

CHRISTINA TSOUPAROPOULOU

## **Killing and Skinning Animals in the Ur III Period: The Puzriš-Dagan (Drehem) Office Managing of Dead Animals and Slaughter By-products**

### **Abstract**

In an approach combining the analysis of key words with the prosopographical study of the relevant text sources, this article discusses the administration and processing of slaughter animals and their by-products in Ur III Puzriš-Dagan (Drehem). The study demonstrates that slaughter animals were administered in a specialised government office with two subdivisions. One of these was responsible for the processing of the carcasses in the kitchens (Großküchen) of Puzriš-Dagan and elsewhere, the other for the utilisation of the skins and other by-products. The article includes discussions of the terms used for slaughter animals and their by-products as well as for the associated locations and officials.

Keywords: Ur III, Drehem (Puzriš-Dagan), administration, livestock agency, dead animals, slaughter by-products, kitchen

### **1. Introduction**

Puzriš-Dagan flourished as an administrative centre responsible for the management of livestock from all over the Ur III state.<sup>1</sup> Almost 77,000 animals a year passed administratively through Puzriš-Dagan. Even so, neither in the literature nor in the primary sources is the final disposal of these thousands of animals managed by the central agency at Puzriš-

<sup>1</sup> Part of the research for this article was presented at the workshop ‘Artisans and Professions in the Ur III Period’ of the RAI in Rome, 2011. I would like to thank the organizer S. Garfinkle and other colleagues who provided useful comments and objections during the presentation of that paper. I would also like to thank B. Lafont, P. Michalowski, P. Paoletti and N. Postgate, who read previous drafts and provided very useful comments. Thanks are due to K. Sauer for her help with editing the text and tables, and especially to M. Richardson for polishing the English of the manuscript. Dates are given in the following format: abbreviated king’s name (Š = Šulgi; AS = Amar-Suena; ŠS = Šu-Suen; IS = Ibbi-Suen), followed by year (e.g. AS.01) or year, month and date (e.g. AS.01.05.23). The abbreviations U-Ī and I-Š used after the PN Lu-diġira stand for Lu-diġira son of Urdu-Īhula and Lu-diġira son of Inim-Šara, respectively. Otherwise, abbreviations follow those of the Cuneiform Digital Library Initiative (CDLI). For a reconstruction of Puzriš-Dagan offices and bureaus as employed here, see Tsouparopoulou (2013).

Dagan explicitly mentioned.<sup>2</sup> However, there was a specific office that received the carcasses of animals that had died or had been slaughtered, and from where they were presumably transferred to the kitchen and other destinations. This will be called the ‘office for dead animals’. This office documented no transfers or disbursals. What information we have is based, for the dead animals, partly on the receipts of two main officials working in this office, Ur-niġar and Šulgi-iriġu, and partly on the receipts of carcasses and other slaughter by-products.

We still do not have a clear understanding of the final disposal of dead animals and slaughter by-products, but in one text (*SET 87*) the names of the final recipients in ŠS.09 are mentioned.

r. i

	[...]	
4	ba-ug <sub>7</sub>	Dead:
5	<sup>d</sup> Šul-gi-iri-ġu <sub>10</sub>	Šulgi-iriġu
6	šu ba-an-ti	received (them).
	[...]	

r. ii

1	Puzur <sub>4</sub> - <sup>d</sup> En-lil <sub>2</sub> sipa ur-gir <sub>15</sub> -ra	Puzur-Enlil the dog handler
2	šu ba-an-ti [...]	received (them).

r. iii

	[...]	
9	ba-ug <sub>7</sub> al-dar-[ra] ad <sub>6</sub> <sup>1</sup> kuš u <sub>3</sub> sa-bi	Dead, split, carcasses, their skins and tendons:
10	Lu <sub>2</sub> -[kal-la]	Lu-kala
11	šu ba-an-ti	received (them).
12	šu-niġin 1873 <udu> maš <sub>2</sub> ġi-a	Total: 1873 sheep and goats.
13	[šu-niġin 50] maš-da <sub>3</sub>	Total: 50 gazelles.
14	[ba]-ug <sub>7</sub>	Dead:
15	[Ur]-ku <sub>3</sub> -nun-na	Disbursed
16	[ba]-zi	by Ur-ku-nuna.

According to this text, the three people receiving dead animals and carcasses, Šulgi-iriġu, the dog handler Puzur-Enlila and Lu-kala, received almost 2000 animals over a year from Ur-ku-nuna.<sup>3</sup> From this text (and others; see below) one can say that (a) dead animals and by-products were transferred to a department that was responsible for the dead animals, headed possibly by Beli-arik and later by Ur-niġar and Šulgi-iriġu, which may have been related to the kitchen and (b) given to dog handlers, sometimes as part of regular deliveries

<sup>2</sup> Based on tablets *AO 19548 (RA 63: 102)* and *AO 19550 (RA 63: 104)*, Sigrist (1992: 33–34) estimated that around 77,000 animals were transferred from and to Puzriš-Dagan each year. See also Sallaberger (2004: 3 n. 6).

<sup>3</sup> For Ur-ku-nuna, see Tsouparopoulou (forthcoming: Cat. No. 459), with references to secondary literature.

for the kennels; and that (c) carcasses were given to a separate department that was specifically responsible for the management and storage of carcasses and hides. This department was probably originally headed by Naram-ili, and subsequently by Nur-Suen and Lu-kala.

Although an ‘office for dead animals’ is never mentioned as such in the secondary literature or in the primary sources, it was one of the most important units in the organization of Puzriš-Dagan. Some of its officials were connected with the kitchen and therefore concerned with feeding officials, foreign emissaries, etc. (Allred 2006).<sup>4</sup> It seldom received animals from the office of the chief official; the shepherds’ office usually sent the dead animals directly to the kitchen and only rarely through this office. The animals that this office received came mainly from the disbursal office and branch offices located outside Puzriš-Dagan, such as that at Tummal, the *nakabtum* organization,<sup>5</sup> the royal court, and that at Ur/Nippur, etc. The officials of the office for dead animals never disbursed the dead animals they received.

This office had two departments. The main department dealt with dead animals for the kitchen and was headed by Beli-arik, Ur-niġar and Šulgi-iriġu. The other was associated with leather (i.e. hides) and wool as raw materials and was headed by Nur-Suen and Lu-kala. The kitchen department had one supervisor at any given time.<sup>6</sup> First it was Beli-arik until Š.44; he was followed by Ur-niġar from Š.44 until AS.03.05.04; but his successor Šulgi-iriġu shared the responsibility for a few months. He started receiving dead animals in AS.03.01 and took over full responsibility at least as early as AS.03.04.08 and remained in post until IS.02, when the Drehem archives cease. The separation into two departments is evident only from Amar-Suena’s reign onwards, when Nur-Suen controlled hides.

It will be best to examine the terminology for dead animals and their by-products as well as the places and professions involved in their administration, mainly from texts stemming from the Drehem archive, before describing the different departments of the office for dead animals further.

<sup>4</sup> Note however that the officials heading this office, Beli-arik, Ur-niġar and Šulgi-iriġu, are almost never explicitly associated with the kitchen ( $e_2$ -muġaldim). This could perhaps be explained by a lack of pertinent tablets. What is available are a few tablets recording deliveries of animals received by Ur-niġar for the kitchen: SA 18 (Š.43.10.01); Nesbit 12 (Š.43.10.15); UCP 9–2–2 40 (Š.43.10.22).

<sup>5</sup> For the *nakabtum* organization, see now Brunke (2008).

