 | 30.89 | 20032 | 6560 | 16210 | 2021-22 |

(Yeh adad o shumaar Crop Reporting Service Punjab ke faraham karda hain.)

# Gandum ke Liye Mozoon Aab-o-Hawa:

Gandum paanch se saadhay paanch mah (140 to 150 din) mein pak kar tayar honay wali fasal hai. Gandum ke ugao ke liye sard aur num mausam nihayat mozoon hai, jabke pakne ke liye

garm aur khushk mausam moassar hota hai. Gandum us waqt behtareen nashonuma paati hai aur achhi paidawar deti hai jab darja hararat taqreeban 21ºC se 24ºC tak ho.

Jab danay bharne shuru hon, to us waqt gandum ko zyada dhoop ki zarurat hoti hai. Kam se kam darja hararat jo gandum apni nashonuma ke doran bardasht kar sakti hai, taqreeban 4ºC hai. Agar darja hararat 35ºC se zyada ho, to gandum achhi tarah nahi ugti.

Gandum kyunkay ek hassas fasal hai, is liye yeh 4ºC ya is se kam aur 35ºC se zyada darja hararat bhi bardasht kar sakti hai, lekin is se hasil honay wali paidawar kam ho gi.

# Gandum Ki Kaasht Ke Liye Ahem Ilaqay:

|  |  |
| --- | --- |
| Punjab ke Ahem Ilaqay | **Baad az Dhaan/Ganna:**  Faisalabad, Toba Tek Singh, Jhang, Gujranwala, Hafeezabad, Sialkot, Mandi Bahauddin, Narowal, Lahore, Sheikhupura, Okara, Kasur, Mianwali, Khushab, Sargodha, Bhakkar.  **Gandum Baad az Kapas (Cotton Zone):** Multan, Lodhran, Vehari, Khanewal, Sahiwal, Pakpattan, Bahawalpur, Bahawalnagar, Rahim Yar Khan, Dera Ghazi Khan, Muzaffargarh, Rajanpur, Layyah, Faisalabad, Toba Tek Singh, Jhang, Okara, Bhakkar.  **Gandum (Barani Ilaaqajat):**  Rawalpindi, Attock, Jhelum, Chakwal. |
| Sindh ke Ahem Ilaqay | Shaheed Benazir Abad, Naushahro Feeroze, Ghotki, Khairpur, Sanghar, Dadu, Matiari, Qambar Shahdadkot, Mirpurkhas, Larkana,  Sukkur, Tando Allahyar, |

|  |  |
| --- | --- |
|  | Shikarpur, Umerkot, Jamshoro, Badin,  Kashmore, Jacobabad, Hyderabad, Thatta. |
| Khyber Pakhtunkhwa ke Ahem Ilaqay | Dera Ismail Khan, Swat, Charsadda, Mardan, Swabi, Peshawar, Nowshera, Buner, Haripur, Dera Lower, Dera Upper, Kurram, Shangla, Bajaur, Malakand, Tank, Bannu, Kohat, Abbottabad, Lakki Marwat, Khyber, Chitral, Battagram. |
| Balochistan ke Ahem Ilaqay | Nasirabad, Jaffarabad, Jhal Magsi, Khuzdar, Dera Bugti, Lasbela, Sibi, Barkhan, Awaran, Kharan, Loralai, Kachi, Kohlu, Qilla Saifullah, Nushki, Chagai, Panjgur, Zhob, Qalat, Washuk, Mastung, Pishin, Turbat, Quetta, Hernai. |

### Zameen Ka Intikhab:

Gandum ki zyada paidawar hasil karne ke liye, podon ki nashonuma aur behtareen ugaw ke liye, narm bhur bhari aur jari bootiyon se paak mera zameen darkaar hoti hai. Gandum nisbatan ek

hassas fasal hai. Is liye iski kuch aqsam darmiyani had tak kalrathi (namak wali), chakni aur

sakht zameenon mein bhi kaasht ki ja sakti hain. Magar is se hasil hone wali paidawar sehatmand zameen mein kaasht ki gayi gandum ki nisbat kam hoti hai.

# Zameen Ki Tayari:

Gandum ki fasal ki buwai ke liye zameen achi tarah tayar karein. Waryal kheton mein do ya teen martaba waqfa waqfa se hal chalayen. Is se jari bootiyan talf ho jati hain aur zameen mein mojood ghizaai ansar poday asani se istemal kar sakte hain. Jahan kahin zarurat ho, laser leveler se zameen ko hamwar karein. Raoni se pehle kheton ko chhote chhote hisso mein taqseem karein taake pani yaksaa aur matlubha miqdar mein diya ja sake. Raoni ke baad watar (zameen ko pani lagane ke aik se do din baad jab mitti haath mein uthayen aur uski gol geend bana kar door phenkain aur woh thokro mein gire/andaazan 30 se 40 feee-sad nami ho) aane par buwai (kaasht) se kuch din pehle subah sooray hal chalayein aur sohaga dein. Yeh amal do teen baar dohrane se jari bootiyan talf ho jain gi (isse daab ka tareeqa kehte hain) aur zameen ki nache ki nami upar aa jaye gi jo gandum ke achay agaw ki zamin

hogi. Jari bootiyon ki talfee ke liye yeh amal bohot ahmiyat ka haamil hai. Daab ka tareeqa agiti

(mozoon waqt se pehle) aur darmiani kaasht mein asani se ikhtiyar kiya ja sakta hai lekin pacheeti Muzon Waqt Ke Baad kaasht mein waqt ki kami ki wajah se yeh tareeqa nahi apnaya ja sakta. Seelab ke ilaqay mein zameen ko hamwar kar ke gehra hal chalayein taake munasib nami moyasir ho. Aakhri tayari mein bhaari aur mera zameen mein do baar jabke halki aur reetli zameen mein sirf aik baar hal chalayein aur sohaga dein.

# Aabpash Ilaqon Mein Gandum Ki Kaasht:

Aabpash ilaqon mein gandum ki beshtar kaasht kapas, dhan, kamad ya makai ke wadh (tana - jarein / baqaiyajat) mein aur kuch raqba par woryal (khali) zameenon par ki jati hai. Is ke sath sath barani ilaqon mein waqia raqba bhi gandum ke zair kaasht laya jata hai. Lihaza mukhtalif faslat ke baad gandum ki kaasht ke tareeqajat ki tafseel darj zail hai.

### 1. Kapas, Makai, aur Kamad ke Kaasht Walay Ilaqay:

**Watar ka Tareeqa**

Sabiqa Fasal kaatne se 15 se 20 din qabal khet ko pani dein, taake jab chharryan kaatien to zameen watar (zameen ko pani lagane ke 1-2 din baad jab mitti haath mein uthain aur uski gol geend banakar door phenkein aur woh tukron mein gire, andazan 30-40% nami ho) ki halat mein ho. Chharryan kaatne ke foran baad do martaba hal chalayen aur ek martaba rotavator ka istemal karen. Agar rotavator mayassar na ho, to bhari sahaaga (wazni sahaaga, jo mitti ke dheelay wazni phatay ki wajah se toot jaayein aur zameen naram ho) dein. Is ke baad beej ba-zariyah drill kaasht karen.

Ye tareeqa un ilaqon mein istemal hota hai jahan zameen kaafee waqt tak nami apne andar

rakhti ho aur kaasht jald az jald aur kam douraniye mein karna matloob ho. Ba-zariyah drill kaasht karne se beej yaksaan (ek jaisa) aur munasib gehrai par jata hai aur ugao behtar hota hai.

### Khushk Tareeqa:

* Sabqa fasal ki chhadiyan katne aur kamad ki bardasht ke baad agar zameen mein watar (zameen ko paani lagane ke ek se do din baad jab mitti haath mein uthayen aur uski gol gend bana kar door phainken aur woh tukron mein gire / andaza 30 se 40 faiz nami ho) na ho to do martaba aam hal chalayein aur ek martaba rotavator ya disk harrow ka istemal karein. Buwai bazarya drill karne ke baad foran paani laga dein. Khayal rahe ke beej ki gehrai ek inch se zyada na ho.
* Yeh tareeqa un ilaqon mein istemal hota hai jahan kasht kapas ki katai ke baad jald az jald aur kam doraniye mein karna maqsood ho. Bazarya drill kasht karne se beej yaksaan aur munasib gehrai par jata hai aur agao behtar hota hai.

### Gap Chhat Ka Tareeq:

Pichhli fasal ki bardasht ke baad do martaba aam hal chalain aur bhaari sohaga (wazni sohaga - taake mitti ke dheelay wazni phattay ki wajah se toot jayen aur zameen naram ho jaye) dein.

Baad azan khet ko pani dein aur phir 4 ghantay bhigoaye huay beej ka chhatta dein.

Yeh tareeqa kasht *klaraathi* (namak wali) zameenon ke liye bohot mozoon hai kyunki pani

khada hone ki wajah se namkiyat ke muzrat kam ho jate hain. Sakht zameenon mein *gap chhat* (khet ko pani se bhar dein jab keechad (*gap*) ban jaye to is mein beej ka

chhatta karna) ke tareeque se gandum kasht karne ke liye beej ko bhigoona zaroori nahi hai

### Khari Kapas Mein Gandum Ki Kasht

Kapas ki bardasht mein dair hone ki soorat mein gandum ki boayi mein dair ho jati hai.

Iska behtareen hal khari kapas mein kasht ka tareeqa hai. Is ke liye sab se pehle khuli hui kapas ki channayi mukammal kar lein aur phir khet ko pani se bhar dein. Agar wathya

(naaliyan) hon to unhein bhi pani se ter kar lein. Agar zameen mehra ho to pani khada hone ke foran baad gandum ke 4 ghante tak bhigoaye hue beej ka yaksaan dohra chhat

deyin. Agar zameen sakht ho aur pani zyada dair tak khara rehta ho to beej ko bhigoone ki zarurat nahi hai, balkay khet mein mojood pani ko madde nazar rakhtay hue munasib

waqfee ke baad khushk beej ka chhat karye. Aur is khet ka jari bootiyon se paak hona lazime hai.

# Khari Kapas Mein Gandum Ki Kasht Ke Hawalay Se Mudarja Zail

### Nuktay Ka Khayal Rakhein:

Khari kapas mein gandum ki kasht ka behtareen waqt 1st ta 15th November hai.

Sharah beej 55 ta 60 kilogram fee acer rakhain. Zameen ki saakht ke mutabiq sherah beej mein izafa kiya ja sakta hai. Beej saaf sutra aur grade hona zaroori hai.

