

Jamhuriyar Nijar

**Kungiyar kasar Japon mai kula
da hulɗar ƙasa da ƙasa**

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**Puroje mai kula da bincike – bincike don bunƙasa ayukkan noma a cikin
fadamu na cikin yankin sahel**



Littahin bada bayani dangance da noman wasu sabin irurruka na hatsi

**Kungiyar kasar Japon mai kula da duk abinda ya shafi arziki na tsanwa
(J-GREEN)**

**(Walafawa daga Inran tare da bada hannun EDOS)
Watan Yuni na 2007**

Wani littahi, Inran ta wallafa shi tare da ban hannun Puroje mai kula da bincike-bincike don bunƙasa ayukkan noma a cikin fadanmu na cikin yankin sahel (EDOS) sashen Tawa. Wannan sabon aiki ne na jaraba sabin irurruka na hatsi.

Wannan littahi an yi shi ne don manoma. Da shi ne aka yi aiki don horar da manoma.

Wannan littahi na bada cikkaken bayani bisa irin hatsi, halayenshi, da kuma yaya ya kamata a yi noman shi a zamanince.

Hotunan da ke cikin wannan littahi, an yi su ne don kawo sauƙi wajen fa'inter da manoma dangance da sabin husa'o'in noman zamani. Wannan littahi an fassara shi a cikin halsuna na gida Hausa da Buzanci.

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Hatsi cimaka ce da ake nomawa sosai a cikin Nahiyoyin Afirika da Indiya a cikin babgaren kasashe masu yanayin kusa – kusa da yanayin hamada ko na sahel.



A cikin tsarin noman galgajiya na Nijar, ana haɗa hatsi wuri ɗaya da dawa ko kuma hatsi da wake ko gyada. Kowane irin haɗi aka yi, manoma na nuhin cimma gurin samun isashen abinci a cikin kowane hili da suka noma.

Ana iya sarrafa hatsi don a yi abinci kala-kala : koko, tuwo, fura da kuskus.

Bayan an hidda albarkatun gona, karan hatsi ana amfani da su wajen yin bukkoki, darni da ciyar da bisashe.

Hoto na 1 : Amfani kala kala
Da ake yi da hatsi

I. Asalin hatsi :

Hatsi dangin ciyawa ce da ake Samu a cikin kasashe na kusa da sahara masu zahi wanda a kwatamce degire 28 a lokacin damana. Ana noman hatsi a cikin yankin da ake samun ruwan sama daga milimeta 200 zuwa 800. Hatsi ba ya da matsala kamar dawa, ana noma shi bisa faska ko dabagi ko baringo. Yana da hankurin kishirwa, kuma ba ya buƙatar taki mai yawa kuma yana jimirin zafi mai yawa

Ana jaraba noman hatsi a cikin yankuna dabam - dabam, an gano manoma kwararri wurare kamar su Sahel da arewacin kasar Guinée.

II. Kamanu da halayen irurukan hatsi na Nijar

Ana bambanta kalar wata hatsi da wata ta hanyar kama, tsawon zangarniya, launin tsabar da kuma tsawon kwanukkan kahin ya nuna.

2.1. Irurukan hatsi na galgajiya da kuma kamanunsu :

Irin hatsi na galgajiya tsawo yake yi, ana iya kasa su kashi biyu :

- Hatsi mai daɗewa kahin ya nuna (kwana 120 zuwa 130). Ana cin shi a cikin watan satumba a nan Nijar. Ana noman shi a cikin babgaren

gusum na kasar Nijar inda ake samun ruwan sama sosai (milimetir 600 zuwa 1000).

- Hatsi mai gaugawa (kwanaki 80 zuwa 95) yana fara bunni idan ya kai kwatamci kwanakki 60 na shibka. Mafi yawan cimakar dengen hatsi da ake samu, ta hanyar wannan kala ce (kishi 90 zuwa 92) don ita ce ta dace da yanayi irin namu inda ruwan sama da ke faduwa ba su wuce milimeta 350 zuwa 600. Irin hatsi kala-kala ne saboda kowace wajen na da kala irin tashi kodayake ba ya bada amfani mai yawan gaske, amma ya dace da yanayin kasa.

2.2. Kamanu da halayen iri na zamani :

Tsarin zaɓen iri na hatsi ya shahi iri na galgajiya wanda shi ne mai gaugawa (kwana 80 zuwa 85). Wannan kalar iri da ta hito daga irin galgajiya ta yi kama da shi wajen zangarku, launi da kyau na tsaba kuma ba ya sauƙin karbuwa wajen manoma.

