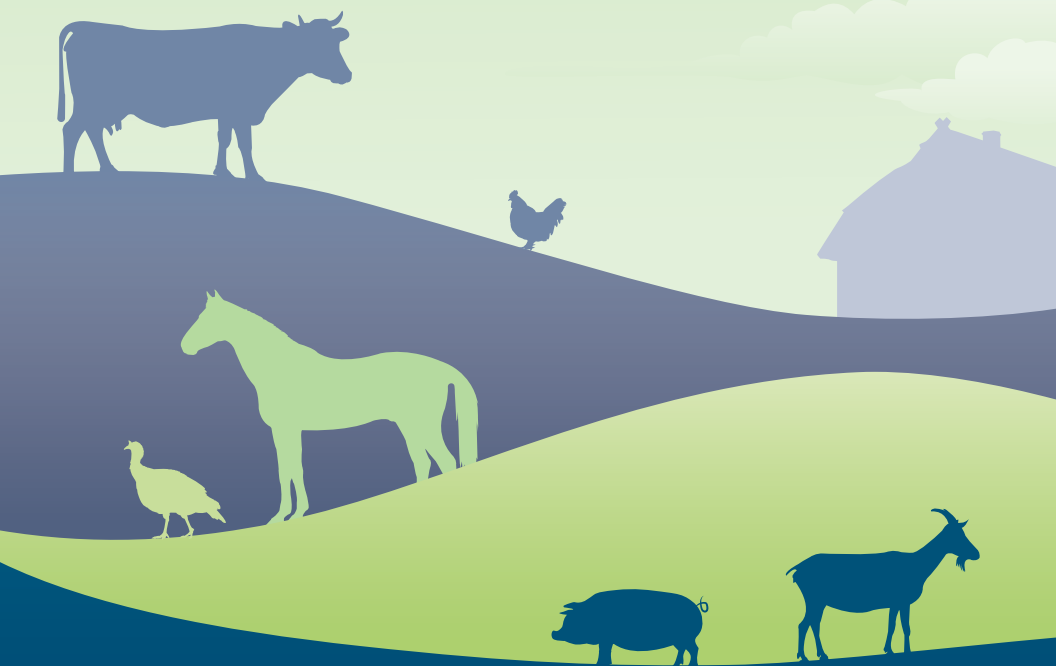


# Tilmaamaha Tuuritaanka Raqda Xayawaanka



# Jadwalka Tasmada

Fursadaha Tuuritaanka Raqda .....	1
Aasitaanka .....	1
Gubitaanka .....	2
Dib-u-habaynta (Rendering) .....	3
Shirkadaha Minnesota Rendering .....	4
Bacrimaynta (Composting) .....	5
Macluumaadka xiriirka .....	9

# Fursadaha Tuuritaanka Raqda

Wax soo saarayaasha Minnesota waxay leeyihiin dhawr fursadood oo sharci ahaan loogu talagalay in la qaado si loo tuuro raqda xoolaha. Fursad kasta waxay leedahay faa'iido gaar ah oo qaarkoodna waxay leeyihiin caqabado ay tahay in maskaxda lagu hayo ka hor inta aan la bilaabin borosiiska. Guddiga Minnesota ee Caafimaadka Xayawaanka ayaa si gaar ah uga welwelaya haddii uu jiro cudurka xayawaanka oo la kala qaadi karo. Xaaladahaan, waa in raqda loo tuuro sida ugu dhakhsaha badan isla goobta si hoos loogu dhigo fiditaanka cudurka. Iyada oo aan loo eegin qaabka la doortay, waa inaad isticmaashaa hababka maaraynta ugu haboon ee laga helayo buuggan.

Hababkan tuuritaanka raqda ee soo socda ayaa la ansixiyey Minnesota.

## Aasitaanka

- Waxay ku haboontahay raqaha aan badnayn.
- Waxaa la isticmaali jiray sanado badan.
- Ogoow heerarka biyaha ee dhulka.
- Suurtogal uma aha goob kasta.

Aasitaanku waa hab ku haboon xaaladaha qaarkood, Waxaana la isticmaali jiray sanado badan si loo tuuro xayawaanka dhintay. Waa mid aad ugu haboon marka la tuurayo raqo tiro yar, sababtoo ah raqaha tirada badan waxaa adkaan karta in si haboon loo aaso.