Sifarish kardah khadain, kapas ki chharryan (shaakhain tana-baqayajaat) kaatne ke baad pani ke saath istemal karein. Nitrogeni khad ki doosri qist doosre pani ke saath daalain. Khad daal kar pani lagate waqt is baat ka khusoosi khayal rakhein ke pani pattiyon ke upar tak chara jaye, warna khad ki afadiyat mein kami aayegi.

December ke aakhri ya January ke shuru mein, yani boayi ke 30 ta 40 din baad, kapas ki chhrhyon(shaakhain) ko kaat lein aur un par lage hue tendon ko tod lein.

Chhadiyan zameen ki satah se takriban 2 inch gehri kaatain aur khet se foran bahar nikaal lein.

# Dhan Ke Baad Gandum Ki Kasht:

Dhan ki fasal ko bardasht se 15 ta 25 din qabl pani dena band kar dein taa ke bardasht ke

waqt zameen watar halat mein aa jaye aur zameen asaani se tayar ki ja sake. Dhan ki bardasht ke baad watar halat mein rotavator ya disk hil chalayein. Baad azan do martaba aam hil chala kar sohaga den aur drill se bijayi karein.

Yaad rahe ke dhan ki katai ke baad dhan ke mudhon (tana, jarrain) aur baqayaat ko aag na lagayein kyunki yeh maholiyati aloodgi mein izafa ka baais hai, insani sehat par is ke

dhuayen ke muzir asraat hotay hain aur fasal ki baqayaat aur zameen mein mojood ahem ghizai ansar mufeeed keere aur khord bini (aam aankh se nazar na aane wale) jandar jal kar zaya ho jate hain. Jis se zameen ki zarkhezi kam ho jati hai.

# Zero Tillage Kasht:

* Agar zero tillage drill ya pak seeder meysar ho to dhan ya kisi bhi doosri fasal ki bardasht ke baad baghair zameen tayar kiye watar (zameen ko pani lagane ke ek se do din baad jab mitti haath mein uthaein aur iski gol gaind bana kar door phenkain aur woh tukdon mein gire / andaazan 30 se 40 feee sad nami ho) mein gandum ki buwai karein.
* Is se fasal ko bar waqt kasht kiya ja sakta hai aur zameen ki tayari ke akhrajaat se bhi

bacha ja sakta hai. Combine harvester se dhan ki bardasht ke baad kheton mein dheeriyon ki shakl mein mojood fasal ki baqayaat ko phaila dein aur phir zero ya pak seeder drill se gandum ki kasht karein.

* Is tareeqa kasht ko ikhtiyar karte hue maholiyati aloodgi mein kami ki ja sakti hai.

# Drill Kasht ke Fawaid:

Drill ke zariye kasht aur khad ke istemal se khad podon ki jaroon ke qareeb girti hai aur is ki

afadit (faida) barh jati hai. Fasal ka ugao yaksaa aur zyada hota hai. Aksar kasht kar beej ko drill karte waqt drill kaafee gehri kar dete hain, jis se beej dair se ugta hai aur zyada shugofay

(shaakhain) bhi nahi bante aur fasal kamzor reh jati hai, jis se paidawar mein kami ho jati hai.

### Drill Machine ki Calibration:

Buwai se pehle ek dafa drill machine ki calibration (beej daalne ki sharaah) kar lein, yaani iski beej daalne ki sharaah ko jaanch lein. Iska tareeqa ye hai ke beej box mein beej daalein. Har seed tube ke aage plastic ka lifaafah chadhalein. Drill ko tractor ke zariye chalayein, kuch fasla par ja kar drill ko rokk dein. Seed tube ke aage lagay hue lifaafon mein jama shuda beej ka wazan kar lein. Drill ki chaudai aur tay ki gayi fasla ko zarb de kar raqba maloom kar lein. Lifafon se hasil shuda beej ke wazan ko is raqba par taqseem karen, to beej ki sharaah fee ikai raqba maloom ho jayegi.

### Patriyon Par Kasht (Bed Planting):

Gandum ko patriyon par kasht karne ka ek naya tareeqa bhi rawaj pa raha hai. Jiske liye market mein bed planter machine bhi mayassar hai. Gandum ko patriyon par kasht karne se aam tor par achay nateejay baramad hue hain.

### Patriyon Par Kasht Karne Se Munderja Zail Fawaid Hasil Hote Hain:

* 30 se 40 feee-sad tak pani ki bachat hoti hai.
* Patriyon par kasht ki gayi gandum mein kamad, sarsoon waghera ki mikhlot (ikathi) kasht bhi ki ja sakti hai.
* Paidawar mein izafa ho jata hai.
* Pani aur khadon ke sahih istemal se paidawar barh jati hai.
* Kilarathi (namkiyat wali) zameenon mein namkeen pani ke istemal se bhi fasal ka nuqsan kam hota hai.
* Andhi ya barish se fasal neeche nahi girti aur is se behtar paidawar hasil hoti hai.

### Gandum Ki Kasht Ke Baad Kheelyan Banana:

* Zarai tehqiqat ke mutabiq agar chhatta ke zariye kasht ki gayi gandum mein rajar ke zariye kheelyan bana di jayein, to is se na sirf pani ki bachat hoti hai balkay fee ekar paidawar mein bhi izafa ho jata hai.
* Is tareeqe kasht se tamam aabpash ilaqon mein musbat nateejay hasil hue hain. Khususan chawal ke ilaqa aur chakni zameenon (jahan pani asani se jazb nahi hota) par bohot zyada fawaid hasil hue hain.
* Ta'hum retli zameenon mein yeh tareeqa zyada faida mand nahi hai. Retli zameenon mein is tareeqe kasht mein aam tareeqe ki muqablay mein das feee-sad se zyada beej istemal

karna chahiye.

### Barani Ilaqon Mein Zameen Ki Tayari Aur Tareeqa Kasht:

* Monsoon ki pehli barsaat ke baad zameen mein raja hal (moldboard/miti palatnay wala hal) chalain taake zameen kaafee gehraai tak bhurbhuri ho jaye aur zyada pani jazb kar

sake.

* Gandum ki kasht se qabal har dafa barsaat ke baad aam hal chalain aur sahaagah dein,

taake agne wali jari bootiyan talaf ho sakein aur zameen par bhurbhuri aur narm teh ban jaye aur zameen ke andar jazb hone wala pani mehfooz rahe.

* Boayi se pehle do martaba aam hal chalain aur bhaari sahaagah dein taake watar zameen ki ooper wali teh mein aa jaye.
* Gandum bazriya drill kasht karein. Safarish kardah khad ki saari miqdaar boayi se pehle zameen ki tayari ke waqt daal dein.
* Barani ilaqon mein June ke mahine mein agar jinatar aur gawara waghera ki kasht ki jaye aur 15 se 20 August tak (takriban 2 mahine baad) usay zameen mein hal chala kar daba

diya jaye to zameen ki zarkhezi mein izafa hota hai aur gandum ki achi paidawar hasil hoti hai.

* Iske alawa, khareef ke mosam mein faslaat kasht karne se zameen ki zarkhezi aur nami mehfooz rakhne ki istitaat barh jati hai, niz jari bootiyan ko control karne mein bhi madad milti hai.

### Band Placement Drill Se Gandum Ki Kasht:

* Band placement drill beej aur khad ko aik hi waqt per drill karti hai. Yeh khad ko beej se takriban 5 cm ke faaslay aur 5 cm ki gehraai par drill karti hai.
* Is tareeqa kasht se barani ilaqon mein agar safarish karda phosphorous khad ki miqdaar se aadhi miqdaar bhi istemal ki jaye to bharpoor paidawar hasil ki ja sakti hai, kyun ke is tareeqa kasht se khad podon ki jadon mein zyada dastiyaab rehti hai.
* Aksar kashtkaar beej ko drill karte waqt drill kaafee gehri kar dete hain, jis se beej der se ugta hai aur zyada shughoofay (shaakhain) bhi nahi bante aur fasal kamzor rehti hai, jis se paidawar mein kami ho jati hai.

### Barani Ilaqon Mein Do Feesli Kasht:

Mukhitlaf tajarbat ki roshni mein yeh ikhtiyar kiya gaya hai ke badalte mousami halaat mein gandum ki kasht aur paidawar mutasir kiye baghair khareef mein aik aur fasal bhi hasil ki ja sakti hai, jis ki tafseel darj-e-zail hai.

1. **Jantar Aur Jowar Ki Bator Sabz Khad Kasht:** Agar June mein jantar aur jowar ki kasht ki jaye aur 15 se 20 August tak (takriban 2 mahine baad) isay zameen mein daba

diya jaye to zameen ki zarkhezi mein izafa hoga aur gandum ki achi paidawar hasil hogi.

1. **Chaaray Ki Kasht:** Barani ilaqon mein mausam-e-barsaat ke shuru mein makai, jowar ya bajray ki fasal bator chaarah kasht ki ja sakti hai. Agar phali daar aur ghair phali daar chaaray ko 70 aur 30 ke tanaasub se kasht kiya jaye to zyada faiday hasil kiye ja sakte

hain.

1. **Makai Aur Soyabean Ki Mukhli Kasht:** Mausam-e-barsaat ke shuru hote hi makai aur soyabean ko 2 aur 4 ke nisbat se mukhli (ikathi) tor par kamiyabi se kasht ki ja sakti hai aur gandum ki bhi achi paidawar li ja sakti hai. Is tarah zameen ki zarkhezi barhane ke

sath fee ekar aamdani mein bhi izafa kiya ja sakta hai.

### Sharah Beej Aur Unka Waqt-e-Kasht:

**Mouzoon Waqt Kasht Ki Ahmiyat:**

Gandum ki bharpoor paidawar hasil karne ke liye aabpash ilaqon mein iski kasht ka mouzoon (munasib) tareen waqt 1 se 20 November hai. Tahqiqat ke mutabiq, 20 November ke baad kasht ki gayi fasal ki paidawar mein rozana ki bunyad par batdrij kami aana shuru ho jati hai, jabkay hamaray han gandum ki fasal December hatta ke January ke shuru tak kasht hoti rehti hai, jis se paidawar mein 50% tak kami ho jati hai, jabkay paidawari lagat (kharcha) wohi rehti hai. Is liye kashtkar bhaiyon se guzarish hai ke puri koshish kar ke gandum ko bro waqt kasht karein taake kashtkar aur mulk dono ka faida ho.

# Sharah Beej

Gandum ki bharpoor paidawar ke liye beej saaf, suthra, graded, khalis, bimariyon aur keeron waghera ke nuqsan se pak hona chahiye.

### Aabpash Aur Barani Ilaqay:

* **30 November tak Buwai ke liye:** 40-50 kg per acre

Beej ke ugaw ki sharah 85 feee-sad se har-giz kam nahi honi chahiye. Basorat-e-ghaer, sharah beej mein munaasib izafa kar lena chahiye.