Wadannan sabin irurruka da INRAN ta kirkiro ana nan ana jaraba su kuma ana bisa hanyar jaraba su a nan Nijar. Ana iya kasa su kala biyu :

- Kala wadda ba ta wuce kwanakki 86 zuwa 95
- Kala wadda ba ta wuce kwanakki 80 zuwa 85.

2.3. Amfanin irin hatsi na zamani da ake jarabawa :

Dangance da hulɗar da ke tsakanin INRAN da EDOS, ana jaraba sabin irurruka na hatsi.

Amfanin wadannan irurruka na hatsi shine :

- Gaugawa
- Hankurin kishirwa
- Samun amfanin gona mai yawa
- Hankurin (jimiri) kwari mabannata.

Don irurrukan su bada sosai yadda ake so dole sai an yi aiki da husa'o'i da hikimomi na noman zamani da bincike-bincike ya bada (sarari tsakanin rami da rami, sa taki da kashin miyagun kwari). Ko dayake manomi ba duka ya iya kaukar nauyin su ba.

Wadannan tabulo biyu (1 da na 2) suna bada bayani dangance da kamanu irin zamani, amfaninsu da kuma laihinsu (matsalarsu).

Kamanun ko halayen iri	HKP:Hainikire zahin kai	Sosat – C – 88	H.80.10 GR mai gaugawa
Irin yankin da ya dace da shi	Inda ruwan sama ya kai milimeta 350 zuwa 500	Inda ruwan sama ya kai milimeta 350 zuwa 600	Inda ruwan sama ya kai milimeta 300 zuwa 400
Lokacin da ya ke d'auka daga shibka zuwa nuna	Kwanakki 70 zuwa 80	Kwanakki 70 zuwa 80	Kwanakki 75 zuwa 85
Amfanin da aka iya samu bisa kowace Eka	Tan 2 kowace Eka 1	Tan 1,5 zuwa tan 2	Tan 2 zuwa 3
Halayen shi idan kwari mabannata suka kai hari	Burtutiki da kuturtar hasti sun imi shi	Tsutsa mai hude kara ta imi shi, yana da hanƙurin zuzzuƙa da kuturtar hasti	Burtutiki da kuturtar hasti ba su imi shi
Tsawon kara	m 1,90 – m 2	-	m 2 zuwa 2,3
Tsawon zangarniya	cm 50 zuwa cm 70	-	cm 52 zuwa cm 55 fadi cm 2 zuwa 2,5
Kama da launin tsaba.	Ja wanda ya yi kusan masara.	Masara wanda ya yi shigar tsanwa.	Masara – masara.

Tabulo na 2 : Amfani da kuma laihin irurukan hatsi

Kalar iri	amfani	Laihi
HKP Hainikire mai gaugawa	Zahin kai – samun amfanin Gona mai yawa Tan 2/eka	Burtutiki da kuturtar hasti sun imi shi
Sosat – c 88	- Zahin kai Samun amfanin gona mai yawa Tan 1,5 zuwa Tan 2 - Yana hanƙurin zuzuda da kuturtar hasti	Tsutsar kara ta imi shi
H- 80-10 GR mai gaugawa kwari gyargera	Zahin kai Yana hanƙurin Burtutiki da kuturtar hasti	



HKP



SOSAT-C88



H-80-10 GR

III. Sabin husa'o'in noman sabin kaloli na irin hatsi :

3.1. Gyaran gona :

Gyaran gona ya shahi yin sassabe da ginar tussan hatsi da kuma kunar su saboda a wanke gona da kyau.

Idan aka yi haka sai a ji daɗin shibka da noma. Bayan haka, wannan gyaran gona yana sa a rabu da wasu miyagun kwari da ke iya boyewa cikin tussan hatsi.

3.2. Sa ma gona taki :

taki yana kumshe da abincin da duk ɗan cimaka ke buƙata don girma cikin ni'ima.

Takin da aka hi sani sune imbo ko kashin bisashe da kuma takin zamani.

3.2.1. Kan takin galgajiya gona da yadda ake watsa shi :

amfanin takin galgajiya shine :

- Taimaka ma cimaka don ta yi sayyu masu karhi
- Kyautata daidaituwar kasar noma
- Kyautatawa wajen samun ingantattar kasar noma
- Kokowa da zaizayewar kasa

- Taimakawa wajen rikon danyi
- Taimakawa wajen girmar da saurar abubuwan da kasa ta ke kumshe da su.