<sup>6</sup> Many tablets documenting receipts of dead animals by Šulgi-iriġu and attributed to Š.42 should instead be dated to AS.06, since the Puzriš-Dagan scribes used the same year-name form for Š.42 as for AS.06. Three tablets have been published documenting the receipt by Šulgi-iriġu of dead animals in Š.45, Š.47 and AS.01. However, all three tablets have either been dated wrongly or the name of the official who received the animals has been reconstructed wrongly. Rochester 16, with Š.45 given as its date, should be dated to ŠS.04 like the other tablets in which an Ur-Nanna transfers several dead animals to Šulgi-iriġu (SA 31; TRU 250; JCS 35: 204.7; etc.). The year name has been given as mu us<sub>2</sub>-sa si-[mu-ru-um<sup>ki</sup> ba-ġul] whereas it should be mu us<sub>2</sub>-sa si-[ma-/num<sub>2</sub><sup>ki</sup> ba-ġul]. AnOr 7: 120, dated to Š.47, should also be dated to ŠS.04, according to its transliteration (mu us<sub>2</sub>-[sa] Si-ma-/num<sub>2</sub><sup>ki</sup> ba-ġul). In OIP 121: 433, dated to AS.01, the name of the receiving official has been reconstructed as Šulgi-iriġu, whereas it should be Ur-niġar.

## 2. Dead Animals and Slaughter By-products Documented at Drehem

There is a generic designation for animals being transferred between offices at Puzriš-Dagan to denote that they had been slaughtered (*ba-ug<sub>7</sub>*). Most of these dead animals were sent to the kitchen to feed soldiers, messengers and personnel stationed at Puzriš-Dagan and beyond. Several officials active within the Puzriš-Dagan administration sent them on, usually directly to Ur-niġar and Šulgi-iriġu or to the kitchen (*e<sub>2</sub>-muġaldim*) via (*ġiri<sub>3</sub>*) Ur-niġar and Šulgi-iriġu. Of the more than 2500 references to *ba-ug<sub>7</sub>* animals in the Drehem archives there does not appear to have been any distinction between animals that had died accidentally or for other reasons (*ri-ri-ga*, ‘fallen’) and animals that had been slaughtered (Steinkeller 1995:55).<sup>7</sup>

There are more than 1500 instances of animals for human consumption, designated as *šu-gid<sub>2</sub>*, which according to Lafont means ‘choisis pour la cuisine’ (2009: 426). Similar conclusions were reached by Brunke (2011: 182), who discussed the fact that *šu-gid<sub>2</sub>* – as a qualitative designation – was usually found in association with the kitchen (*e<sub>2</sub>-muġaldim*), and by Sigrist (1992: 40–42), Allred (2006) and Sallaberger (1993: 29). By contrast Englund (2004: 40) considers such an animal destined for divination, possibly because the verb *šu-gid<sub>2</sub>* is associated with extispicy (Karahashi 2000: 161–162). However, another term (*kin-gi<sub>4</sub>-a*) indicated lambs for divination (Steinkeller 1995; Heimpel 1993: 131–33), and although animals designated for divination were consumed afterwards,<sup>8</sup> they would hardly constitute routine food for soldiers and one cannot easily account for the quantities attested with this interpretation.

This term, *šu-gid<sub>2</sub>*, occurs at Drehem only from Š.42 onwards and is not found in the Early Drehem archives (i.e. the Šulgi-simti archive). In *TCL* 2:5483 (rev. 19) *gu<sub>4</sub> šu-gid<sub>2</sub>* is contrasted with *gu<sub>4</sub> giš*, but the significance of this distinction is unclear. Sigrist (1992: 41) understands *gu<sub>4</sub> giš* as oxen able to do agricultural work, in contrast to *gu<sub>4</sub> šu-gid<sub>2</sub>*. Another text, *OrSP* 47–49: 121, lists wild goats, sheep and ewes as *gurum<sub>2</sub>-am<sub>3</sub>* (‘inspected’) as well as others described as *šu-gid<sub>2</sub>-am<sub>3</sub>*. It seems that any animal could be described as *šu-gid<sub>2</sub>*, including female and male equids (*dusu<sub>2</sub>*, *anše si<sub>2</sub>-si<sub>2</sub>*), female kids, cows (*ab<sub>2</sub>*), goats (*maš<sub>2</sub>*, *dara<sub>4</sub>*, *uzud*), sheep (*udu*), ewes (*u<sub>8</sub>*), lambs (*sila<sub>4</sub>*, *kir<sub>11</sub>*), oxen (*gu<sub>4</sub>*), gazelles (*maš-da<sub>3</sub>*) and others. Moreover, even though most *šu-gid<sub>2</sub>* animals are associated with the kitchen, there are also transactions of such animals among different bureaus within the Puzriš-Dagan administration, such as between Abba-saga and Intaea,<sup>9</sup> Nalu and Nasa,<sup>10</sup> and Nalu and Ur-ku-nuna.<sup>11</sup> Several cattle herders (*unu<sub>3</sub>*) and shepherds (*sipa*) also gave *šu-gid<sub>2</sub>* animals to the Puzriš-Dagan central agency.<sup>12</sup> Car-

<sup>7</sup> The term *ri-ri-ga* is common in the Šulgi-simti archive (Sallaberger 1994: 53) as well as in Ġirsu and Umma. For the semantic difference between the expressions *ba-uš<sub>2</sub>/ug<sub>7</sub>* and *ri-ri-ga* in the Umma texts, see Stepien (1996: 41 and n. 23; 77–78; 199).

<sup>8</sup> See *BIN* 3: 403, obv. 1–3, where military personnel (*gara<sub>3</sub>-du*) ate the meat of a sacrificial animal. For a discussion of this passage, see Hilgert 2003: 22–23 and n. 76.

<sup>9</sup> *AAICAB* 1/3, Bod. A 80 (AS.06.12.27): transfer of 703 *šu-gid<sub>2</sub>* animals from Abba-saga to Intaea.

<sup>10</sup> E.g. *CST* 76 (Š.44.07.30); *CST* 77 (Š.44.08.29); *SumTemDocs.* 12 (Š.46.03.30); *Rocznik MNW* 25 A (Š.46.05.29); *MVN* 15: 29 (Š.46.10).

<sup>11</sup> E.g. *TCL* 2: 4684 (Š.46.02); *AUCT* 1: 505 (Š.46.11); *BIN* 3: 24 (Š.47.03).

<sup>12</sup> *AUCT* 2: 235; *MVN* 8: 6; *OIP* 115: 364, rev. 22: *šu-gid<sub>2</sub> ki unu<sub>3</sub>-[e]-ne*; *Nisaba* 8: 122; *AUCT* 2: 303.

casses, however, are never designated as šu-gid<sub>2</sub>, and yet most šu-gid<sub>2</sub> animals are sent to the kitchen. Taking these facts together suggests that the šu-gid<sub>2</sub> animals were considered slaughtered for food particularly suitable for being (Sigrist 1992). Most of them were sent from various Puzriš-Dagan officials to the kitchen, either directly or via (ġiri<sub>3</sub>) Ur-niġar and Šulgi-iriġu.

At least 61 Drehem texts dating from Š.31 to ŠS.09 concern animal carcasses (adda).<sup>13</sup> Some are annual accounts, one for more than 4000 carcasses of ovines (*Princeton* 1: 118), and one concerns the carcasses and hides of 484 bovines collected at the storehouse (*MVN* 8: 146). The value of a carcass was relatively high, estimated by Englund (2003) to have been 1/5 to 1/10 of that of a live animal. Many of the carcasses processed at Puzriš-Dagan were given as food to dogs or the female staff (usually weavers),<sup>14</sup> while others were sent to the 'storeroom' (e<sub>2</sub>-kišib-ba).

The hides (kuš) were also usually sent to the storeroom, but occasionally they were given to Puzur-ili, the head of the leather industry at Puzriš-Dagan.<sup>15</sup> From the few references to skinning in the Ur III documents,<sup>16</sup> it seems that it may have been done at royal workshops,<sup>17</sup> which would explain why skins and hides were brought into the palace (see below). Several animal herders seem to have sent carcasses together with their hides to Puzriš-Dagan, and the administrators could therefore track any losses from the state flocks.<sup>18</sup> This corresponds to the obligation of the Old Babylonian shepherd to send back to the owner the skin and possibly tendons of all the animals that had died under his care; he was then given a receipt to prove his losses to the administration at shearing time (Postgate 1975: 6).