* **1 se 10 December tak Buwai ke liye:** 50-55 kg per acre

### Pichiti kaashta fasal mein beej ki sharah:

Pichiti (mozoon waqt ke baad) kaashta gandum mein beej takheer se ugta hai, poday shughufay (shaakhein) kam banate hain aur satte chhotay reh jate hain. Lihaza beej ki sharah ek had tak barhane se bunyadi shaakhon mein izafa hota hai jis se paidawar par acha asar parta hai. Mazeed baran sharah beej mein mazkoorah izafa jari bootyoon ke control ke liye bhi ma’awn sabit hota hai, kyonke fasal ke podon ki tadaad zyada hone ki wajah se jari bootyoon ko phailnay ka moqa kam milta hai.

# Beej ko zeher lagana:

Gandum ki mukhtalif bimaariyon mein kangiyaari, karnal bunt, gandum ki blast aur akheera waghera zyada nuqsan pohanchati hain aur paidawar mein nuqsan ka bais banti hain. Inki rok tham ke liye beej ko boayi se pehle thaio feeniat methyl bas haisaab do ta ardhai gram fee kilogram beej ya amide acloprid + tebuconazole bas haisaab 2 milli liter fee kilogram beej lagayen. Behtar hai ke beej ko zeher lagane ke liye ghoomne wala drum istemal kiya jaye, ta ham agar yeh mayasar na ho to plastic ki aik bori mein wazan shuda beej aur safarsh kardah zeher daal kar bori ka moun bandhein aur dono taraf se pakad kar achi tarah hilayen ta ke beej ke har daanay ko zeher lag jaye. Khayaal rahe ke bori ko taqreeban aadha bhara jaye ta ke dawai achi tarah beej ke saath lag sake.

# Taraqqi dadeh aqsaam:

Fasal ki behtar aur miyaari paidawar ke hasil ke liye taraqqi dadeh aqsaam ke saaf suthray, sehatmand aur bimariyon se paak beej ki ahmiyat musallama (tasleem shuda) hai. Gandum ki safarsh kardah aqsaam aur unka mozoon waqt kaasht mandarja zail hai

# Punjab ke aabpaash aur baraani ilaqon ke liye: Aqsam baraye Aabpaash Ilaqajat:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Number Shumar | Naam Qism | Number Shumar | Naam Qism | Number Shumar | Naam Qism |
| 1 | Urooj- 22 | 8 | Deyoram- 2021 | 15 | Ajala-16 |
| 2 | NRC  Super | 9 | Nawab-21 | 16 | Zankul-16 |
| 3 | Sadiq-21 | 10 | Rahbar- 21 | 17 | Borlaug-16 |
| 4 | Dalkash- 20 | 11 | Bhakristar | 18 | Fakhr Bhakar |
| 5 | Nishan | 12 | Ghazi-19 | 19 | Johar-16 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 6 | Subhani- 21 | 13 | Akbar-19 | 20 | Faisalabad- 8 |
| 7 | MH-21 | 14 | Anaaj-17 |  |  |

* Deyoram-2021 gandum ki aik alag noiyat ki qism hai, jo sindhati istemal (pasta masnoaat jaise noodles) banane ke liye mozoon hai.
* Sadiq-21 aur Nawab-21 Janubi Punjab mein kaasht ke liye zyada mozoon hai

# Aqsam baraye Barani Ilaqajat:

|  |  |
| --- | --- |
| Numbra Shumar | Naam Qism |
| 1 | Urooj-22 |
| 2 | MA-21 |
| 3 | Markaz-19 |
| 4 | Barani-17 |
| 5 | Ehsan-16 |
| 6 | Fatah Jang-16 |
| 7 | Pakistan-13 |

**Punjab ke Aabpaash Ilaqon mein Waqt-e-Kasht:**

* Aabpaash Ilaqon mein gundum ka mozoon tareen waqt kasht 1st se 20th November hai. Taham 30 November se 15 December tak bhi gundum ki kasht ki ja sakti hai.
* Fakhr Bhakkar ko 25 October se 15 November tak aur Bhakkar Star ko 10 November se 10 December tak kasht karein.
* Anaaj-17, Zincool-16, Johar-16, Borlag-16, Ajala-16, aur Faisalabad-2008 ko bhi 10 December tak kasht ki ja sakti hai.

# Punjab ke Barani Ilaqon mein Waqt-e-Kasht:

* Barani Ilaqon mein gundum ka waqt kasht 20 October se 20 November hai.

**Soba Khyber Pakhtunkhwa:**

|  |  |  |
| --- | --- | --- |
| Aqsam | Waqt-e- Kasht | Alaqa Jaat |
| Khaista 2017, Israr Shaheed 2017, Khyber  Pakhtunkhwa 2015, Gol, Faisalabad 2008,  Pirsabaq 2008, Ghanimat, Punjab 2011,  Fakhar Sarhad, Janbaz 2010, Pirsabaq 2019,  Gulzar 2019, Faheem 2019, Zankol 2016, A  Zark. Dera, Pirsabaq 2013, Paseena 2017 | 1st November se 30th November | Aabpash Ilaaqay |
| Pirsabaq 2015, Shahkar 2013, Tatara, Nifallma 2013, Zam, Nifa Insaaf 2015, A Zark. Dera, Kohat 2017, Shahid 2017,  Aman 2017, Wadan 2017, Jung 2016,  Hashim 2010 | 20th October se 30th November | Barani Ilaaqay |

**Soba Sindh:**

|  |  |
| --- | --- |
| Waqt Kasht | Qisam |
| 20 October  ta 20 November | Benazir 2013, Haml 2013, Naya Sarang 2013, SKD-1, TD-1, Naya Sundar 2011, Faisalabad 8, Akbar-19, Ghazi-19, Sindhu 2016, Imdad 2005, Mol 2002, Kiran-95, Abadgar 93, Mehran 89, Naya Sunehri 2010, Naya Amber 2010, Kharman, Sassi, Anmol 91, Tando Jam 83, Naya Zarkheez (Kalrathi Zameen ke liye) |

**Soba Balochistan:**

|  |  |  |
| --- | --- | --- |
| Aqsaam | Waqt Kaasht | Ilaqajat |
| Zardana 89, Zarghoon 79, Umeed 2014,  Nifallama 2013, Aas 2011, Rasco 2005,  Punjab 2011, Benazir 2013, Ajala 2016,  Johar 2016, Faisalabad 2008, Khusha  2019, Aaghaz 2019, Zarlishta-99 | 20 October  to 30 November | Balayi / Aabpash Ilaqay |

|  |  |  |
| --- | --- | --- |
| Rasco 2005, Aaghaz 2019, Saryaab 92,  Benazir 2013, Ajala 2016, Pir Sabaq 2013,  Pir Sabaq 2015 | 25 October  to 30 November | Barani Ilaqay |

**Gilgit-Baltistan:**

|  |  |
| --- | --- |
| Waqt-e-Kasht | Aqsam |
| 15 March se 15 May (Ik Fasal) | Pakistan 2013, Borlag 2016, Zankol 2016 |
| 20 October ta 15 November (Do Fasal) | NAARC 2011, Peer Subaq 2015, Pakistan 2013,  Borlag 2016, Zankol 2016, Faisalabad 2008 |

**Azad Jammu Kashmir:**

|  |  |
| --- | --- |
| Waqt Kaasht | Aqsam |
| 20 October ta 30 November | Pakistan 2013, Pir Subaq 2015, Johar 2016, Zankol 2016,  Ehsan 2016, Fatah Jang 2016, Pir Subaq 2017, Bari 2017,  Markaz 2019 |

**Gandum ke liye Khadon ki Sifarishat:**

Achhi paidawar ke hasool ke liye laboratory ke zameeni tajziye ki roshni mein sifarish kardah khadon ka istemal karein. Khadon ki miqdaar ka sahih taayeen karne mein zameen ki bunyadi zarkhezi, zameen ka color, uthapan (namak wali), iski qisam aur noiyat, dastiyaab nahri ya tube well ke pani ki miqdaar aur haalat, mukhtalif faslon ki kathrat kaasht aur pichhli fasal waghera ko madde nazar rakhein. Tamam ilaaqon mein tajziyah gahen mojood hain jahan se kisaan bhai zameen aur tube well ke pani ka tajziyah karwa sakte hain.

### Khadon ki Ahmiyat:

Itne kam wasail se barhti aabadi ki zarooraton ko poora karna bohot mushkil hai. Miti ki zarkhezi, keeron aur ghizai ajza ki kami ke nateejay mein zarai paidawar mein kami waqi hui hai. Is se zaraat mein khad ki ahmiyat mein izafa hua hai. Khad podon ke liye darj

zehl tareeqon se ahm sabit ho sakti hai:

* + Jaroon ki gehraai mein izafa karti hai.
  + Khadoon mein mojood potassium podon ke sute aur daanay ke wazan aur quality ko behtar karta hai.
  + Khadoon mein mojood phosphorus jadon ki tez tar nashonuma aur podon mein beej ki tashkeel (banaawat) mein madad karta hai.
  + Khad mein mojood nitrogen podon ki nashonuma mein izafa karta hai. Nitrogen

chlorophyll ka bunyadi juz hai jo photosynthesis (podon mein khoraak banane ka amal)

ke amal mein tawazun barqarar rakhta hai aur podon ke sabz rang ki khasoosiyat barqarar rakhta hai. Yeh podon mein amino acids ka bhi ek hissa hai aur protein tashkeel deta hai.