Siyaabaha ugu haboon waa in la raaco si hab shaqaynaya la isaga tuuro raqaha. Tusaale ahaan, haddii raqda meel aad u hoosaysa lagu aaso uma qurmayso si wanaagsan oo sanado badan ayay isku wada oolli kartaa, taas oo halis gelin karta tayada biyaha dhulka oo yaraynaysa fursadaha isticmaalka mustaqbalka ee goobta. Badanaa taas looguma talagelin xayawaanka u dhintay cudur.

Mararka qaarkood aasitaanku waa fursada keli ah marka ay jiraan dhacdooyinka musiibada, waana in la tixgeliyaa ka dib marka lala tashado khabiir sababtoo ah arimaha sida xaaladaha deegaanka ayaa u baahan in la qiimeeyo.

## Tallaabooyinka lagu bilaabay aasidda:

1. Markii aasitaanka la isticmaalayo xaalad caadi ah, waxaad ka hubin kartaa Adeegga Dhowrida Khayraadka Dabiiciga ah ee USDA si ay kaaga caawiso meelaha ay miisaska biyuhu kuu ogolaanayaan inaad ku aasto.
2. Markaad heshaan meesha lagu aasayo raqda, waxaad u baahan tihiin inaad godka ka dhigtaan inta dherer ahaan loo baahanyahay si uu u qariyo dhamaan raqda si looga hortago soo qufashada xayawaanka raqda cuna.
3. Hubi inaad ka fogaataan biyaha dhulka korkooda saaran iyo kuwa ilaha dhulka hoostiisa.
4. Godku waa in uu ka sareeyaa shan (5) dhudhun (feet) miisaska biyaha ee xilliga caadiga ah. Halkan ka soo ogoow dhererka miisaska biyaha Minnesota:  
[https://www.dnr.state.mn.us/waters/programs/gw\\_section/mapping/platesum/mha\\_wt.html](https://www.dnr.state.mn.us/waters/programs/gw_section/mapping/platesum/mha_wt.html)
5. Waxaad sidoo kale hubin kartaa dhererka biyaha markaad aasayso adiga oo qodaya godka, kadibna sii qodaya shan dhudhun (feet) si aad u xaqiijiyo inaad ka sarayso heerka miisaska biyaha.

## Gubitaanka

- Waa hab si fiican u shaqaynaya marka si haboon loo isticmaalo.
- Ka ugu fiican markii waxyar la gubayo
- Qof kastaaba si fudud uma heli karo meel kasta.
- Waxay u baahan tahay inaad la shaqeyso xarun la oggol yahay.

Gubitaanku waa hab ku haboon raqda xayawaanka yar-yar, sida digaaga. Laakiin, ma aha mid ku haboon xoolaha waaweyn ee kaa dhintay ama raqda waaweyn. Habkani wuxuu sidoo kale u baahan yahay qalab gaar ah iyo ruqsadaha Hay'adda Xakamaynta Wasakhoowga (Pollution Control Agency) Danbaska iyo qiiqa gaaska ka soo baxaya qalabka waxguba kama badnaan karaan heerarka ay dajisay PCA.

## Tallaabooyinka lagu bilaabay gubitaanka:

La xiriir Guddiga Minnesota ee Caafimaadka Xayawaanka (Minnesota Board of Animal Health) si aad u ogaato in tani ay tahay mid ku haboon howshaada.

## Dib-u-habayn (Rendering)

- Habkani wuxuu ka sameeyaa wax-soo-saar la adeegsan karo.
- Shirkadaha ayaa si toos ah uga soo qaada beeraha meelaha qaarkood ee Minnesota oo geeya dhowr meelood.
- Gawaaridu waxaa loo baahanyahay inay si ammaan ah u qaadaan raqda oo raacaan borosiiska ammaanka-noolaha.

Dub-u-habayntu waa habka dib-u-warshadaynta (recycling) raqda xayawaanka. Waxaa jira shirkado dhowr ah oo adeegyadan siiya xoolo dhaqatada Minnesota. Shirkaduhu waxay u adeegaan koonfurta iyo bartamaha Minnesota; waxaa jira fursado yar dhinaca waqooyiga ee gobolka.

Gawaarida shirkadaha dib-u-habaynta waa in uu kormeero ogolaanshana siiyo Guddiga Caafimaadka Xoolaha, haddii uusan gaariga lahayn mulkiilaha xayawaanku. Raqda iyo qaybaha xayawaanka waa in lagu raraa gaari aan daadinaynin si looga hortago in cudurku faafo oo waddooyinkuna ay nadiif u ahaadaan.