Tendons (sa) are also documented at Drehem, usually together with carcasses and hides.<sup>19</sup> They could be fed to dogs (probably boiled) or used for making shoes. Tendons were usually measured by weight; one slaughtered sheep might yield 16 grams of tendons.<sup>20</sup> Other by-products, such as hooves (umbin), tails (kun) (*SACT* 1: 120) and horns (si) are sometimes mentioned, but without further details.<sup>21</sup>

<sup>13</sup> For a palaeographic discussion of ad<sub>6</sub>, ad<sub>7</sub> and ad<sub>3</sub> in the Ur III documentation, see Veldhuis (2008).

<sup>14</sup> *CST* 50; *CST* 45; *OIP* 115: 66, from the Šulgi-simti archive; *BIN* 3: 2 (possibly also from the Šulgi-simti archive); *OIP* 115: 325 obv. 1–4: 20 gu<sub>4</sub> 11 ab<sub>2</sub> ba-ug<sub>7</sub> ad<sub>6</sub>-bi 12-am<sub>3</sub> geme<sub>2</sub> uš-bar e<sub>2</sub>-Amar-<sup>d</sup>Šul-gi-/ra-ke<sub>4</sub> ba-ab-gu<sub>7</sub>, dated to Š.47.01.

<sup>15</sup> See *AUCT* 1: 950 (AS.03.05) and *SAT* 2: 838 for the transfer of tendons of sheep to be eaten by dogs. See now Paoletti (2012: 183–199).

<sup>16</sup> E.g., Ġirsu texts: *TUT* 39 (*SVS* I/1: 39) rev. 6: kuš gid<sub>2</sub>-da; *TUT* 82 (*SVS* I/1: 82) rev. 37: [kuš] gid<sub>2</sub>-da ša<sub>3</sub> e<sub>2</sub> uš-bar; *MVN* 7: 412 rev. 1: [...] kuš gid<sub>2</sub>-da; *ITT* 5: 6965, 5: kuš gid<sub>2</sub>-da ša<sub>3</sub> e<sub>2</sub> kin gur-ra; Drehem texts: *TRU* 14 obv. 2: [3+] sila<sub>4</sub><sup>?</sup> ba-[ug<sub>7</sub>] ad<sub>6</sub> kuš-bi e<sub>2</sub>-gal-še<sub>3</sub> gid<sub>2</sub>-dam; *UDT* 111 obv. 1–2: 1 ab<sub>2</sub> ba-ug<sub>7</sub> ad<sub>6</sub>?-bi e<sub>2</sub>-gal-še<sub>3</sub> ba-gid<sub>2</sub>.

<sup>17</sup> See *UDT* 111 and *TRU* 14 in the preceding note.

<sup>18</sup> E.g. *BPOA* 7: 2240: 60+10 ad<sub>6</sub> udu, 2 ad<sub>6</sub> sila<sub>4</sub> ġiri<sub>3</sub> sipa-e-ne ki Du<sub>11</sub>-ga-ta Ur-ku<sub>3</sub>-nun-na šu ba-ti, and *YOS* 4: 253, which documents the transfer of 6523 carcasses of several types of animals from shepherds and cowherds of the fattening house (e<sub>2</sub>-kuruš da), taken in charge by Šulgi-iriġu.

<sup>19</sup> *PDT* 1: 515 rev. ii 22: ad<sub>6</sub> kuš u<sub>3</sub> sa-bi; *OIP* 121: 54: 60 kuš udu sa-bi 2 ma-na.

<sup>20</sup> *JCS* 23: 114, 33: 20: kuš udu sa-bi 2/3 ma-na; *OIP* 121: 54 in preceding note.

<sup>21</sup> For slaughter by-products, see Englund (2003: §18–§21). For umbin as a slaughter by-product, see *MVN* 18: 127.

How these by-products were obtained is not known. Even information about skinning is sparse,<sup>22</sup> conspicuously omitted also from the Old Babylonian butcher's manual (Foxvog 1989).<sup>23</sup> Skinning seems to have been of no immediate concern to the state administration and bureaucrats at Puzriš-Dagan; there are only very limited references to animal flayers and none to skinning as such. Neither are other expected livestock management practices documented in the Drehem texts, and moreover, barely any information on how the shepherds organized themselves and their flocks is available.

The consumption of meat (uzu) is likewise poorly documented at Drehem (Lafont 2009: 424). Aja-kala seems to have been responsible for receiving meat. Šulgi-iriġu is also identified as sending dairy products and meat to the scribe Ur-Baba via (ġiri<sub>3</sub>) Zuzu.<sup>24</sup> The individuals concerned with meat were Aja-kala, Ur-Baba and Dajani, all apparently in the e<sub>2</sub>-uz-ga (*Torino* 1:164) (discussed below).

Occasional references to processed meat<sup>25</sup> include: preserved/salted meat (mu-du-lum),<sup>26</sup> meat to be dried (uzu ħad<sub>2</sub>-še<sub>3</sub>, and usually also to be salted),<sup>27</sup> to be roasted (ka-izi-še<sub>3</sub>),<sup>28</sup> to be grilled on charcoal (ne-mur-še<sub>3</sub> and ne-mur-ta ba-še<sub>6</sub>),<sup>29</sup> or prepared as broth (uzu a-bala).<sup>30</sup> Broth was prepared in the e<sub>2</sub>-uz-ga,<sup>31</sup> while the salt-

<sup>22</sup> For the skinning of a sacrificial animal, see Farber (1977: 57.20, 59.46). There are artistic representations of the process of animal skinning in the Neo-Assyrian period; see for example Layard (1849: Pl. 75).

<sup>23</sup> For a discussion on the preparation of an animal for sacrifice, see Scurlock (2006: 32–33).

<sup>24</sup> *AUCT* 1:288: x i<sub>3</sub>-šaĥ<sub>2</sub>, 19.3.1:i<sub>3</sub>-udu gur i<sub>3</sub> e<sub>2</sub>-uzu ki <sup>d</sup>Šul-gi-iri-ġu<sub>10</sub>-ta, ġiri<sub>3</sub> Ur-<sup>d</sup>Ba-ba<sub>6</sub> dub-sar mu-ku<sub>x</sub>(DU) Zu-zu šu ba-ti.

<sup>25</sup> For references to processed meat at Puzriš-Dagan and a brief discussion, see Steinkeller (1995: 49 and ns. 3–7); Sallaberger (1993: 112–113, ns. 510–511, 117); Hilgert (2003: 52–53; 2008: 6 n. 11); Brunke (2011: 170–172; 186–187).

<sup>26</sup> E.g. *OIP* 115: 280; *JCS* 14: 107, 2; *MVN* 15: 101; *TRU* 117; *MVN* 13: 443; *PDT* 2: 1175; *Orient* 16: 53 (6 sila<sub>4</sub>-ga a-mun-še<sub>3</sub>), for which, see also Steinkeller (2008: 190 n. 15); *Atiqot* 4: pl. 10, 55; *AUCT* 2: 338; *AUCT* 2: 358; *Babyloniaca* 7: 75, 4; *BCT* 1: 39 rev i 6, 11; *BCT* 1: 107; *CST* 114; *JCS* 14: 107, 2; *MVN* 3: 228 rev. 2; *SACT* 1: 134; *PDT* 1: 102 (the last three texts document salted meat that entered the storeroom); *MVN* 13: 443; *MVN* 15: 95 obv. i 10, ii 14; *Nik.* 2: 467; *NYPL* 244; *OIP* 115: 280; *OIP* 121: 582; *OIP* 121: 179; *TRU* 116; *TRU* 117; *Princeton* 2: 432; *Princeton* 2: 441; *MVN* 15: 101; *Ontario* 1: 113; *Akkadica* 114–115: 101, 27.

<sup>27</sup> *BCT* 1: 39 rev. i 6, 11; *JCS* 14: 107, 2; *MVN* 13: 443; *Nik.* 2: 467; *OIP* 115: 280; *TRU* 116; *TRU* 117; *MVN* 15: 101.

<sup>28</sup> *PDT* 2: 1106; *TCS* 294; *AUCT* 1: 441; *BIN* 3: 369; *Torino* 1 252; *PDT* 2: 1175; *CDLB* 2008: 2, 6; *Ontario* 2: 216. For ka-izi, see Hilgert (2003: 77 and n. 257); Sallaberger (1993: 113 and n. 511); Steinkeller (1995: 49, 62 and n. 6).