**Aabpash Ilaaqon Mein Khadon Ki Umumi Sifarishat:**

|  |  |  |
| --- | --- | --- |
| Khad Ki Miqdaar (Borioun Mein) Fee Aikad | Ghizai Ansar (Kilo Gram Fee Aikad) | Noyat Zarkhezi Zameen |
| Do Bori DAP + Do Bori Urea + Aik Bori SOP ya MOP | Potash: 25,  Phosphorus: 46,  Nitrogen: 64 | Kamzor Zameen: Namiyati Madah %0.86 tak, Phosphorus 7PPM tak, Potash 80PPM tak |
| Deirh Bori DAP + Poney Do Bori Urea aur Aik Bori SOP ya MOP | Potash: 25,  Phosphorus: 34,  Nitrogen: 54 | Awasat Zarkheez Zameen: Namiyati Madah %0.86 se %1.29, Phosphorus 7 se 14PPM, Potash 80 se 180PPM |
| Sawa Bori DAP + Deirh Bori Urea + Aik Bori SOP ya MOP | Potash: 25,  Phosphorus: 30,  Nitrogen: 46 | Zarkheez Zameen: Namiyati Madah %1.29 se zyada, Phosphorus |

|  |  |  |
| --- | --- | --- |
|  |  | 14PPM se zyada, Potash 180PPM se zyada |
| DAP Ke Mutabadil Single Super Phosphate ya NitroPhos aur Urea Zameen Ke Tajziye Ke Mutabiq Istamal Karein |  |  |

# Barani Ilaaqon Mein Khadon Ki Sifarishat:

|  |  |  |
| --- | --- | --- |
| Saalana Barish | Ghizai Ansar (Kilo Gram Fee Aikad) | Khad Ki Miqdaar (Borioun Mein) Fee Aikad |
| Kam Barish Ka Ilaaqa (Saalana Barish 350 Milli Meter Tak) | Nitrongen: 32,  Phosphorus: 23,  Potash: 12 | Aik Bori DAP + Aik Bori Urea + Aadhi Bori SOP ya MOP |
| Darja Banda Ilaaqa: Rajanpur, Layyah, Dera Ghazi Khan, Muzaffargarh, Bhakkar, Mianwali aur Khushab ke barani ilaake, Jand, Pindi Ghep |  |  |
| Darmiyani Barish Ka Ilaaqa (Saalana Barish 350 se 600 Milli Meter Tak) | Nitrongen: 40,  Phosphorus: 28,  Potash: 12 | Sawa Bori DAP  + Sawa Bori Urea + Aadhi Bori SOP ya MOP |

|  |  |  |
| --- | --- | --- |
| Darja Banda Ilaaqa: Chakwal, Talagang aur Pand Dadan Khan ke ilaqay |  |  |
| Zyada Barish Ka Ilaaqa (600 Milli Meter Se Zyada) | Nitrongen: 48,  Phosphorus: 34,  Potash: 25 | Deirh Bori DAP  + Deirh Bori Urea + Aik Bori SOP ya MOP |
| Darja Banda Ilaaqa: Rawalpindi, Attock, Jhelum, Sohawa, Narowal, Gujrat, Khariyan, aur Shakargarh ke ilaqay |  |  |

**Khadon Ka Tariqa Istamal**

### Aabpash Ilaaqay (Irrigated Areas):

* **DAP Ki Sari Sifarish Kardah Miqdaar aur Urea Ki Aadhi Miqdaar:**

Kaasht ke waqt, DAP aur Urea ki aadi miqdaar ko milakar zameen ki aakhri tayari karte waqt chhatta kar ke hil aur sahagha ke zariye zameen mein mila dein. Agar kisi wajah se yeh khaden buwai ke waqt nahi daali ja sakti, toh pehli aabpashi se pehle chhatta karne ke baad pani laga dein.

### Feertigation Method (Paani Mein Hal Kar Ke):

Iske ilawa, DAP ki sifarish kardah miqdaar ko paani mein hal kar ke bazriya drum

(feertigation) pehli aabpashi ke saath bhi diya ja sakta hai. Tajurbaat se sabit huwa hai ke is tareeqay se DAP ka istemal bhi faidamand hai.

### Baaki Urea aur SOP:

Baaki ki sari Urea ki miqdaar aur SOP ki khad, fasal ke ugaao ke baad, pehle ya doosre pani ke saath istemal karein.

### Barani Ilaaqay (Rainfeed Areas):

* **Fasal Ki Buwai:**

Tamam khaden buwai ke waqt kheti mein bikhair kar do hare hil ke saath sahagha dein.

### Behtareen Barish Ke Ilaaqay Mein Urea Ka Istamal:

Darmiyani ya zyada barish walay ilaako mein, gobh ki haalat se pehle aadhi ya aik bori Urea fee aikad barish hone par istemal karein.

### Zameen Ki Kalraath (Namkiat Wali Zameen):

Iske ilawa, barani ilaako mein jahan zameen thodi kalraathi (namkiat wali) ho, kaasht ke waqt gypsum ka istemal achay nataij deta hai. Agar zameenein ziada kalraathi hon, toh khad ka istemal zameen ke tajziye ke baad karen.

# Khadon Ke Istamal Se Mutaliq Hidayat:

Kaasht ke waqt, phosphorus aur potash ki khad ka istemal band placement drill ke zariye karein.

Chawal, Kamad, Kapas Ke Baad Ya Reetlay Ilaaqon Mein Potash ki khad zaroor istemal karein.

Nitrogen ki khad ko 2 ya 3 barabar aqsaat mein istemal karein.

Reetlay ilaakon mein nitrogen ki khad ko chaar barabar aqsaat mein daalein, kyunki aise zameenon mein nitrogen khad ke zaya hone ka khudsha hota hai.

Kamzor Zameenon Mein Fasl ki haalat ko madde nazar rakhte hue, aadhi bori urea fee aikad mazeed daalein.

Pechiti (Mozoon Waqt Ke Baad) Kaasht Ki Surat Mein khad ki poori miqdaar kaasht ke waqt he daal dein.

Aloo Ki Fasal Ke Baad Zameen ki zarkhezi ke mutabiq khad daalein.

Shour Zada / Kalraathi (Namak Wali) Zameenon Mein Keemiyai tajziye ke mutabiq monsoon se pehle gypsum istemal karein.

Agar kisi wajah se phosphorus ki khad waqt-e-kaasht na daali ja sake, to pehle pani ke saath daal dein.

Chhatta Dene Ki Surat Mein Pehle khet ko pani laga dein aur tar wathri haalat mein khad ka chhatta karein.

Taraqqi Pasand Kishtkar Ke Liye 2 bori DAP fee ekar istemal karein.

### Zaroorat Se Zyada Aur Kam Khad Istamal Karne Ke Nuqsanat:

Khad se murad aisa chemical madah hai jo mitti mein podon ke liye zaroori ghizai ajza farahm karne ke liye istemal kiya jata hai. Khadon ka istemal faslon ki paidawari salahiyat barhane ke liye bhi kiya jata hai. Halaanke zyada miqdaar mein khad daalne se aabi guzargah mein ghizai ajza jama ho jate hain. Ek awsat zaraati zameen mein daali gayi khadon mein se sirf tees se pachaas feeesad faslain istemal karti hain, jabke nisf khad zaya ho jati hai.

### Zyada Khad Istamal Karne Se:

Aam tor par fasl ke paton ke kone bhura hona ya paton ka jhulsna (jal jana) shamil hota hai. Khadon mein maujood hal pehrez namak jarron se nami kheench kar nikal deta hai, jiska nateejah jarron ka zakhmi hona, paton ka mirjhana, kinare se peela pad jana aur

poday ki nashonuma ke rukne ke surat mein nazar aata hai.

### Kam Khad Istamal Karne Se:

Zameen ki zaroorat se kam khad ke istemal par podon ki barhoti (nashonuma) mutasir

hoti hai. Nashonuma ke khas marahil mein fasl ko zaroori ghizai ajza moassar nahi hote, jiske nateejay mein fasl achi tarah phool phal nahi sakti aur paidawar fasl par kiye gaye kharchay se bhi kam hasil hoti hai.

Asley Mitti ki qisam, aabpashi ke tareeqay kar, zameen ki zarkhezi aur mukhtasir poday ki hasasiyat jese amoor ko madde nazar rakhte hue khad istemal karni chahiye.

### Namiati Madah Aur Sabz Khad Ka Istamal

Namiati khad podon aur janwaron se hasil ki jane wali qudrati khadain hain. Namiati khadain

mitti ke namiati maday ki miqdaar ko barhati hain, mitti ki saakht aur keemiyai khasoosiyat mein tabdeeli laati hain. Namiati khad darje zail mahsulat se hasil ki ja sakti hai:

* **Zaraati Baaqiyat**
* **Goobar ki Khad**
* **Sannati Fazla**

Hamari zameenon mein namiati madah ki miqdaar kaafee kam hai. Is liye zameen ki buniyaadi zarkhezi aur tabi'i haalat ko barqarar rakhne ke liye desi aur sabz khad ka istemal bohot zaroori hai. Goobar ki gali sari khad ki 4 trollyan yani 8 se 10 ton fee aikar istemal karein. Agar goobar dastiyaab na ho to gawara, jinter ya doosre phali daar ajnas kaasht karein aur phool aane par sabz khad ke taur par zameen mein dabaa dein. Ye amal gandum ki Buwai se do mahine pehle karein aur har do teen saal baad zaroor dohraayein. Chawal ki ilaqo main gandum ki barhaasht ke baad jinter ya doosre phali daar ajnas kaasht karein. Ye fasslain basmati dhan ki muntakili se 15 se 20 din pehle hal chala kar zameen mein mila dee jayein to bhi zameen ki zarkhezi ko bahaal rakhne mein madad milti hai.

### Gandum Mein Boran Aur Zinc Ka Istamal

Gandum mein jhaar bante waqt zinc aur daana bante waqt boran ka istemal karne se paidawar par achay asraat martab hotay hain:

### Zinc ke liye:

Zinc Sulphate 33% (6 kilogram per acre). Agar saabiqa fassal mein zinc sulphate istemal kiya gaya ho to gandum mein na karein.

### Boran ke liye:

Boric Acid 17% (2.5 kilogram per acre)

# Aabpashi

Mukhtalif faslon ke baad kasht gandum ko darj zil turqib kaar ke mutabiq aabpashi karen:

### Kapas, Makai aur Kamad ke baad kashta gandum

**Pehla Pani:** Shagofay nikalte waqt yani buwai ke 20 se 25 din baad.

Is marhale par pani ki ishad zarurat hoti hai aur pani der se lagane ki surat mein poda shagofay (shaakhain) kam banata hai aur fee poda ston ki tadaad kam ho jati hai.

**Dosra Pani:** Buwai ke 80 se 90 din baad (Gobha ke waqt).

Is waqt stah ban raha hota hai aur baahir nikalne ke marhalay mein hota hai. Agar is marhale par pani na diya jaye ya taakhir se diya jaye to stah chhote reh jatay hain aur inmein danay ki tadaad kam reh jati hai aur paidaawar mein kami ho jati hai.

**Teesra Pani:** Daanah banne ki ibtida yani buwai ke 125 se 130 din baad (Doodhiya haalat).

Yeh stah mein daana banne aur bharnay ka waqt hota hai. Agar is marhale par pani na diya jaye ya taakhir se diya jaye to daanay ka size chhota reh jata hai aur paidaawar mein kami ho jati hai.

### Dhan ke baad kashta gandum

**Pehla Pani:** Buwai ke 35 se 45 din baad.

Dhan ke wadh (Madh – jarr aur tana) mein chonki watar zyada hota hai is liye gandum ki fasal ko pehla pani qadray taakhir se lagaya jaye taake zameen narm rahe, poda ki jarron ko hawa ki munaasib farahmi jaari rahe aur poda zyada jarrain aur shagofay (shaakhain) bana sake.