### **Talaabooyinka lagu bilaabayo dib-u-habaynta:**

1. La xiriir shirkada dib-u-habaynta oo Minnesota (eeg bogga soo socda ee liistada).
2. Xaqiiji in gawaarida dib-u-habaynta ay raacayaan nidaamka ammaanka noolaha ee beertaada marka uu yimaado.
3. La xiriir Guddiga Caafimaadka Xayawaanka Minnesota haddii aad ku nooshahay waqooyiga Minnesota.

# Shirkadaha Dib-u-habaynta (Minnesota Rendering Companies)

## **Central Bi-Products Plant A**

Degmada Todd  
1-800-767-2569  
[www.centralbi.com](http://www.centralbi.com)

## **Central Bi-Products Plant B**

Degmada Redwood  
1-800-767-2569  
[www.centralbi.com](http://www.centralbi.com)

## **Darling International Plant A**

Degmada Faribault  
507-526-3296

## **Darling International Plant B**

Degmada Fillmore  
507-526-3296

## **Leroy Job Trucking**

Degmada Sherburne  
612-245-6085

## **Sanimax**

Degmada Dakota  
651-451-6858  
[www.sanimax.com](http://www.sanimax.com)

## **T-N-T Rendering**

Degmada Lyon  
712-348-2407

## **West Central Sanitation Inc.**

Degmada Kandiyohi  
320-235-7630  
[www.wcsanitation.com](http://www.wcsanitation.com)

## **Worthington Rendering Company**

Degmada Nobles  
507-376-4711



## Bacrimaynta (Composting)

- Waa ammaan, nadiif oo shaqayn karta marka si sax ah loo sameeyo.
- Way fududahay inaad ku samayso dhul kaaga dhexdiisa.
- Waa in la raaco tilmaamaha si loogu guulaysto.
- Waxay ka hortagtaa cudurada marka si sax ah loo sameeyo.

Bacrimayntu (composting) waa hab sahlan haddii aad taqaano waxa aad samaynayso. Hubi inaad la xiriirto mid ka mid ah shaqaalaheena goobta si aad u ogaatid sida si guul leh loogu bacrimaynta raqda. Adiga ayaa samayn kara markaad fahamto sida habku u shaqeeyo iyo waxyaabaha loo baahan yahay si loo sameeyo bacrimaynta (composting) wanaagsan.

Bacrimayntu (composting) waxay ku tiirsan tahay noole/cayayaanka dabiici ahaan loo helo/ u jira sida bakteeriyada iyo fungi. Noolahani waxay u baahan yihiin cunto caafimaad leh, hawo, biyo iyo hoy. Kuwa ugu waxtarka leh waa noolaha thermophilic microbes, ama thermophiles, oo u kora una shaqeeya si wanaagsan marka heerkulku ka sarreeyo 130° F. Marka ay thermophiles ay si fiican u noolyihiin, waxay raqda u bedelaan shay waxtar leh oo humus- ka oo kale ah oo u shaqeeya sida bacrimiye si tartiib ah u siidaynaya wax carrada ku darma oo dabiici ah, ama jajab (mulch) biyaha kaydiya.

Noole kasta ayaa sida ugu wanaagsan u shaqeeya marka ay cunaan cunto isu dheeli tiran, oo noolaha/cayayaanka wax bacrimaynta taas kama reebana. Waxay ubaahan yihiin kaarboon (carbon C) iyo naytaroojiin (nitrogen N) labadaba oo saamiga saxda ah. Sida ugu wanaagsan, nafaqada ku jirta rastada bacrimayntu (compost) waa inay noqdaan 30 qaybood kaarboon ah C iyo hal qayb naytaroojiin ah N (30:1).

Rastada bacrimayntu (compost pile) waa inuu haysataa saddex ilaa shan dhudhun oo bacrimaynta (compost) kala daadsan ah. oo ku hareeraysan badhtamaha si ay ugu ahaato dugsiye. Tani waxay ku ilaalinaysaa in ay dhexdu ahaato 130° F ee loo baahanyahy ama wax ka sarreeya, haddii dhammaan xaaladaha kale ay sax yihiin - xataa jiilaalka barafka leh.