<sup>29</sup> According to Steinkeller (1995: 49 and n. 7), this should be translated as 'roasted in hot embers'. Texts mentioning this type of meat preparation are: *BIN* 3: 369; *BIN* 3: 74; *RA* 9: 48, *SA* 107 (pl. 3); *TRU* 327; *Nisaba* 8: 188.

<sup>30</sup> E.g. *PDT* 2: 1106: 1 ud<sub>5</sub> uzu-a-bala-še<sub>3</sub>; *BPOA* 7: 2787; *OIP* 121: 452; *AnOr* 7: 154; *AnOr* 7: 104: obv. 9; *AnOr* 7: 108, obv. i 5 and 20, ii 2 and 22, rev. v 32, vii 2; *DoCu EPHE* 274; *Ontario* 1: 46; *ASJ* 18: 74, 2; *BIN* 3: 12; *BIN* 3: 369; *AUCT* 1: 441; *TRU* 322; *TCS* 294; *TRU* 323; *BIN* 3: 547: obv. 4; *PDT* 2: 1106; *NYPL* 357; *PDT* 1: 572; *PDT* 2: 906; *PDT* 1: 612; *MVN* 13: 103; *Rochester* 86; *SET* 72; *BCT* 1: 102; *AUCT* 1: 479; *PDT* 2: 1112.

<sup>31</sup> In most of the above texts documenting animals to be used for broth, either one of the maškim officials can be shown on the basis of prosopography to have been related to the e<sub>2</sub>-uz-ga, or the e<sub>2</sub>-uz-ga is explicitly mentioned.

ing seems to have been also the responsibility of kitchen officials (e.g. Šulgi-iriġu).<sup>32</sup> The context within which the expression uzu NIM-še<sub>3</sub><sup>33</sup> occurs suggests a kind of preparation like roasting, as discussed by Hilgert (2008: 6 n. 11).

### 2.1 Locations where Dead Animals and By-products Were Managed

Of the several locations apparently managing dead animals and slaughter by-products, one can distinguish between those concerned with the preparation of food and those used for storage or other management practices. The three locations for food preparation were the kitchen (e<sub>2</sub>-muġaldim), the abattoir or slaughterhouse (e<sub>2</sub>-gu<sub>4</sub>-gaz) and the e<sub>2</sub>-uz-ga. Some Ġirsu texts treat these three institutions together.<sup>34</sup> The three places concerned with storage and handling of carcasses and slaughter by-products were the palace (e<sub>2</sub>-gal), the storeroom (e<sub>2</sub>-kišib-ba) and the workshop (geš-kin-ti).

Most prominent for the preparation of meat is the kitchen, with more than 1400 references. This is where Puzriš-Dagan officials sent animals that were dead (ba-ug<sub>7</sub>) or destined for slaughter (šu-gid<sub>2</sub>; discussed above). There also seem to have been several kitchens outside Puzriš-Dagan, such as those at Tummal,<sup>35</sup> Ur,<sup>36</sup> Nippur<sup>37</sup> and Uruk,<sup>38</sup> all seemingly run by Puzriš-Dagan personnel.<sup>39</sup> The dates of the references to these kitchens outside Puzriš-Dagan correspond closely to the months for the major festivals in those cities,<sup>40</sup> indicating that they served the royal entourage, including military personnel (gara<sub>3</sub>-du and aga<sub>3</sub>-us<sub>2</sub>), who resided there during these festivals.

A cattle slaughterhouse at Puzriš-Dagan is mentioned in Ġirsu texts,<sup>41</sup> and although the Drehem texts nowhere refer to an e<sub>2</sub>-gu<sub>4</sub>-gaz, it seems certain that one must have

<sup>32</sup> *AUCT* 2: 358 rev. 5–7: 2(diš) udu niga sag<sub>10</sub> us<sub>2</sub> ba-šur<sub>2</sub> mu-du-lum-še<sub>3</sub> dŠul-gi-iri-ġu<sub>10</sub> maškim; *Ontario* 1: 113 obv. 1–4: 1(diš) udu a-lum niga sag<sub>10</sub> us<sub>2</sub> ba-šur<sub>2</sub> mu-du-lum-še<sub>3</sub> ġiri<sub>3</sub> dŠul-gi-iri-ġu<sub>10</sub>.

<sup>33</sup> *ASJ* 18: 74, 2; *CDLB* 2008: 2, 6; *Torino* 1: 164; *AUCT* 1: 377; *Ontario* 2: 216.

<sup>34</sup> *ASJ* 14: 334.17, obv. 8–10; *MVN* 11: 95, obv. 12–14; *MVN* 11: 107, obv. 12–14; *STA* 30, obv. 12–14.

<sup>35</sup> For e<sub>2</sub>-muġaldim ša<sub>3</sub> Tum-ma-al<sup>ki</sup>, see *SACT* 1: 163: 4–6; *OIP* 121: 419: 4–6; *OIP* 121: 420: 3–5; *OIP* 121: 421: 3–5. Note that the latter tablets refer to the feeding of the gara<sub>3</sub>-du, who were probably stationed at Tummal during the eighth month of AS; Duga, a well-known Puzriš-Dagan official, was in charge of providing for them.

<sup>36</sup> For e<sub>2</sub>-muġaldim ša<sub>3</sub> Urim<sup>ki</sup>-ma, see e.g. *YOS* 18: 15, obv. 3–5; *PDT* 2: 1147, rev. 3–6; *OIP* 121: 427, 5–8; *MVN* 2: 164: 8–10; *Princeton* 1: 67, 4–7; *OIP* 121: 429, 5–9.

<sup>37</sup> For e<sub>2</sub>-muġaldim ša<sub>3</sub> Nibru<sup>ki</sup>, see e.g. *SET* 106, obv. 15; *BCT* 1: 35, rev. 25–26; *UDT* 116, obv. 3 and 5; *JCS* 57: 28, 4, obv. 2 and 4; *OIP* 121: 365, obv. 5 and 7; *NYPL* 250, obv. 5 and 7.

<sup>38</sup> For e<sub>2</sub>-muġaldim ša<sub>3</sub> Unu<sup>ki</sup>, see e.g. *NYPL* 194; *AUCT* 1: 890; *AUCT* 1: 955; *Hirose* 286; *MVN* 15: 291; *OIP* 121: 382; *OIP* 121: 383; *Ontario* 1: 81.

<sup>39</sup> For a comprehensive discussion of the kitchen at Puzriš-Dagan, see Allred (2006).

<sup>40</sup> E.g. at Tummal during the eighth month (Sallaberger 1993: 145); at Ur during the first, seventh and tenth months (ibid.: 179–194); at Nippur during the second (ibid.: 114–122) and twelfth months (ibid.: 150–52). I would like to thank P. Paoletti for bringing this to my attention.

<sup>41</sup> For e<sub>2</sub>-gu<sub>4</sub>-gaz e<sub>2</sub> PU<sub>3</sub>.ŠA-iš-da-gan, see *HLC* 96: pl. 92.10; *MCS* 3: 13 (*BM* 102105), obv. 9; *MVN* 11: 83, obv. 11; *MVN* 11: 85, obv. 13. See also references to the slaughterhouse in Sagdana in *MVN* 5: 240, obv. 10; *CT* 7: 47 (*BM* 17775), obv. 12.



operated there.<sup>42</sup> According to Steinkeller (2008: 190 and ns. 14–17), at Puzriš-Dagan the  $e_2$ - $gu_4$ - $gaz$  must have been identical to the  $e_2$ - $mu\check{h}aldim$ , and many Umma texts seem to use these two terms interchangeably.