Takin galgajiya, kamata ya yi a kai shi kahin a soma gyaran gona. Za a soma bin tsuli – tsuli a cikin gona sa'anana sai a baje shi da hannu. A baje taki kahin a yi noma saboda a ci ribarshi sosai.

Takin galgajiya yana da amfani kwari wajen raya gona. Idan ana son gona ta zan tana da taki kodayaushe to, duk shekara sai an kai Tan 5 zuwa 10 na taki a cikin kowace Eka 1.

3.2.2. Sa takin zamani da watsa shi :

Yadda ake yi :

- Ana sa takin zamani kahin a yi shibka. Shi takin zamani Supa Sampil ko Supa Firipil ana watsa shi misalin kilo 100 na SSP a kowace Eka ko kuma kilo 50 na STP a kowace Eka.
- Ana sa takin zamani cikin kowane rame bayan an yi shibka. A beta a sa taki sai a rufe takin.

Ga minzani : Taki DAP = kilo 20 / Eka 1 ko kuma garam 2/ rami 1

Taki 15-15-15 = kilo 60/Eka 1 ko kuma garam 6/ rami 1



Hoto na 1 : Husa'ar sa takin zamani rami – rami :



Hoto na 2 : Baza takin galgajiya



Hoto na 3 : Watsa takin zamani



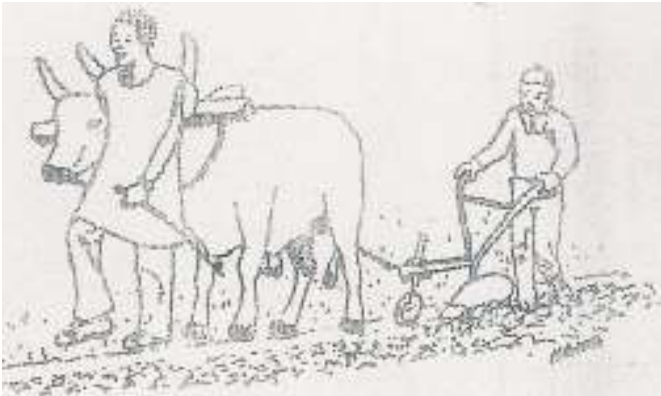
Hoto na 4 : Juya ƙasa don haɗa takin galgajiya da na zamani cikin ƙasa.

3.3. Gyaran wurin noma :

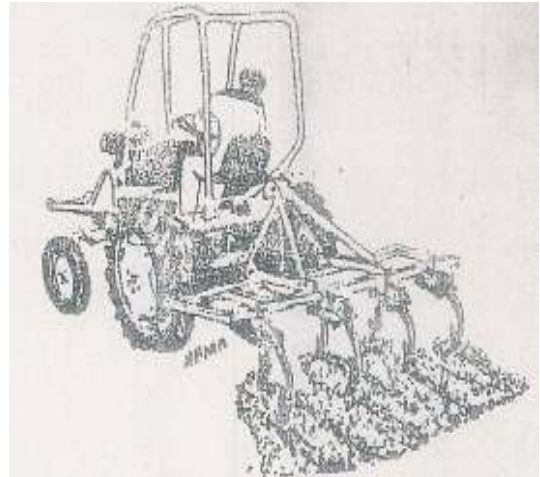
Yana da gurin :

- Gyaran wurin da za a shibka
- Gyaran kasa (noman jirgi ko galma) don ta zan rikon danyi
- Sa takin galgajiya tare da an juya shi cikin kasa
- Sa takin zamani tare da en juya shi cikin kasa
- La'akari da mugunyar ciyawa.

Wajen gyaran gona, ana iya amfani da kayan aiki na galgajiya (kwasu) ko kuma galma ta dabbobi ko kuma jirgin danƙaro.



Hoto na 5 : Noman shanu



Hoto na 6 : Noman jirgi

Idan faska ce ko tudu, a yi aiki wajen tada kasa da jirgin danƙaro mai noma iri-iri (Arara), kalmen Manga ko kwasu kahin a soma ruwan sama saboda a juya kasa don taki ya shiga kasa sosai.

3.4. Zaben iri da yadda ake sanya mashi magani :

3.4.1. Zaben iri :

Wajen zaben iri, a zaɓi tsaba wadda ta nuna tun a zangarniyarta, wadda ƙwari ba su nakkasa ba ko kuma wadda ke garwaye da wani iri ko irin ciyawa.