**Dosra Pani:** Buwai ke 80 se 90 din baad (Gobha ke waqt)

**Teesra Pani:** Daanah banne ki ibtida yani buwai ke 125 se 130 din baad (Doodhiya haalat)

### Pacheeti Kaasht Fasal ko Aabpaashi

**Pehla Pani:** Shaakhain nikalte waqt (Buwai ke 25 se 30 din baad)

**Dosra Pani:** Gobha ke waqt (Buwai ke 70 se 80 din baad)

**Teesra Pani:** Daanay banne ki ibtidaai haalat (Buwai ke 110 se 115 din baad) (Doodhiya haalat)

### Aabpaashi se mutalliq zaroori hidayaat:

* + Agar mausam mutawatar garm aur khushk rahe to dosray aur teesray pani ke darmiyan waqfa mein zarurat ke mutabiq aik zayid pani lagaiyein.
  + Zameen ki saakht aur mausami haalaat ko madde nazar rakhte hue pani lagane ke waqt mein radd-o-baddal kiya ja sakta hai.
  + 25 March tak aakhri aabpaashi mukammal kar lein, lekin pacheeti fasal ko pani uske baad tak bhi lagaya ja sakta hai.
  + Tamam ilaqon mein aam tor par aur dhan wale ilaqon mein khaas tor par gandum ke kheton mein kiyary chhote banayein taake aabpaashi munasib miqdaar mein ho sake aur pani ki bachat ke saath fasal bhi khushhaal rahe.
  + Raitli zameen mein zarurat ke mutabiq zayid pani lagaya ja sakta hai.

### Aabpaashi ke naazuk marahil:

Gandum ke poday ko barhootri ke naazuk marahil mein pani ki zaroorat hoti hai aur in marahil mein pani ki kami paidaawar par bohot bura asar dalti hai. Is liye in marahil mein fasal ko pani ki kami na anay dein.

* + Bajai se 20-25 din baad is moqa par pani lagana bohot zaroori hota hai kyunke poday mein jhaad ban raha hota hai aur har poday mein ston ki taadaad barhti hai.
  + Gobh ki haalat (stah banne ke dauran), bajai ke 80 se 90 din baad Is waqt stah ban raha hota hai aur bahar nikalne ke marahil mein hota hai. Agar is marhalay par pani na diya jaye ya dair se diya jaye to stah chhote reh jate hain.
  + Doodhiya haalat (bajai ke 125 se 130 din baad) is marhalay par pani ki kami se daane ka

size chhota reh jata hai aur wazan mein kami hoti hai, jisse paidaawar mein khaterhowa mutasar ho sakta hai.

### Jari Bootiyan

Gandum ki achi aur zyada paidaawar hasil karne ke liye jari bootiyon ki talfee bohot zaroori hai. In ke insidaad ka kemiayi aur ghair kemiayi tareeqa mundarja zil hai.

### Ghair Kemiayi Insidaad:

* + - Faslon ka adal badal karein aur gandum wale khetoun mein do ya teen saal baad chara, basraim wagaira kaasht karein.

### Daab ka tareeqa:

* + - Rauni ke baad jab khet watar mein aa jaye to hal chalane ke baad sohaga deein. Jab jari bootiyan ki konpalein nikal aayein to zameen tayar karein, is se jari bootiyan talf ho

jayengi.

### Barahiro:

* + - Pehli aabpaashi ke baad watar haalat mein barahiro chalane se bhi jari bootiyan control ho sakti hain.

### Goadi:

* + - Fasl ke ugaao ke baad khurpay ya kasoolay ki madad se dry goadi kar ke fasl ko jari

bootiyon se paak kiya ja sakta hai. Yeh bohot behtar amal hai aur kaafee moasar bhi hai, bas yeh zaroori hai ke kisaan bhaiyon ke paas afradi quwat mohayya ho.

### Kemiayi Insidaad:

Chhoray paton wali jari bootiyan, misaal ke taur par baatho, leheli, jangli paalak aur shahtara wagaira ko khatam karne ke liye, bajai ke baad 30 se 35 din ke andar, jab poday 3 se 4 paton ke marhale mein hon, tar watar mein Trisulfuron 16 gram ya Bromoxynil Octaneat **+** Heptanoyl **+** MCPA 300 milliliter, 100 se 120 liter pani per ekar spray karein.

Nokeelay Paton Wali Jari Bootiyan (Jangli Jai, Dambi Siti Waghaira) Ko Control Karne Ke Liye Clodinafop Propargyl 15 WP 120 gram per acre aur Panaxacadine 50 EC 330 milliliter per acre

istemal ki jati hain. Inhe 100 se 120 liter pani mein mila kar, 30 se 40 din ke andar, tar watar haalat mein spray karein.

Dambi Siti, Sarmacho Ghaas, Billi Booti Waghaira Ki Talfee Ke Liye Mesosulfuron-Methyl + Iodosulfuron-Methyl Sodium 120 gram, 120 se 150 liter pani mein mila kar, tar haalat mein spray karein.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zehar Ki Miqdaar Fee Aikaar** | **Company Ka Naam** | **Tijarti Naam** | **Zehar Ka Naam** | **Jari Bootiyan** |
| 16 gram | Syngenta | Logran | Trisulfuron | Chore Paton Wali |
| 14 gram | Syngenta | Alaimax | Metsulfuron-Methyl + Tribenuron-Methyl |  |
| 50 ml | Jafar | Gecho | Floraslam + Flumetsulam |  |
| 300 ml | FMC | Starane-M 50 EC | Fluoroxypyr + MCPA |  |
| 300 ml | Bayer | Buckdle Super 60% EC | Bromoxynil Octanoate + Heptanoate + MCPA |  |
| 200 ml | Jafar | Rowing 12% OD | Carfeentrazone + Fluoroxypyr |  |
| 390 gram | ICI | Weed Crush 42% | Floraslam + MCPA Sodium |  |
| 160 gram | ICI | Top Weet 15% WP | Clodinafop Propargyl | Nokayle Paton Wali |
| 100 gram | Bayer | Atlantis Super 6% WG | Mesosulfuron-Methyl + Iodosulfuron-Methyl Sodium | Nokayle Paton Wali  + Chore Paton Wali |
| 1 to 1.5 liter | Syngenta | Pendimethalin 33% EC | Pendimethalin (Qabal Az Agau) |  |
| 150 ml | FMC | Palas 45 OD | Pyroxsulam |  |
| 500 ml | Bayer | Puma Super 75 EW | Feenoxaprop-P-Ethyl | Dumbi Siti, Jangli Jai |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 330 ml | Syngenta | Axial | Pinoxaden |  |
| 13.5 gram | Syngenta | Sulfo Sulfuron 75% WG | Sulfosulfuron |  |

# Ihtiyaati Tadaabeer:

* + Ghair Kimiayi Insidaad ke liye faslon ka adal badal karein aur gandum wale khet mein har do ya teen saal baad barseem waghera jaise charah jats kaasht karein.
  + Istamal se pehle label zaroor parhein aur darj shuda hidayaat ke mutabiq zahar istamal karein.
  + Zahar ke chirkao ke baad godi ya baarhhero ke istamal se parheiz karein.
  + Spray ke baad jari bootiyon ko chara ke tor par har gez istamal na karein.
  + Meeyari spray ke liye nozzle flat fan ya T-jet istamal karein.
  + Taiz hawa, dhundh ya baarish mein spray na karein.

# Gandum Ki Bimariyan, Alamaat Aur Inka Insidaad

### Kangi (Rust)

**Bimari Phelanay Ka Sabab:**

Is ki wajah phapondi hai. Yeh gandum ki nuqsan daah bimari hai. Jise aam zubaan mein *Kangi*

ya *Ratti* bhi kehte hain. Kangi ki teen qisamain hain:

1. Bhoori Kangi / Patay ki Kangi
2. Zard Kangi / Dhari Daar Kangi
3. Siyah Kangi / Tane ki Kangi

### Alaamat:

Mausam-e-sirma mein num alood mausam aur baarishain is bimari ke phailnay mein maoon (madadgar) sabit hoti hain. Zard kangi mein zard rang ke chhote chhote dhabbay mutawazi qataaron mein mojood hotay hain. Bhoori kangi mein bhoore rang ke gol dhabbay be-tarteeb aur mushtahir hotay hue nazar aatay hain. Siyah kangi mein kangi ke gehre bhoore rang ke beezawi dhabbay paton aur tane par baray size ke hotay hain. Pakistan mein bhoori aur zard kangi humla aawar hoti hai. Mausami adam mawafeeqat ki wajah se kaali kangi ka humla bohat hi kam hota hai.

### Tibbi Insidaad:

Fasal ke khas o khaashak (baqaya jaat) ikathay kar ke talaf kar dain. Kangay ki tamam aqsaam

ke khilaaf quwat-e-mudafaat rakhnay wali sifarish karda aqsaam kaasht karain. Zyada riquba par aik qisam ke bajaye teen se chaar aqsaam kaasht karain. Fasal ki kaasht November mein karain kyun ke is par kangay ka hamla pichiti (mozoon waqt ke baad) fasal ki nisbatan kam hota hai.

### Keemiyai Insidaad:

Bimari ke tadaruk ke liye Tri-flaxys Strobene + Tebukonazole 90 gram, Propiconazole 200 milli liter per acre istemal karain. Ghair zaroori khadon aur aabpaashi se ijtinaab (perhez) karain.

### Gandum ki Juzvi Kangiyari Karnal Bunt Bimari Phelane Ka Sabab:

Is bimari ki wajah Teleshia Indica nami phopondi hai.

### Alaamat:

Bimari ka hamla satte namoodar (zahir) hone par hota hai. Shuru mein poday ke chand satte bimaar hote hain, hamla barhne par fasal mein chand satte aur har satte mein se chand daanay bimari ke hamla ka shikar hote hue nazar aate hain. Gandum mein Karnal Bunt ke hamlay ki soorat mein gandum ke daanay kaale ho jaate hain, zyada hamlay ki soorat mein beej bhi phopondi se mutasir ho jaata hai aur nai saal fasal kaasht karne ke qaabil nahi rehti.

### Tabee Insidaad

Fasal ke khos o khashaak (baqayaat) ikhatay kar ke talaf kar dein. Beej tandrust istemal karain. Quwat-e-madaf'at rakhne wali aqsaam kaasht karain.