The  $e_2$ - $uz$ - $ga$ , although never explicitly mentioned as receiving dead animals or slaughter by-products, must have been involved in meat preparation as well. Sigrist (1992: 158–162) asserted that it was administered by a cook and served as a residence for elite individuals and the queen, and Sallaberger (1996: 405) has argued that the  $e_2$ - $uz$ - $ga$  was not a fattening shed. Englund (2002: § 4a) suggested that the close association of the  $e_2$ - $uz$ - $ga$  and the  $e_2$ - $mu\check{h}aldim$  in several texts, many of which were published by Uchitel (1996: 223–228), shows that the  $e_2$ - $uz$ - $ga$  was certainly involved with meat preparation. He suggests that the large amount of reed that was sent there indicates a type of smoke house.<sup>43</sup> For a complete account of the  $e_2$ - $uz$ - $ga$ , see Wu (1996).

All those concerned with the administration of the  $e_2$ - $uz$ - $ga$  at Puzriš-Dagan functioned as  $ma\check{s}kim$ , and most held the title of cook:<sup>44</sup> Aja-kala,<sup>45</sup> Ur-Baba<sup>46</sup> and Urim-kidu. Both before and contemporaneously with Aja-kala the cook, texts identify Ba-mu,<sup>47</sup> Ur-Šulgira<sup>48</sup> and Dajani<sup>49</sup> as  $ma\check{s}kim$  officials, apparently responsible for receiving animals destined for the  $e_2$ - $uz$ - $ga$ . The texts documenting the direct receipt of animals from these people during Šulgi's reign were usually encased in envelopes, some of which are still extant,<sup>50</sup> while later many of them were sealed.

Carcasses and hides were sent to the storeroom<sup>51</sup> and later removed.<sup>52</sup> For hides to be stored some preparation would have been necessary, but this is a process not documented in the Ur III texts.<sup>53</sup> In a few references, mainly from the archive of Šulgi-simti, the palace

<sup>42</sup> See the discussions by Steinkeller (2008: 190) and Sharlach (2004: 50–51). For the slaughterhouse at Nippur, see Sharlach (2004: 97).

<sup>43</sup> See however Johnson (2004: §3.2), who associates the reeds and mats transferred there with the building of the  $e_2$ - $uz$ - $ga$ .

<sup>44</sup> For this, see the discussion in Allred (2006: 72–76).

<sup>45</sup> Aja-kala is on very few occasions referred to with the title of cook. Even so, it is almost certain that all references to Aja-kala acting as  $ma\check{s}kim$  in transactions related to the  $e_2$ - $uz$ - $ga$  refer to the same Aja-kala. See e.g. *ArOr* 25: 560, 16; *CST* 67; *MVN* 13: 121; *PDT* 2: 1169; *Hirose* 48; *CST* 101; *Princeton* 1: 94, with reference to Nippur; *NYPL* 123; *CST* 105; *BIN* 3: 501.

<sup>46</sup> E.g. *SAT* 2: 551 (Š.46.10.15); *CST* 164; *MVN* 13: 839; *OIP* 115: 332.

<sup>47</sup> E.g. *CTNMC* 8; *TRU* 258; *CST* 80; *BPOA* 6: 574; *MVN* 13: 116; *BIN* 3: 612.

<sup>48</sup> *OIP* 115: 232; *OIP* 115: 371; *PDT* 1: 119; *AAICAB* 1/1, Ashm. 1923–426; *OIP* 115: 381; *SACT* 1: 136; *CST* 477.

<sup>49</sup> *Orient* 16: 41, 7; *CST* 98; *Ontario* 1: 33; *CST* 125; *Nisaba* 8: 132; *BIN* 3: 12; *MVN* 5: 104; *PDT* 1: 479; *RA* 8: 185, 3.

<sup>50</sup> See *AuOr* 8: 82, 4, but also *SA* 22 (Pl. 37), which must have been encased in an envelope, as the top edge of the tablet shows, and *BIN* 3: 369; *BCT* 1: 73, for which one cannot be certain; note also *Ontario* 1: 36, which should be collated, since most probably it documents a direct transfer between Nalu and Aja-kala of animals destined for the  $e_2$ - $uz$ - $ga$ .

<sup>51</sup> The phrase used in this kind of transaction was  $ad_6$ - $bi$   $e_2$ - $ki\check{s}ib$ - $ba$ - $\check{s}e_3$   $ba$ - $an$ - $ku_4$ ; see *SAT* 2: 913, rev. 11: 11  $udu$   $ba$ - $ug_7$   $e_2$ - $ki\check{s}ib$ - $ba$ - $\check{s}e_3$ ; *NYPL* 256: 10  $gu_4$   $ba$ - $ug_7$   $e_2$ - $ki\check{s}ib$ - $ba$ - $\check{s}e_3$   $Be$ - $li_2$ - $a$ - $ri_2$ - $ik$   $\check{s}u$ - $ba$   $ti$ .

<sup>52</sup> *OIP* 115: 464:  $e_2$ - $ki\check{s}ib$ - $ba$ - $ta$ .

<sup>53</sup> See Levey (1959) for the stages of skin preparation.



(e<sub>2</sub>-gal) is associated with the storage of hides and carcasses.<sup>54</sup> Within the central livestock agency, the storage of hides and carcasses at the palace was arranged either through Puzriš-Dagan officials via known scribes of the palace<sup>55</sup> or directly through well-known Puzriš-Dagan officials.<sup>56</sup> Why store hides and carcasses at the palace? The palace was probably a full economic unit, a household where several different workshops and craftsmen were operating, and transferring hides there could have been related to such enterprises. Hides were also sent to the workshop (geš-kin-ti), but only a few texts mention this.<sup>57</sup> The most common expression associated with sending hides to the workshop was kuš-bi geš-kin-ti-a ba-an-ku<sub>4</sub>.<sup>58</sup>

## 2.2 Associated Professions

Among the professions and titles mentioned in these texts are cooks, flayers, butchers, leather workers, dog handlers and scribes. Only the first four are directly related to processing and preparation. Cooks (muḫaldim) are rarely explicitly mentioned in connection with the management of dead animals, although it is almost certain that the officials managing the kitchens at Puzriš-Dagan were cooks by profession and title. Ur-niḡar, the official responsible for receiving dead animals during Šulgi's reign (see further below) was indeed a cook, as was his father. His seal (Tsouparopoulou forthcoming: Cat No. 474), impressed on some bullae tagging the contents of tablet sacks as well as on some envelopes recording the receipt of dead animals for the kitchen, explicitly mentions his father's title as muḫaldim. Urim-ki-du, another royal cook according to the title on his seal (ibid.: Cat. No. 456), was also responsible for deliveries of animals to be processed at the e<sub>2</sub>-uz-ga.<sup>59</sup> Similarly Aja-kala, another person responsible for deliveries to the e<sub>2</sub>-uz-ga, is described as a royal cook on his seal (ibid.: Cat No. 31, 32) and in some texts.<sup>60</sup>

<sup>54</sup> *Torino* 1: 180 (Š.36.05.19); *Torino* 1: 179 (Š.38.04); *OIP* 115: 46 (Š.38.05); *OIP* 115: 48 (Š.38.08); *OIP* 115: 51 (Š.39.01); *BPOA* 7: 2555 (Š.39.02.00); *OIP* 115: 52 (Š.39.03); *OIP* 115: 54 (Š.39.04.15); *Torino* 1: 181 (Š.39.04.19); *Babyl.* 8 HG 8 (Š.39.05.18); *Princeton* 1: 101 (Š.39.09.03); *PRAK* 2 D 49 (Š.39.11); *OIP* 115: 56 (Š.39.12); *SAT* 2: 226 (Š.39.12.27); *AnOr* 1: 2 (Š.40.01.22); *OIP* 115: 58 (Š.40.03.27); *OIP* 115: 59 (Š.40.04.20); *OIP* 115: 60 (Š.40.06.13); *BIN* 5: 73 (Š.40.07); *Rochester* 11 (Š.40.07.30); *Nisaba* 8: 381 (Š.40.09); *ASJ* 4: 64, 2 (Š.40.10); *AuOr Suppl.* 11: 66 (Š.40.10.28); *Afo* 40-41: 52, 1 (Š.40.11.06 and Š.40.11.08); *CST* 52 (Š.41.01); *Ontario* 1: 16 (Š.41.01.15); *PDT* 2: 970 (Š.41.01.18); *AuOr Suppl.* 11: 67 (Š.41.02); *Ontario* 1: 17 (Š.41.05.00); *Princeton* 1: 98 (Š.41.09.00); *AuOr Suppl.* 11: 64 (Š.41.09.10); *OIP* 115: 78 (Š.42.04.03); *Hirose* 18 (Š.42.08.00); *Torino* 1: 188 (Š.42.08.28); *OIP* 115: 80 (Š.42.08.30); *OIP* 115: 82 (Š.43.01.29); *NYPL* 079 (Š.43.02.22); *OIP* 115: 83 (Š.43.03.30).