## Talaabooyinka lagu bilaabi karo bacrimaynta (composting):

**Waxyaabo ay ku badantahay kaarboontu (Carbon)** sida dhaska miishaarta, dhirta jiridda leh oo la shiiday oo laga heli karo xarumaha bulshada ee dhirta lagu jarjaro, bal qurmay, dabacasaha sugar beets oo la shiiday, qubka lowska ama hadhaaga kale ee dhirta ee midabka bunniga leh. Isku darka laba ama saddex nooc oo ka mid ah walxaha kaarboontu ku badanyahay ayaa sida ugu wanaagsan u shaqeeya. Badnaanta kala duwanaanshaha dhumucda walxaha rastadaadu waxay u fiican tahay isu dheelitirnaanta socodka hawada, dugsiinta, xoojinta rastada iyo balaca dusha si cayayaanku ay u quutaan. Waxaad u baahan doontaa qiyaastii saddex illaa shan cubic yard oo qalabka ah 1,000 kii rodol (pound) oo raq ahba -- ka yar haddii shayadu ay si sahal ah u sii daynayaan kaarboonka, in ka badan haddii aysan si sahal ah u sii daynaynin. Ku billow rastada xoogaa saalada xoolaha ah, qashinka birta wax lagu solo ama bacrimiye muddo ka hor si aad u sii bilowdo borosiiska bacrimaynta (composting).

**Waxyaabo intee le'eg ayaa loo baahan yahay si wax loo bacrimeeyo?**  
**1,000 rodol kasta, waxaad u baahan tahay 3 illaa 5 waar oo saddex jibaaran (cubic yard) oo qalab ah.**



## Waxyaalaha Wax bacrimaynta:

Waxyaabaha dabiiciga ah ee midabka bunniga waxay noqon karaan:

- Caleenta
- Qashka geedaha
- Qashinka Balka
- Jiridda gallyada
- Dhaska miishaarta
- Dhirta dhimatay ee qalalan
- Jajabka Dhirta
- Waraaqaha la ridqay

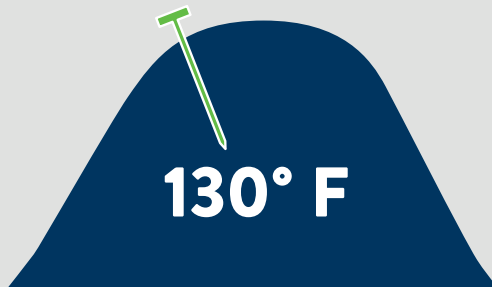






**Wax-qaadaha afka hore wax ku qaada** ama mashiin kale oo raqda lagu qaadi karo, isku hagaajin kara, ama rogi kara oo ku rari kara bacrimaynta dhamaatay taraagga kala firdhiya ayaa ku habboon in loo helo bacrimaynta. Uma baahnid wax-qaadaha maalin kasta, laakiin waxaad u baahantahay in aad heli karto si aad u dhisto rastada, si aad u rogto marka heerkulku bilaabo in uu hoos u dhaco iyo si aad ugu rogto marka ay jiraan xaaladaha degdega ah, sida haddii roob uu qooyo rastada ama ay aad uga kululaato heerka badbaadada. Waynida wax-qaaduhu waxay fududaynaysaa awooddaada in aad shaqada dhakhso ugu qabato.

**Biyaha.** Waxaad u baahan doontaa inaad biyo ku dhex darto rastada mar-mar dhif ah maadaama heerkulka sare ee guduhu uu qalajinayo. In ay si joogto ah uga helaan biyo ilaha goobaha biyaha ama laagaha ayaa ku haboon si loogu ilaaliyo rastada bacrimayntu (compost pile) in ay qoyanaato sababta oo ah waxay badanaa leedahay tiro dheeraad ah oo naytaroojiin ah taas oo quudin doonta cayayaanka/noolaha (compost).