### Keemiyai Insidaad:

Beej ko phopondi ki bimariyon se bachane ke liye Buwai se pehle Thiophanet Methyl ke hisaab se

do ta adhai gram per kilogram beej ya Imidacloprid + Tebukonazole ke hisaab se 2 milli liter per kilogram beej ya Seedexin + Fludioxoneil ke hisaab se 2 milli liter per kilogram beej laga kar

kaasht karain. Is bimari ke control ke liye koi keemiyai zeher registered nahi hai. Lihaza, bimari

ke hamlay ki soorat mein tadaruk ke liye bimaar satte khet se nikaal kar zameen mein daba dein, taake hamla mazeed barhne se roka ja sake.

### Gandum ki Khuli Kangiyari (Loose Smut) Bimari Phelane Ka Sabab:

Is bimari ki wajah Ustilago Triticina nami phopondi hai.

### Alaamat:

Yeh bimari siyah safofee (powder) khushon ki soorat mein namoodar (zahir) hoti hai. Siyah rang ka yeh safofee (powder) jo ke daano ki jagah bimaar khushon mein nazar aata hai, darasal bimari paida karne wali phopondi ke spores hain. Hawa ke zariye yeh utmaar (spores) khushon se ur kar tandrust podon ki nokhiz baaliyon (nayi shaakhon) par gir jaate hain. Bimari daane ke andar mojood rehti hai. Aindah saal yeh daane beej ke taur par istemal karne se bimari paida ho jaati hai.

### Tabee Insidaad

Bimari se mutasir fasal ki baqayaajat ikhatay kar ke talaf kar dein. Beej tandrust fasal se rakhein. May-June mein beej ko 4 se 6 ghante pani mein bhigo kar dhoop mein achi tarah sukha kar aindah fasal ke liye mehfooz kar lein. Quwat-e-madaf'at rakhne wali aqsaam kaasht karain.

### Keemiyai Insidaad:

Beej ko phopondi ki bimariyon se bachane ke liye Buwai se pehle Thiophanet Methyl ke hisaab se do ta adhai gram per kilogram beej ya Imidacloprid + Tebukonazole ke hisaab se 2 milli liter per kilogram beej ya Seedexin + Fludioxoneil ke hisaab se 2 milli liter per kilogram beej laga kar kaasht karain. Is bimari ke control ke liye koi keemiyai zeher registered nahi hai. Lihaza, bimari ke hamlay ki soorat mein tadaruk ke liye bimaar satte khet se nikaal kar zameen mein daba dein, taake hamla mazeed barhne se roka ja sake.

### Gandum ka Akhara (Foot Rot) Bimari Phelane Ka Sabab:

Is bimari ki wajah phopondi Fusarium hai.

### Alaamat:

Yeh marz podon par do dafa hamla aawar hota hai. Pehla hamla takhmi poday (beej se niklay hue chotay poday) ki haalat mein aur doosra jawan podon par. Pehli soorat mein roayadgi (ugaai) bohot kam hoti hai. Doosra hamla Feebruary se March mein hota hai. Is waqt mutasir poday martay nahi lekin baaliyan (shaakhain) ya to bilkul daano se mehroom ho jaati hain ya daane chotay reh jaate hain.

### Tabee Insidaad

Fasal ke khas o khashaak (baqayaat) ikhatay kar ke talaf kar dein. Beej tandrust istemal karain. Quwat-e-madaf'at rakhne wali aqsaam kaasht karain. Jahan bimari ka khatra ho wahan Buwai qadri pichhti (mozoon waqt ke baad) karni chahiye. Khushk zameen mein Buwai kar ke foran pani

lagane se bimari kam ho jaati hai.

### Keemiyai Insidaad:

Beej ko phopondi ki bimariyon se bachane ke liye Buwai se pehle Thiophanet Methyl ke hisaab se do ta adhai gram per kilogram beej ya Imidacloprid + Tebukonazole ke hisaab se 2 milli liter per kilogram beej ya Seedexin + Fludioxoneil ke hisaab se 2 milli liter per kilogram beej laga kar

kaasht karain. Is bimari ke control ke liye koi keemiyai zeher registered nahi hai. Lihaza, bimari

ke hamlay ki soorat mein tadaruk ke liye bimaar satte khet se nikaal kar zameen mein daba dein, taake hamla mazeed barhne se roka ja sake.

### Gandum ki Safofee Phopondi (Powdery Mildew)

Is bimari ki wajah **Bimari Phelane Ka Sabab:**

phopondi Erysiphe graminis hai.

### Alaamat:

Yeh bimari gandum ke poday ke zameen ke upar wale tamam hisson par hamla aawar hoti hai. Lekin aam tor par paton ke upar wali satah par safeed safofee (powder) dhabon ki soorat mein zahir hoti hai. Patay ka hamla shudah hissa doosri taraf se bhura ya gehra bhura rang ka hota hai. Agar

is bimari ka hamla shuru mein ho jaye to nuqsan zyada hota hai. Daane chirmar ho kar bareek reh jaate hain aur paidawar mein kami waqeh ho jaati hai.

### Tabee Insidaad

Quwat-e-madaf'at rakhne wali manzoor shudah aqsaam kaasht karain.

### Keemiyai Insidaad:

Is bimari ke control ke liye koi keemiyai zeher registered nahi hai.

### Gandum Ka Blasst (Blast) Bimari Phelane Ka Sabab:

Yeh bimari Magnaporthe oryzae (fongus) ki wajah se hoti hai.

### Alaamat:

Is bimari ki ibtida'i shanahti (pehchan ki) alaamat fasal ke toleedi marhalay par gandum ke khet mein bikhre huay tukron mein dekhi ja sakti hai. Gandum ke blast ki sab se aam alaamat mein

juzvi (thory/ kahin kahin) ya mukammal tor par rang tabdeel kiye huay sataaen hain, shuru mein siyah aur surmai rang ke nishan mutasir satoon ki buniyad par nazar aate hain. Mutasir reshon

par bhure se safeed daagh nazar aate hain, jab ke daanon ka oopari khal surkhi mail bhure se

gehra surmai rang ke hashye aur darmiyan mein safeed se halkay bhure lambe ghaaway/jhriyan ko zahir karte hain. Satoon ka jozvi ya mukammal tor par khushk hona bimari ki shiddat par munhasir hota hai. Daanay bharne ke marhalay par hamlay ke nateejay mein chhote, jhriyon

wale, chirmar huay, aur kam wazan beej bante hain.

### Tabee Insidaad

Fasal ke baqaya jaat akathay kar ke talaf kar dein. Beej tandrust istamal karain. Bimari ke

hamlay se bachne ke liye khet ko jari bootiyon se paak rakhna chahiye. Bimari se mutasir beej istamal na karain.

### Keemiyai Insidaad:

Beej ko phapphonde ki bimariyon se bachane ke liye boayi se pehle Thiofeennat methyl hisaab do ta ardha gram fee kilogram beej ya Amide acropyrid + Tebukonazole hisaab 2 milli liter fee

kilogram beej ya Seedexin + Fludioxonil hisaab 2 milli liter fee kilogram beej ko laga kar kaasht

karain. Is bimari ke control ke liye koi keemiyai zeher registered nahi hai. Lehaza bimari ke

hamlay ki soorat mein ke tadaruk ke liye bimaar satay khet se nikaal kar zameen mein daba dein, takay hamla mazeed barhney se roka ja sakay.

### Septoria Tractica Blotch Bimari Phelane Ka Sabab:

Yeh bimari Mycosphaerella graminicola fungus ki wajah se hoti hai. Is bimari ke spores barish ki fawaar aur hawa ke zariye tawil faslon tak muntaqil hoti hain.

### Alaamat:

Ibtidai alaamat puranay paton par zahir hoti hain aur jaise hi spores oopar ki taraf bikhartay hain, to alaamat ooper ke phooldar hisson mein zahir hona shuru ho jati hain. Ibtida'ee tor par paton ke neeche chhote sabzi mail dhabbay zahir hotay hain. Jaise hi yeh barhtay hain, yeh dhabbay beyazwi ya dhaari daar shakl ke sath halkay se gehre bhore rang ke daagh ban jatay hain. Baad mein, zakhm bhore ho jatay hain aur barh jatay hain aur poore patay ka ihata kar lete hain. Yeh tanon aur siron par bhi zahir hotay hain. Aakhir mein, patay khushk ho jate hain aur mar jatay hain. Agar flag leaf aur iske neeche walay do patay mutasir hoon to paidawar mein kami waqay hoti hai.

### Tabee Insidaad

Fasal ke baqaya jaat akathay kar ke talaf kar dein. Beej tandrust istamal karain. Bimari ke khatra ho, to boayi qadray pichay karni chahiye.

### Keemiyai Insidaad:

Is bimari ke control ke liye koi keemiyai zeher registered nahi hai.

### Fusarium Head Blight

**Bimari Phelane Ka Sabab:**

Yeh bimari Fusarium graminearum fungus ki wajah se hoti hai.

Is bimari ke spores barish ki fawaar aur hawa ke zariye tawil faslon tak muntaqil hotay hain.

### Alaamat:

Ibtidai alaamat mein gandum ke chand, ya baaz auqat tamam, ston ka waqt se pehle hi rang tabdeel ho jata hai. Gandum par alaamat aam tor par ston nikalne ke taqreeban 18 se 21 din baad zahir hoti

hain. Yeh woh nash-o-numa ka marhala hota hai jis mein aam tor par bimari hamla karti hai, lekin agar phool aanay ke baad mustehkam tor par mausam nam ho aur iska hamla aur alaamat pehle zahir ho sakte hain. Infeection ke nateejay mein danay ka na banna aur chhotay safeed ya gulabi rang ke chadmar huay beej hotay hain. Fusarium head blight ke nateejay mein ston ke khaali honay aur chhotay danon ki wajah se paidawar mein kami waqay hoti hai.

### Tabee Insidaad

Fasal ke baqaya jaat akathay kar ke talaf kar dein. Beej tandrust istamal karain. Bimari ke khatra ho, to boayi qadray pichay karni chahiye.

### Keemiyai Insidaad:

Is bimari ke control ke liye koi keemiyai zeher registered nahi hai. **Nuqsaan da keeray, parinday, choohay aur uan ka insidaad Deemak (Termite)**

### Shanakht

Yeh chhota sa keera hota hai jo zardi mael rang ka hota hai. Yeh apna ghar zameen mein bana kar khandaan ki shakal mein rehta hai.

### Nuksan ka Tareeqa

Deemak fasal ki jaroon par hamla karta hai. Barani ilaqon mein is ka hamla zyada dekha gaya hai. Mutasir poday peelay parh jatay hain aur shadid hamlay ki surat mein mar jatay hain. Yeh hamla aam tor par tikriyon mein hota hai.

### Tabee Insidaad

Gobar ki kachi khaad istemal na karein kyunkay yeh deemak ke liye sazgaar mahol faraham karti hai.

### Keemiyai Insidaad

Rowni ke waqt ya hamla shuru hote hi Feepronil 5 SC ba hisaab 1 liter per acre aabpashi ke sath istemal karein.