<sup>55</sup> *TLB* 3: 135 (AS.03.11): ba-ug<sub>7</sub> mu-ku<sub>x</sub>(DU) e<sub>2</sub>-gal-še<sub>3</sub> ki In-ta-e<sub>3</sub>-a-ta ša<sub>3</sub> Urim<sub>5</sub><sup>ki</sup>-ma ḡiri<sub>3</sub> Ur-šu-ga-lam-ma.

<sup>56</sup> *AUCT* 1: 895 (Š.48.12): ad<sub>6</sub>! kuš-bi e<sub>2</sub>-gal-la ba-an-[ku<sub>4</sub>] ki <sup>d</sup>En-lil<sub>2</sub>-la<sub>2</sub>-ta ba-zi.

<sup>57</sup> *MVN* 15: 198: kuš gid<sub>2</sub> geš-kin-ti-še<sub>3</sub>.

<sup>58</sup> *OIP* 115: 325, obv. 8, rev. 5; *OIP* 115: 355 obv. 5; *PDT* 1: 18, obv. 4; *SET* 114, obv. 14-18; see also *TRU* 277, rev. 10: kuš-bi geš-kin ba-an-ku<sub>4</sub>.

<sup>59</sup> See above the discussion of the maškim(s) for the e<sub>2</sub>-uz-ga.

<sup>60</sup> An Urdu-Nanna, probably Aja-kala's son, acted in the same capacity. For Urdu-Nanna's seal see Tsouparopoulou (forthcoming: Cat. No. 427).

Only three flayers (su-si-ig) are named: Atu, Ur-šugalama (*Babyl.* 8 HG 5 Š.48.05) and Dadaja (*JCS* 31, 174 F Š.43.06); on a few occasions they receive hides and carcasses. Atu appears in the Early Drehem archives with this title, and his seal also gives his father's title as su-si-ig (*MVN* 3: 147 Š.35.03). Atu the su-si-ig is mentioned in another Drehem text, dated to Š.43.12 (*UDT* 121) and in its duplicate *AUCT* 1: 235. Dadaja appears in a Drehem text concerned with the transfer of hides (*JCS* 31 175 G Š.43.03), and most probably this Dadaja is identical with the animal flayer. In two Ġirsu texts the title su-si-ig follows ašgab (leather worker),<sup>61</sup> indicating that these two professions were very closely related.

Dog handlers (sipa ur-gir<sub>15</sub>-ra) are regularly mentioned as the recipients of carcasses to feed their dogs. They were attached either to the army (Tsouparopoulou 2012) or to the healing goddess Gula. Butchers (ġiri<sub>2</sub>-la<sub>2</sub> and gu<sub>4</sub>-gaz) are rarely mentioned in Ur III texts. Šu-Erra is the only gu<sub>4</sub>-gaz named at Drehem (*MVN* 15: 275), but the title on his seal is royal cook (muḫaldim lugal), and Lafont (2009) assumed that the title gu<sub>4</sub>-gaz is unattested at Drehem. The leather workers (ašgab) must have been involved with the management of hides, but references to them within the corpus of the livestock agency are almost non-existent.

### 3. The Kitchen Department of the Office for Dead Animals

The three officials associated with this department are:

Beli-arik	Š.42 – Š.43
Ur-niġar	Š.43 – AS.03
Šulgi-iriġu	AS.03 – IS.02

Once the central agency had been officially established at Puzriš-Dagan (Š.42), Beli-arik was the person who received dead animals from several offices and bureaus of Early Drehem (Naram-ili and Šulgi-simti) and from the central agency. At first he received the animals together with Ur-niġar, but by Š.44 Ur-niġar had become the only recipient of dead animals from the central agency's offices. In Š.42.11 both Beli-arik and Ur-niġar were receiving hides (*BIN* 3: 611), after which a centralization of this office around Ur-niġar took place, and the first tablet in the available documentation recording such a transfer to Ur-niġar alone is dated to Š.44.01.<sup>62</sup> Ur-niġar, in turn, was replaced by Šulgi-iriġu in AS.03.

At first Ur-niġar as the main official used to receive dead animals and hides, but later other officials handled the hides, indicating that there were two departments in the office. The one was for dead animals to be processed for food. The other was for the leather industry, which must have existed at Puzriš-Dagan independently from the shoemaking facility and its archive,<sup>63</sup> but about which we have little information. Later in Amar-Suena's reign the officials responsible for receiving hides also received wool.<sup>64</sup>

<sup>61</sup> *ASJ* 20: 110, 8: obv. iii 12, rev. i 1 and 19, ii 20; *HLC* 2: 99 (pl. 93) rev. 20.

<sup>62</sup> *OIP* 115: 300. Note that it seems more probable that the official with whom this transaction originated (ki) was Nalu rather than Nasa. Nasa seldom transfers dead animals to this office.

<sup>63</sup> For the leather industry at Puzriš-Dagan, see Stol (1983); and for the shoe archive Paoletti (2012: 127, 133, 183–199, passim).

<sup>64</sup> See also Stępień (1996) for a similar situation at Umma.

It is suggested here that the three officials Beli-arik, Ur-niĝar and Šulgi-iriĝu also manned the kitchen ( $e_2$ -muĥaldim) at Puzriš-Dagan. The circumstantial evidence for such an affiliation in the texts makes this suggestion almost certain, especially a few texts which state explicitly that Ur-niĝar received animals destined for the kitchen.<sup>65</sup> These are listed in table 1:

Table 1: Texts in which Ur-niĝar is associated with the kitchen

Date	Publication	Details
Š.43.00.00	<i>Torino</i> 1:213	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim Ur-niĝar <sup>gar</sup> šu ba-ti
Š.43.10.01	<i>SA</i> 18 (Pl. 28)	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim-še <sub>3</sub> Ur-niĝar <sup>gar</sup> šu ba-ti
Š.43.10.22	<i>UCP</i> 9–2–2: 40	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim-še <sub>3</sub> Ur-niĝar <sup>gar</sup> šu ba-ti
Š.47.01.12	<i>MVN</i> 15:36	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> šu ba-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.08.06	<i>Engelbert</i> 1	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> ba-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.08.05	<i>MVN</i> 8: 107 ( <i>RA</i> 75: 79)	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> šu ba-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.08.11	<i>Amorites</i> 13: pl. 5 ( <i>OIP</i> 115: 314)	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> šu ba-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.08.15	<i>OIP</i> 115: 315	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> šu [ba]-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.08.22	<i>RA</i> 74: 2 a ( <i>OIP</i> 115: 316)	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> šu ba-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.09.01	<i>MVN</i> 13: 530	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> šu ba-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.09.04	<i>CST</i> 183 <sup>66</sup>	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> šu ba-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.09.07	<i>BIN</i> 3: 511	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ...Ur-niĝar <sup>gar</sup> šu ba-ti ki Na-sa <sub>6</sub> -ta ba-zi
Š.47.10.02	<i>CST</i> 185 <sup>67</sup>	2 udu-niga e <sub>2</sub> -muĥaldim-še <sub>3</sub> mu mar-tu-ne-še <sub>3</sub> Ur-niĝar <sup>gar</sup> maškim ša <sub>3</sub> Unu <sup>ki</sup> -ga zi-ga ki Lu <sub>2</sub> -diĝir-ra
AS.02.01.04	<i>SAT</i> 2: 723	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim-še <sub>3</sub> e <sub>2</sub> Puzur <sub>4</sub> -iš <sup>d</sup> -Da-gan <sup>ki</sup> -ta Uri <sub>3</sub> <sup>ki</sup> -še <sub>3</sub> ma <sub>2</sub> zi-gum-ma-ke <sub>4</sub> ib <sub>2</sub> -gub Ur-niĝar <sup>gar</sup> šu-ba-ti ki Ab-ba-sa <sub>6</sub> -ga-ta ba-zi
XX.XX.00.05	<i>JCS</i> 35: 189, 1	šu-gid <sub>2</sub> e <sub>2</sub> -muĥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-[ne-še <sub>3</sub> ] Ur-niĝar <sup>gar</sup> [sagi maškim]? (=ŠU.[...]) ki Na-[...-ta ba-zi] <sup>68</sup>