**Heerkulbeeg dabodheer** leh si loogu cabiro dhexbartanka rastada.

## Qalab lagu kala furo raqda.

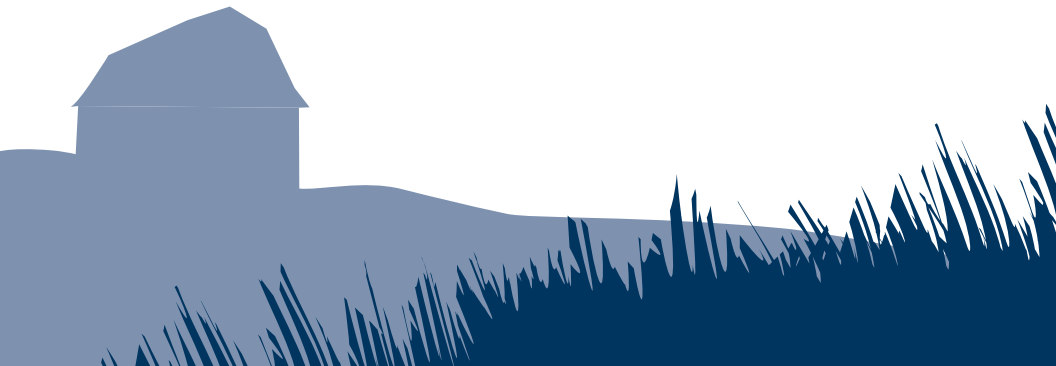
Marka ay raqdu weyn tahay waxaa dheeraanaya borosiiska bacrimaynta. Badanaa waxaa fiican in la jeexo afar meelood/rubuc raqda weyn si ay u siiso cayayaanka meel ay u shaqeeyaan.

Waxaad ku duleelin kartaa raqda maqas weyn ama mindida ugaarsiga ama mindida qalliinka. Haddii aad rabto in

aad sii qaado tallaabo dheeraad ah, ama haddii aad rabto in aad raqda jarjarto si aad rastada u yarayso waxaad u baahan tahay miishaar weyn ama boolasha ka lagu jaro ayaa ku caawin kara. Furitaanka raqdu wuxuu dedejiyaa bacrimaynta, laakiin waa ikhtiyaari. Cayayaanka bacrimayntu iyagaa iskood u dhex geli kara raqda. Haddii aad furto raqda, waxaad dareemi doontaa in rastadu u egtahay in ay isku duntay xoogaa aan badnayn kadib markii aad isku habaysay. Tan waxaa la yiraahdaa “yielding” (wax soo saarida). Marka ay taasi dhacdo, hubso in raqdu si fiican u qarsoon tahay dhinac kasta, ama waxay soo jiidan kartaa xayawaanka cuna.



**DIGNIIN:** Haddii aad ka shakisan tahay in xayawaanku uu u dhintay cudurka dadku qaadi karo (zoonotic) (midka loo gudbin karo dadka), ha furin raqda. Taas bedelkeeda, u sheeg dhakhtarka xoolahaaga iyo Guddiga Minnesota ee Caafimaadka Xayawaanka isla markiiba.



## Talooyinka bacrimaynta (Composting):

Bacrimaynta lo'da la liso iyo lo'da hilibka ee dhimata ayaa ah hab loo tuuro oo u habboon beeralay badan. Borosiiska bacrimaynta ayaa u shaqeeya si wanaagsan marka si taxadar leh loo maamulo bilowga ilaa dhamaadka Habka bacrimaynta ee shaqaynaysaa waxay u baahantahay in heerar la rabo ay yihiin shan xaaladood:

- Saamiga C:N.
- Qoyaanka ku jira.
- Heerkulka.
- Heerkulka Oksajiinta (Oxygen).
- Heerka pH.

Beeraleydu waxay u baahan yihiin inay ku bilaabaan bacrimiye bilaabe (bulking agent) wanaagsan, oo rastada laga neefiyo dhowr jeer oo aad ku darto biyo haddii loo baahdo. Marka xaaladuhu wanaagsan yihiin, bacrimayn deg-deg ah oo dhamaystiran ayaa ku dhici doonta unugyada yar-yar. Maarayn dheeraad ah oo bacrimaynta lafaha ah ayaa lagama maarmaan ah. Aqoonta sida ugu haboon ee loo bacrimeeyo raqda lo'du waxay hubinaysaa in si habboon loo tixgeliyo deegaanka, deriska iyo sharciyada gobolka.

## Macluumaadka xiriirka:

**Taleefanka:** 651-296-2942

**Webka:** <http://www.mn.gov/bah/carcass-disposal>

**E-mail:** animalhealth@state.mn.us

**MINNESOTA BOARD OF ANIMAL HEALTH  
(GUDDIGA MINNESOTA EE CAAFIMAADKA  
XAYAWAANKA)**

**Xoolo u caafimaad Qaba Dad iyo Bulsho Caadimaad Qabta**

625 Robert Street North  
St. Paul, MN 55155

651-296-2942

[animalhealth@state.mn.us](mailto:animalhealth@state.mn.us)

[www.mn.gov/bah](http://www.mn.gov/bah)