# Gandum ka Sust Teela (Aphid)

### Shanakht

Yeh sabzi mael chhota sa keera hai jiska jism nashpati ki tarah hota hai. Jism ke ooper aakhri hisson mein do nalyaan hoti hain jo meetha maada kharij karti hain, jiski wajah se patton par kali phaphondi ug aati hai. Yeh aam tor par ek jagah par akathay paaye jatay hain aur agar inhe cheda jaye to bohot kam harkat karte hain.

### Nuksan ka Tareeqa

Yeh keera podon ke patton, shagoofon (shakhon), aur ston ka ras chosta hai, jiski wajah se poda aur sta kamzor ho jata hai. Shadeed hamlay ki surat mein danay sukar jatay hain aur paidawar

par bura asar parta hai. Iska hamla aksar wast Feebruary se March ke darmiyan zyada hota hai. Shadeed hamlay ki surat mein patton par kali uli ug aati hai, jo patton mein khoraak banane ka amal mutasir karti hai.

### Tabee Insidaad

* Agiti kasht ko farogh dein.
* Power sprayer ke saath tez pressure se pani ka spray karein.

# Biological Control

Gandum par sust teelay ke hamlay mein har saal izafa dekha gaya hai. Iska asaan aur sasta hal yeh hai ke gandum ke khet mein sarson ya canola ki do lines kasht karein. Sarson ya canola par sust teela pehlay hamla karta hai aur faidamand keeray, jaise ladybird beetle, Chrysopa, aur syrphid fly, bhi jaldi peda hote hain. Yeh keeray sust teelay ki tadaad barhnay nahi dete aur

gandum par muntaqil ho kar sust teelay ko khatam karte hain.

### Keemiyai Insidaad

Is keeray ke hamlay ke doran power sprayer ke saath tez pressure se pani ka spray karne se hamla kam ho jata hai. Lekin iske liye koi keemiyai zehar registered nahi hai.

# Chor Keera (Cut Worm)

### Shanakht

Is ki sindiyan din ke waqt mudhon (tana, jarain) aur daraaron mein chhupi rehti hain aur raat ke waqt hamla karti hain.

### Nuksan ka Tareeqa

Yeh ugti hui fasal ke podon ko satah zameen se kaat deta hai. Yeh khata kam aur kaat kaat kar ziada zaya karta hai, jiski wajah se fasal ko kafee nuksan hota hai.

### Tabee Insidaad

Pani dene se is keeray ka hamla kam ho jata hai.

### Keemiyai Insidaad

Is keeray ke control ke liye ab tak koi keemiyai zehar register nahi ki gayi hai.

# Lashkari Sundi (Armyworm)

### Shanakht

Yeh sundi aam tor par patton aur ston par payi jati hai, aur iske jism par dhariyan (qataren/lines) hoti hain. Yeh lashkar ki shakal mein ek khet se dosre khet ki taraf yalgaar (hamla) karti hai, is wajah se ise Lashkari Sundi kaha jata hai.

### Nuksan ka Tareeqa

Yeh keera baaz ilaqon mein kabhi kabhar wabai surat ikhtiyar kar leta hai. Yeh gandum ke patton aur ston ko nuksan pohanchata hai.

### Tabee Insidaad

Fasal par lashkari sundi ka hamla barhne se bachane ke liye hamla shuda khet ke gird khaiyan khod kar un mein pani chhor dein taake reengti hui sundiyan un mein gir kar mar jayein. Ya phir unhein mitti mein daba dein. Is tareeqay se sundiyan dosre kheton par hamla nahi kar sakein gi.

### Keemiyai Insidaad

Lashkari sundi ko control karne ke liye ab tak koi keemiyai zehar register nahi ki gayi hai.

# Tannay ki Gulabi Sundi (Pink Borer)

### Shanakht

Iski sundi gulabi rang ki hoti hai. Yeh keera sundi ki haalat mein sardi ke din dhan ke mudhon (tana, jarain) mein guzaarta hai.

### Nuksan ka Tareeqa

Yeh keera zyada tar chawal ke ilaqon mein gandum ki fasal par hamla karta hai aur darmiyani

konpal kaat deta hai, jo sookh jati hai. Iska hamla December se March ke darmiyan kisi bhi waqt ho sakta hai. Mutasir ston mein danay nahi bante aur sitta safeed nazar aata hai.

### Tabee Insidaad

Dhan ki kattai ke baad mudh (tana, jarain) ko talaf kar dein. Gandum ki mutasir shakh ko ukhaar kar talaf kar dein.

### Keemiyai Insidaad

Tannay ki gulabi sundi ko control karne ke liye ab tak koi keemiyai zehar register nahi ki gayi hai.

# American Sundi (Helicoverpa spp)

### Shanakht

Baaligh purwana bhuray rang ka hota hai, aur aglay pron par siyah dhabba hota hai. Sundi jism mein badi aur sabz bhuray rang ki hoti hai. Sundi ke tarafain mein lambaai ke rukh do lakeerain hoti hain. Anday ka rang safeedi mael zard hota hai.

### Nuksan ka Tareeqa

Iska hamla khas tor par kapas ke ilaqon mein hota hai. Sundiyan November aur December mein gandum ke shugufon aur shakhon ko khati hain. March aur April mein yeh sundiyan ston par

hamla karte hain aur danon ko khati hain.

### Tabee Insidaad

Kapas ki bardasht ke baad chharryan kaat kar zameen mein gehera hal chalayen taake zameen mein mojood pupay talaf ho jayein. Jari bootiyan talaf karein. Purwanon ki talafee ke liye roshni ke phanday lagayen. Andon ki talafee ke liye Trichogramake cards istemal karein.

### Keemiyai Insidaad

Is keeray ke control ke liye ab tak koi keemiyai zehar register nahi ki gayi hai.

# Kaali Chiyonti (Black Ant)

### Shanakht

Yeh aam chiyontiyon ki tarah hoti hai lekin jism mein barhi hoti hai.

### Nuksan ka Tareeqa

Buwai ke waqt chiyontiyan khet se danay uthakar le jati hain, jis se fasal ka matluba ugaao hasil nahi hota.

### Insidaad

Yeh keera zameen mein ghar bana kar rehta hai. Aam tor par iska hamla nuksan ka baais nahi banta. Beej ko chiyonti ke hamlay se bachane ke liye zehr laga hua beej kasht karein.

# Chouhay (Rats)

### Shanakht

Aam tor par kheton mein chouhay kafee nuksan ka baais bante hain.

### Nuksan ka Tareeqa

Chouhay gandum ke ilawa doosri faslon ko bhi nuksan pohanchate hain. Yeh fasal ko khate kam aur nuksan ziada karte hain. Gandum ke ilawa, kamad, chawal, makkai, phaldar poday, nursariyon aur sabziyon ke podon ko kaat kar kharaab karte hain aur nuksan pohanchate hain. Iske ilawa, khalon (paani guzarnay ki jagah) aur witon (band) par unke bilon ki wajah se kafee miqdaar mein paani zaya ho jata hai.

### Tabee Insidaad

Chouhay ke bilon ko mitti ya paani se bhar diya jaye, ya bilon ko ukhaad kar chouhay ko maara jaye. Muqami tor par dastiyaab pinjray aur phanday laga kar bhi inhe talaf kiya ja sakta hai.

### Keemiyai Insidaad

* Ek hissa zehr (Zinc Phosphide) ko 20 hisse aatay mein mila kar thorey se gur mein chhoti chhoti goliyaan banayein aur chouhay ke bilon ke paas kheton mein rakh dein taake jab chouhay nikalain to khakar mar jayein.
* Ek hissa zehr ko 20 hisse ubalay hue makkai ke danon ke sath mila kar bilon ke qareeb rakhain.
* Kheton mein ek goli zehr fee bil rakh kar bil ko mitti se band kar dein. Goliyaan se zehrili gas nikal kar chouhay ko bil ke andar hi khatam kar degi. Zehrili goliyaan waghera kheton mein rakhte waqt ehtiyaat karein taake mawashi, paalto janwar inhe na khayen.

# Parinday (Chiriyan, Shahrak aur Kaway waghaira)

### Nuksan ka Tareeqa

Kaway aur shahrak buwai ke waqt beej uthaa lete hain aur nuksan ka baais bante hain. Chiriyan fasal pakne par hamla karti hain. Ughay huay poday ko ukhaar kar aur khakar nuksan pohanchati hain. Chidiyaan ke jhund pakki hui fasal ke ston se danay nikaal kar zaya kar dete hain.

### Tabee Insidaad

* Chiriyaan ko shikar karne wale parindon ki hosla afzai karein.
* Jaali ya phanday laga kar unka shikar karein.
* Tin ke dabbay bajakar bhi unhein door rakha ja sakta hai.
* Kapray ya momi kaaghaz ki jhundiyan kheton mein laga kar parindon ko door rakha ja sakta hai.

### Fasal ki Bardasht

Jab gandum ke ston ka rang sunahra ho jaye, koi sitta sabz haalat mein na ho aur daana agar sitta se nikaal kar daant ke neeche dabaya jaye to kutk ki awaaz se toot jaye, to is waqt fasal bardasht ke qabil ho chuki hoti hai. Gandum ki katayi aam tor par do tareeqon se hoti hai:

### Dasti Katayi

1. **Mashini Katayi**

Kam pehmayay par kasht aur labor ki sahulat maasur hone ki surat mein katayi daranti se ki jati hai. Katayi se pehle khet ke aise hisson ka intekhab karein jahan se fasal giri na ho aur har ilhaz se achi ho, taake beej ke liye chhanti ja sake. Barish ke dauran katayi rok dein jab tak mausam bilkul saaf na ho jaye. Iski katayi, ghahai aur safai alag ki jaye taake beej mehfooz ho jaye. Bhariyan qadray chhoti bandhain aur ston ka rukh ek hi taraf rakhain. Khilware chhote rakhain aur unchay kheton mein lagayein. Khilware ke arghad barish ke paani ke nikaas ke liye khaiyan banayein. Aindah fasal ke liye beej ghahai ke baad achi tarah safai kar ke aur dawa laga kar alag saf sutrey godamon mein rakhna chahiye.

Jabke gandum agar zyada raqbay par kasht ki gayi ho to mashini katayi ko tarjih dein. Is maqsad ke liye mukhtalif machine, reaper aur combine harvester istemal kiye jate hain. Gandum ki katayi aur ghahai agar combine harvester se ki jaye to waqt ki bachaat ke ilaawa danon ka nuksan bhi kam hota hai. Agar fasal combine harvester se bardasht ki ho to wheat straw chopper ki madad se todi banayein. Is se ek taraf izafee aamdani hoti hai aur doosri taraf yeh ke fasal ki baqiayaat ko jalane ki bajaye sahih tor par istemal karne ka moqa milta hai.