Although there are no direct transfers to Šulgi-iriĝu of animals destined for the kitchen, he appears as maškim or ĝiri<sub>3</sub> in such transactions, as can be seen from the following texts documenting animals destined for the kitchen under his responsibility (table 2):

<sup>65</sup> See also *OIP* 115: 222 (Š.43.05.12), where Beli-arik functions as maškim for a disbursal to the kitchen for the aga<sub>3</sub>-us<sub>2</sub> ( $e_2$ -muĥaldim mu aga<sub>3</sub>-us<sub>2</sub>-e-ne-še<sub>3</sub> Be-li<sub>2</sub>-a-ri<sub>2</sub>-ik maškim zi-ga).

<sup>66</sup> Collation *MVN* 12: p. 102.

<sup>67</sup> Collation *MVN* 12: p. 102.

<sup>68</sup> This tablet should be collated. Most probably it reads: Ur-niĝar<sup>gar</sup> šu ba-ti... ki Na-sa<sub>6</sub>-ta ba-zi, similar to the previous tablets.

Table 2: Texts in which Šulgi-iriĝu is associated with the kitchen

Date	Publication	Details
AS.04.11.19	AOS 32:W64 (NYPL 304)	mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> e <sub>2</sub> -muḥaldim-še <sub>3</sub> ĝiri <sub>3</sub> Puzur <sub>4</sub> - <sup>d</sup> IŠKUR ra <sub>2</sub> -gaba <sup>d</sup> Šul-gi-iri-ĝu <sub>10</sub> maškim ki <sup>d</sup> Šul-gi-a-a-ĝu <sub>10</sub> -ta ba-zi
AS.04.11.22	RA 9: 51, SA 202 (pl.5)	šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim mu aga <sub>3</sub> ! -us <sub>2</sub> -e-ne-še <sub>3</sub> <sup>d</sup> šul-gi-iri-ĝu <sub>10</sub> maškim ki <sup>d</sup> Šul-gi-a-a-ĝu <sub>10</sub> -ta ba-zi
AS.05.06.03	SACT 1: 156	šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ĝiri <sub>3</sub> <sup>d</sup> Šul-gi-iri-ĝu <sub>10</sub> Urdu <sub>2</sub> -ĝu <sub>10</sub> maškim ki <sup>d</sup> Šul-gi-a-a-ĝu <sub>10</sub> -ta ba-zi
AS.05.06.21	Nisaba 8: 153	e <sub>2</sub> -muḥaldim mu kaš <sub>4</sub> -ke <sub>4</sub> -ne-še <sub>3</sub> > <sup>d</sup> Šul-gi-iri-ĝu <sub>10</sub> / maškim ki Ur-šu-ga-/lam-ma-ta ba-zi ša <sub>3</sub> Unu <sup>ki</sup> -ga <sub>2</sub> (sic)
AS.06.08.26	OIP 121: 470	e <sub>2</sub> -muḥaldim mu šakkan <sub>6</sub> gišbun <sub>x</sub> tuš-ša-/ne-še <sub>3</sub> (=KI.BI) [ <sup>d</sup> ]Šul-gi-iri-ĝu <sub>10</sub> maškim ... [z]i-ga ša <sub>3</sub> Tum-ma-al ki [En]-diĝir-ĝu
AS.06.11.04	PDT 2: 1082	šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> <sup>d</sup> Šul-gi-iri-ĝu <sub>10</sub> maškim ki Lu <sub>2</sub> -diĝir-ra-ta ba-zi
AS.06.11.27	Nisaba 8: 36	long account obv. iii, 13–15: šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim <sup>d</sup> Šul-gi-iri- ĝu <sub>10</sub> maškim ... rev iii 8: ki Ab-ba-sa <sub>6</sub> -ga-/ta ba-zi
AS.06.12.24	TLB 3: 31	šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim mu gar <sub>3</sub> -du <sup>d</sup> Amar- <sup>d</sup> Suen-ke <sub>4</sub> -ne-še <sub>3</sub> [ <sup>d</sup> ]Šul-gi-iri-ĝu <sub>10</sub> maškim [ki] Lu <sub>2</sub> -diĝir-ra-ta [ba]-zi
AS.07.06.06	BPOA 7: 2564	šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim mu gar <sub>3</sub> -du-ne-še <sub>3</sub> ĝiri <sub>3</sub> <sup>d</sup> Šul-gi-iri- ĝu <sub>10</sub> DIĜIR-kal sukkal maškim [...] ki Šu-ma-ma-ta ba-zi
AS.08.01.18	BIN 3: 477	1 gu <sub>4</sub> -niga e <sub>2</sub> -muḥaldim mu gar <sub>3</sub> -du-e-ne-še <sub>3</sub> ĝiri <sub>3</sub> <sup>d</sup> Šul-gi-iri-ĝu <sub>10</sub> ... ki Šu-ma-ma-ta ba-zi
AS.08.04.15	PDT 2: 951	šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim mu gar <sub>3</sub> -du-e-ne-še <sub>3</sub> ĝiri <sub>3</sub> <sup>d</sup> Šul-gi-iri-ĝu <sub>10</sub> DIĜIR-kal sukkal maškim ki Šu-ma-ma-ta ba-zi
AS.08.05.28	MVN 15: 204	2 udu šu-gid <sub>2</sub> [e <sub>2</sub> -muḥaldim] mu gar <sub>3</sub> -du-e-ne-[še <sub>3</sub> ] ĝiri <sub>3</sub> <sup>d</sup> Šul-gi-iri-[ĝu <sub>10</sub> ]... ki Igi- <sup>d</sup> En-lil <sub>2</sub> -še <sub>3</sub> -ta ba-zi
AS.08.07.27	AOS 32: O 8 (NYPL 244)	10 udu šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim mu gar <sub>3</sub> -du-ne-še <sub>3</sub> ĝiri <sub>3</sub> <sup>d</sup> Šul-gi-iri-ĝu <sub>10</sub> DIĜIR-kal sukkal maškim ki Igi- <sup>d</sup> En-lil <sub>2</sub> -še <sub>3</sub> -ta ba-zi
XXXX.00.00	MVN 11: 144	šu-gid <sub>2</sub> e <sub>2</sub> -muḥaldim mu aga <sub>3</sub> -us <sub>2</sub> -e-ne-še <sub>3</sub> ĝiri <sub>3</sub> <sup>d</sup> Šul-gi-iri-ĝu <sub>10</sub> ... [ki ... ba]-zi

### 3.1 The Official Beli-arik (Š.42–Š.43)

Beli-arik the ‘cupbearer’ (sagi) was connected with the receipt of dead animals and carcasses at Puzriš-Dagan from Š.42. His seal is of the royal servant type, mentioning King Šulgi as his lord (Tsouparopoulou forthcoming: Cat. No. 53). He first received carcasses together with Ur-niĝar in Š.42.11, sent by Naram-ili (BIN 3: 611 and *Sumer* 24: 71, 7). A month later he received dead oxen from Enlila, designated for the storage room.<sup>69</sup> In the same month Beli-arik, together with Ur-niĝar, received the carcasses of dead animals from Naram-ili (AOS 32, S05 NYPL 278), recorded on a tablet encased in an envelope; the envelope was sealed by both Beli-arik and Ur-niĝar.

<sup>69</sup> AOS 32, O 24: e<sub>2</sub>-kišib-na-še<sub>3</sub>.