3.4.2. Sanya ma iri magani :

Ana garwaya iri tare da fazo ɗan barbado ko kuma a haɗa ɗan barbado da wani maganin ƙwari don kare iri da wasu miyagun ƙwari waɗanda ke iya tasowa bayan an yi shibka.

Ga yadda ake sa magani :

- A zuba kilo 10 na iri cikin babban daro
- A jika koshiya cikin ruwa
- A sanya gan ko leda a ruhe hannuwa, a sanya kyalle a ruhe hanci kar a tabi iska
- A zuba rabin kwali (sachet) cikin iri sai a juya sosai
- Sa'annan a zuba kuma saurar rabin sai kuma a kara juyawa kwarai.



Hoto na 7 : Garwaya iri da fazo dan barbaɗo

Yadda za a yi bayan an kare sanya ma iri magani :

Don kiyaye cutarwar magani tilas sai an wanke hannuwa da sabini bayan an garwaya iri da magani ko bayan an yi shibka. Kwano ko kwaryar da aka yi amfani da su za a aje su musamman don wannan aiki na garwaya iri ko shibka.

3.5. Shibka :

sayen iri : Iri zamani za a sayo kimani kilo 10 kowace Eka 1 kuma a garwaya su da fazo dan barbaɗo.

Lokacin shibka : Ruwan farko in dai an samu milimeta 15 zuwa 20 amma wurin faska ko tudu.

Tsarin shibka : Layi – layi

Sarari tsakanin ramu : Metir 1 x metir 1

Kashin kanfa : A yi shi bayan kwana 8 zuwa 10.



Hoto na 8 : Shiƙar hatsi

3.6 : Ayukkan tattali

3.6.1. Noma

- **Noman farko** : Da wuri - wuri bayan ta kama ƙarhi idan ta ɗago saman rami
- **Maimai** : Sati biyu bayan noma
- **Maimai na 2 ko 3** : Idan aka lura da gonar na buƙatu

Ana iya noma na galgajiya (kalme, kwaso ko haiwa) ko na zamani (galmar dabbobi).



Hoto na 9 : Noman hatsi

3.6.2. Cira

Ana cira lokacin da ake noman farko ko bayan an nome amma ana barin kwara ukku kawai kowane rame.

Wannan cira, amfanin ta shine, ba damar saurar hatsi da ya yi amfani da abincin da ke cikin rami su kadai saboda ya ishe su sosai don su girma da sauri.



Hoto na 10 : Cirar hatsi

3.6.3. Sanya takin ure :

Kilo 100 na ure a kowace eka ya kamata. Amma sai a raba kilo 100 kashi biyu. A sa kilo 50 bayan an yi cira. Saurar kilo 50 idan hatsi ya fara jan kara.

Ana sanya ure idan akwai danyi sosai. Ana aje ure kusan gindin hatsi misali sentimetir 10 daga gindin sa'annan sai a sa kalme ko kwasa a ruhe shi.



Hoto na 11 : Aje ure kusan gindin hatsi Sentimetir 10 daga rami



Hoto na 12 : Ruhe ure da kwasa.