# Baad Az Bardasht Fasal ki Sanbhal Kyun Zaroori Hai?

Fasal ki bardasht ke baad sanbhal is liye zaroori hai kyonke is se mandarja zail faiday hasil hote hain:

* + Khoraak ka Tahaffuz.
  + Quality Assurance (Meyaar ki Yaqeen Dihani.
  + Behtar Storage:
  + Keeron Se Behtar Tahaffuz:
  + Nuksanaat Kam Ho:
  + Behtar Marketing Ke Moqaay
  + **Bardasht Ke Baad Ke Marahil**
  + i. **Ghahi (Threshing)**

Gandum ki threshing karte waqt yeh khayal rakha jaye ke daanay tootne na paayein, warna un par keeron ka hamla jald aur zyada hota hai.

### ii. Jins (Gandum ka Beej) Mein Nami Ki Miqdaar

Ghalla ko godaamon mein rakhte waqt is mein nami taqreeban 10 percent se zyada nahi honi chahiye. Daanon ko daant ke neeche dabane se agar kark ki awaaz se toot jaye to nami ki miqdaar munaasib hai. Agar nami zyada ho to jins (gandum ka beej) ko dhoop mein sukha lein.

### iii. Ghalla Ko Boryon Mein Bharna

Ghalla ko zakheera karne ke liye nai boryan istemal karein, basorat degar purani boryan use karni hon to unhein safarsh shuda zehr ke mahalool se achi tarah spray kar ke sukha kar istemal karein. Agar mumkin ho to gandum zakheera karne ke liye har metric thela istemal karein.

### iv. Godaamon Ki Safai

Godaamon mein agar koi dararein waghaira hon to wahan mitti ya sement laga kar achi tarah band kar diya jaye. Godaamon mein safarsh shuda zehr spray karein aur kam az kam 48 ghante band rakhne ke baad unke darwazay khol diye jayein. 4 se 6 ghante tak godaamon mein dakhil na hoon aur unki achi tarah safai karein.

### v. Fumigation

Agar godaamon mein chohon aur keeray makoron ka hamla ho jaye to is ke Insidaad ke liye Aluminum Phosphide ki 30 se 35 goliyaan har hazaar makoob feeet mein istemal karein. Agar jins (beej) khuli padi ho to usay plastic sheet se achi tarah hawa band kar lein. Godaamon ki saal mein do martaba fumigation karein, ek ghalla zakheera karte waqt

aur doosra mausam barsaat mein nami barhne par. Fumigation (dhoni dena) ke dauran godaam bilkul hawa band hona chahiye, basorat-e-udas zehrili gas ka asar zail ho jata hai. Godaam ko kam az kam saat din ke liye band rakhein. Godaam kholne ke 4 se 6 ghante baad andar dakhil hoon. Fumigation ke liye zehr ki goliyaan kisi kapde waghaira mein baandh kar rakhain aur baad mein inki raakh ko talaf kar dein aur jins mein na jane dein.

### vi. Ghalla Ki Chohon Se Hifazat

Chohon se hifazat ke liye mozoon zehr ki goliyaan bana kar raat ke waqt chohon ki guzargah par rakhain to yeh unko kha kar mar jate hain.

### vii. Ghar Mein Bhudolon Mein Gandum Zakheera Karna

Bhadolon mein gandum mehfooz rakhne ke liye kuch ehtiyaati tadabeer ka khayal rakhein. Bhadolon ko achi tarah hawa band kar lein. Bhadolon mein do se teen goliyaan, hisaab se ek ton gandum, bhadolah band karne se pehle kisi cup ya pyaale mein daal kar gandum ke ooper rakh lein. Kam az kam bees din tak bhadolon ko na kholain.

# Zakhira Shuda Anaaj ke Nuksan Daah Kiiray

1. **Khupra Beetle (Trogoderma granarium)**

### Nuqsan Pohnchane Ka Tareeqa:

* + Gurb / Sunday anaaj ki satah ko kharch kar aur anaaj ko kha kar nuqsan pohnchati hain.
  + Ye anaaj ko faras (kiroon makoron ka fuzla) mein tabdeel kar deti hain.
  + Zyada hamlay ke nateejay mein market value ka nuqsan hota hai.
  + Larva ki zyada tadaad hafzan-e-sehat ke manafee halaat paida karti hai.

# Anaaj ka Gudwan / Borer (Rhyzopertha dominica)

### Nuqsan Pohnchane Ka Tareeqa:

* + Gurb / Sunday aur baligh keeray anaaj ki guthliyon ko faras tak kam kar dete hain.
  + Gurb / Sunday anaaj mein sorakh kar ke daakhil hote hain aur unko kha kar nuqsan pohnchate hain.

# Aate ki Surkh Bhondi (Tribolium castaneum)

### Meizban:

* + Tootay huay daanay aur pisa hua aata.

### Nuqsan Pohnchane Ka Tareeqa:

* + Gurb / Sunday aate par hamla karte hain.
  + Ye aate ke thaanwi aur buniyadi kiiray hain.
  + Zyada hamlay ki soorat mein ye gas chhorte hain, jiss se aate mein tezabi boo paida hoti hai.

# Zakhira Shuda Anaaj ke Nuksan Daah Kiiron Ki Rok Thaam aur Control:

* + Zakhira karne wali jagah ko baqaida safai karen taake aate ki surkh bhondi ko zinda rehne ke liye darkaar chhote chhote tukde hattaye jaa sakein.
  + phatay huay ya kharab packaging na khareedain kyun ke inke mutasir hone ka imkaana zyada hota hai.
  + Purane mawad se mutasir hone ki soorat mein, aate ki surkh bhondi naye mawad par tazeeri se hamla karti hai.
  + Purane containers ko tazah aate se bharne se pehle achi tarah safai karen taake naye infeection se bacha ja sake.
  + Storage units ko khushk rakhen kyunki aate ki surkh bhondi ko nashonuma ke liye nami ki zaroorat hoti hai, aur khushki mein woh zinda nahi reh sakti.

### Gandum ka Khales Beej Paida Karna

Kisaanon se guzarish hai ke woh gandum ki safarsh shuda aqsaam ka sehatmand aur tasdeeq shuda beej kaasht karein. Lekin agar tasdeeq shuda beej ki kami ya adam dastiyaabi ho to,

gandum ki manzoor shuda aqsaam ka khales beej apni kaashat se hasil karke bhi istemal kar

sakte hain. Jo fasal se beej tayar karna ho, wahan manzila zail ehtiyaati tadabeer ikhtiyar karen:

Khet mein jo ghair aqsaam ke poday hoon, unhein nikaal kar beej ki khudai mein masroof na honay dein. Jari bootiyan bhi dahi se hatayein.

Zarayi madakhil muqammi daftaron ke mutabiq istemal karen,

Kaangiari wale tamam poday kaat kar zameen mein daal dein taake unka faida na ho.

Bhriyan bandhne ke liye parali ya ussi qisam ka naar istemal karen,

Katai ke baad gandum ki mukhtalif aqsaam ke khaliyan (dheeriyaan) alag alag lagayen, taake ghalat beej ka aabroo na ho.

Ghai se pehle aur baad mein thresher ya combine harvester ko achay se safai karen. Pehli ek ya do buriyaon ka beej na rakhein.

Beej daalte waqt buriyaon par gandum ki qisam ka naam zaroor likhen.

Beej zakhira karte waqt, is mein nami ki miqdaar 10% se zyada nahi honi chahiye.

Beej zakhira karte waqt roshan aur hawadar godam istemal karein, taake beej mein khushkmi aur safai barqarar rahe.

Beej ko gred kar ke kaashat karein .

# Gandum ki Masnooghat:

Gandum ka beej khoraak ke liye istemal kiya jata hai aur ise pisa kar aata tayar hota hai, jo roti, double roti, biscuit, cake, daliya, pasta, aur noodles jaise khanay tayar kiye jaate hain. Gandum ke beej ke khamir se starch, beer aur hayati atay bhi tayar kiye ja sakte hain. Gandum ke podon ka istemal palto janwaron ke chaaray ke tor par bhi hota hai.

# BaKhabar Kisan Sifarshaat

**Aabpaash Ilaaqay:**

## bimari se paak aur tasdeeq shuda hona chahiye, aur usay zaroori zehr se laga kar kaashat karen.

## Sifarsh shuda aqsaam ka beej, aur beej ki sowati waqt aur sharaah ke mutabiq kaashat karen.

## Koshish karen ke gandum ki kaashat November ke mahine mein mukammal ho jaye.

**Beej Ki Sharaah**:

## Igtai aur darmiyani kaashat ke liye 40 se 50 kilogram per acre.

* + Pichayti kaashat ke liye 50 se 55 kilogram per acre.

## Khari kapas mein beej ki sharaah 55 se 60 kilogram per acre rakhen.

## Kaashat ko drill ke zariye karen.

## Gandum mein khadeyan ka istemal zameen ki tajziati report ke mutabiq karen.

## Gandum mein khad malhool bana kar istemal karen. Urea ki khad dhoop mein na rakhen, kyunke urea dhoop mein bhap ban kar ud jata hai.

## Gandum ki fasal mein jari bootiyan telaf karne par khaas tawajjo dein

## Kapas, makai aur kamaad ke baad kaashat ki jane wali gandum ko pehla pani, fasal ki boayi ke 20-25 din baad lagaen. Dhan ke baad aane wali gandum ko 35-45 din baad pehla pani lagaen.

## Baaqi aabpaashi, fasal ki naazuk halaat jaise gobh aur daane ki doodhya halaat par zaroor karen. Agar mausam garm aur khushk ho, toh aik zayad pani doosray aur teesray pani ke darmiyan lagaen.

## Agar pichayti kaashat na guzeer ho, toh ise zyada se zyada 15 December tak mukammal karen.

# Barani Ilaaqay:

## Watar ko mehfoz karney kalel monsoon ki pehli baarish ke baad ek martaba raaja hill aur baad azan har baarish ke baad aam hill chalayein.

## bimari se paak aur tasdeeq shuda hona chahiye, aur usay zaroori zehr se laga kar kaashat karen.

## Sifarsh shuda aqsaam ka beej, aur beej ki sowati waqt aur sharaah ke mutabiq kaashat karen.

## 40 se 50 kilogram per acre beej ki sharaah rakhen.

## Kaashat ko rabi drill ke zariye karen.

## Gandum mein khadeyan ka istemal zameen ki tajziati report ke mutabiq karen.

Gandum ki fasal mein jari bootiyan telaf karne par khaas tawajjo dein.