Hoto na 13 : Hilin gona bayan an juya kasa da taki

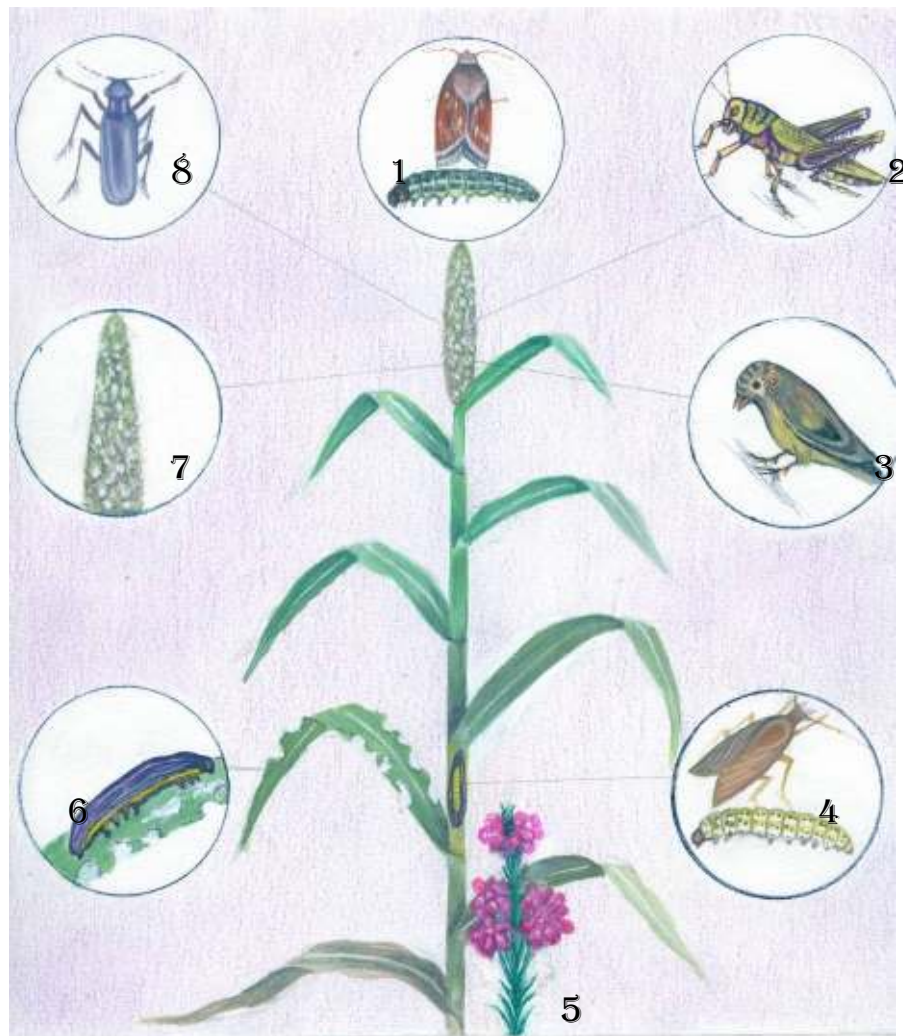
3.6.4. A kashe kwari idan suka bayyana :

3.7. Hidda amfanin gona da adana shi :

Da hannu ne ake girbar hatsi. Ana gibe hatsi kuma a bar su a rana har su bushe kahin a kimshe su a rumbu ko rahewa ko ambuta.

3.8. Kwarin da suka hi haddabar hatsi da kuma hanyoyin yakinsu :

miyagun kwari ko ire-iren rishin lahiyar da ke damuwar hatsi ga su nan a hoto 18.



Hoto na 18 : Miyagun kwari masu haddabar hatsi

- | | |
|------------------------|---------------------------------|
| 1. Zuzzuda | 5. Kujjin hatsi |
| 2. Fara | 6. Tsanwar tsutsa mai cin ganye |
| 3. Tsuntsu | 7. Kuturtar hatsi |
| 4. Tsutsar karan hatsi | 8. Kwarin hure |

Tabulo na 3 na bada haske bisa ire-iren cututtukan da ke haddabar hatsi da kuma yadda ake yakinsu.

Tabulo na 3 : Cututtuka da matsalolin da ke haddabar hatsi da kuma yadda ake yaƙinsu :

Irin miyagun ƙwari ko kuma matsalolin da ke haddabar hatsi	Yadda ake yaƙinsu
Mugun kahin damana	- ƙone tussan da wasu sauran karan bara - amfani da zaɓaɓɓen iri kuma a yi aiki da fazo ɗan barbado cikin iri.
ƙwarin cikin ƙasa	A yi noman tada ƙasa kahin shibka kuma a yi aiki da fazo ɗan barbado.
Mabannata dangin namun dawa (kurege, zabi, fakara da sauransu)	Yin amfani da fazo cikin iri.
Kuturtar hatsi	- Sa fazo cikin irin shibka - Aiki da iri mai hanƙuri - Hidda hatsin da ya kamu, ƙunar tussan da kara tsohi.
Sha bunni	- Noman ciyawa cikin gona da kewayenta, yin amfani da mai na bedi.
Tsutsa mai shiga kara	- Kone tussa da karan bara - Amfani da mai na bedi.
Fara	- Amfani da mai na bedi
Ƙwari masu shan bunni	- Amfani da iri mai gaugawa - Tattarawa da kone su - Amfani da mai na bedi litir 2/Eka 1.
Zuzzuɗa	- A tada ƙasa kahin shibka - Amfani da iri mai gaugawa.
Tsuntsu	- Fakon tsuntsu, kashe gidagen shi
Kujijin hatsi	- Sa taki, hidda ciyar striga - Juya abinda ake nomawa (Bana a noma wake, baɗi hatsi)
Watsa mugunyar ciyawa	Noma kahin a shibka hatsi.