Beli-arik's first clear association with the central livestock agency can be found in Š.43, when he received dead animals from Ašniu of the Tummal branch.<sup>70</sup> Other transfers from Ašniu to Beli-arik followed,<sup>71</sup> and he also acted as the maškim official in an expenditure document of an unknown official for dead animals given to the kitchen for the aga<sub>3</sub>-us<sub>2</sub> (*OIP* 115: 222 Š.43.05.12). That was his last transaction associated with the office for dead animals. Thereafter, Ur-niġar took over, and eventually he controlled all the transfers of dead animals during the reign of Šulgi and the first three years of Amar-Suena.

### 3.2 *The Official Ur-niġar (Š.43–AS.03)*

Ur-niġar's name figures in more than 800 documents from Drehem. According to his seal he was the son of Tiru the cook (Tsouparopoulou forthcoming: Cat. No. 474). In Š.42 and Š.43 he received dead animals and carcasses together with Beli-arik the cupbearer, but after Š.43.09 he remained alone in the post.<sup>72</sup> The animals that passed through his bureau were almost always explicitly described as dead (ba-ug<sub>7</sub>) or for slaughter (šu-gid<sub>2</sub>) and must have been sent to the kitchen, although this is not explicitly mentioned in the texts.<sup>73</sup>

Ur-niġar received dead animals mainly from one office, the disbursal office. Hundreds of tablets document his receipt of dead animals from Nalu (of the Ur/Nippur branch),<sup>74</sup> from Aġuni and Lu-diġira U-Ĥ (from the *nakabtum* branch), from En-diġirġu for Tummal,<sup>75</sup> and from officials of the branch for rare/exotic animals, most notably Lu-diġira I-Š, as well as dead equids from Šu-Idim.

Ur-niġar sealed a tablet dated to Š.48 for the receipt of dead animals from Lu-diġira (*SAT* 2: 573, Š.48.07) over a period of a month. According to this tablet, the number of animals received by Ur-niġar from the bureau of Lu-diġira (possibly U-Ĥ) is 473 (463 ovine and 10 cattle). Lu-diġira seems to have sent about 15 animals every day to the office for dead animals. This tablet, sealed by Ur-niġar, documented his receipt of animals for a whole month, but such texts are rare within the office for dead animals. Obviously they did exist and their rarity is probably due to the chance preservation of such tablets. A similar docu-

<sup>70</sup> *TCS* 132 (*Torino* 1: 268), dated to Š.43.02.22.

<sup>71</sup> *MVN* 13: 861 (Š.43.02.28); *RT* 37: 136 1 (Š.43.02.30); *RA* 9: 40, *SA* 1 (pl. 1) (Š.43.03.08); *AnOr* 1: 5 (Š.43.03.14); *Sumer* 24: 72, 8 and *TIM* 6: 28 (Š.43.04.02); *Nisaba* 9: 190 (Š.43.05.10); *RA* 9: 40, *SA* 2 (Š.43.06.24).

<sup>72</sup> The first tablet documenting him alone receiving carcasses from Naram-ili is apparently *BIN* 3: 6, dated to Š.43.09.

<sup>73</sup> During Šulgi's reign, especially from Š.47, another person appears with the same name, who also received dead animals. That person was a dog handler and received the carcasses of dead animals to feed the dogs for which he was responsible (e.g. *SACT* 1: 127, rev. 13–14). It is sometimes difficult to differentiate between these two men, who were clearly not identical, since Ur-niġar, the official of the office for dead animals, was not responsible for receiving animals destined for the dogs. Usually the phrase e<sub>2</sub>-kišib (storeroom) was used in connection with the dog handler, e.g. *SA* 49 (Pl. 5), *OIP* 115: 325; but see tablet *AOS* 32: O 24, where Beli-arik received dead oxen designated as e<sub>2</sub>-kišib-na-še<sub>3</sub>. Thus, some references to Ur-niġar in connection with carcasses probably refer to the dog handler and not the official of the office for dead animals.

<sup>74</sup> E.g. *MVN* 8: 2 (Š.44.12.28); *MVN* 8: 1 (Š.44.12.11).

<sup>75</sup> E.g. *MVN* 20: 182 (Š.45.03.27); *AOS* 32: G13 (Š.45.07.15).

ment must be *BRM* 3: 42, recording En-diġirġu's transfers of dead animals to Ur-niġar, which he also sealed.<sup>76</sup> However, this document is a bulla, used as a tag for a container of the corresponding tablets. It is thus possible that *SAT* 2: 573 is also a bulla, used to tag a leather bag containing the tablets documenting receipts of dead animals by Ur-niġar from Lu-diġira.<sup>77</sup>

Generally, the tablets documenting such transfers to the office for dead animals during the reign of Œulgi did not have a left-edge inscription. A few, however, did, and in these cases, the scribe recorded the year-name there. In the reign of Amar-Suena, especially after the third month of his second regnal year, some scribes started using the left-edge to write the total number of animals transferred to the office for dead animals,<sup>78</sup> seen most prominently in tablets originating from the bureau of Lu-diġira. This became a common practice in the other offices also.<sup>79</sup>

During the reign of Amar-Suena, Nanna-andul is involved with Ur-niġar in the receipt of dead animals, mostly acting as the sealer of the pertinent documents.<sup>80</sup> The bullae and envelopes he sealed are transfers of dead animals to Ur-niġar. One is from Abba-saga, the chief official;<sup>81</sup> the other is a bulla with a monthly account of the animals that Lu-diġira I-Š sent to Ur-niġar (*MVN* 4: 117, AS.02.08); the last one is a bulla documenting a transfer from Abba-saga of animals that had died at Tummal (*ASJ* 19: 204.14, AS.02.09). All envelopes and bullae date to the second year of Amar-Suena's reign. In those cases in which Nanna-andul sealed the document, the phrase 'DUB (kišib<sub>3</sub>) dNanna-an-dul<sub>3</sub>' was always recorded in the text,<sup>82</sup> although his exact position within the Puzriš-Dagan central agency cannot be easily determined. The last tablet we have for Ur-niġar receiving dead animals was issued in AS.03.04.06 (*Nisaba* 8: 243). From then on, Œulgi-iriġu takes over that responsibility.

The disbursal office and the chief official's office sent dead animals destined for the kitchen to Ur-niġar, either directly by issuing a transfer (šu ba-ti) document or indirectly by recording a transfer in a double-entry expenditure document (ba-zi/zi-ga). However, no direct transfers from the shepherds' office exist for the period that Ur-niġar officiated at the department for the kitchen, including during Œulgi's years. This does not mean that the shepherds' office did not have an obligation to send their animals there, but it could be explained by the appearance of expenditure documents from the chief official's office. The same animals transferred to the kitchen, which Ur-niġar received (šu ba-ti) after they were debited from the account (ba-zi) of Nasa the chief official, are found to have been previously distributed by Ur-ku-nuna on the same day, in documents which only bear the designation e<sub>2</sub>-muġaldim. The following is an example with both tablets dated to the same day (Š.47.08.11); the outlined text represents parallel passages:

<sup>76</sup> Dated to AS.01.

<sup>77</sup> For more information on these types of bullae, see the author's forthcoming article on archival practices at Puzriš-Dagan.

<sup>78</sup> E.g. *Ontario* 1: 120 (AS.02.03.07); *Nisaba* 8: 117 (AS.02.03.19); *TCS* 197 (AS.02.04.11).

<sup>79</sup> For a discussion of left-edge inscriptions, see Watson (1986) and Hilgert (2003).

<sup>80</sup> For his seal, see Tsouparopoulou (forthcoming: Cat. No. 281).

<sup>81</sup> Envelope of *OrSP* 47–49: 131 (AS.02.07.20).

<sup>82</sup> *MVN* 4: 117 (AS.02.08); *ASJ* 19: 204.14 (AS.02.09).

[A] OIP 115:314

Obv.

1. 1 sila<sub>4</sub>-niga <sup>d</sup>En-lil<sub>2</sub>
2. mu-ku<sub>x</sub>(DU) Ur-niġar<sup>gar</sup>
3. 1 sila<sub>4</sub> <sup>d</sup>Nin-lil<sub>2</sub>
4. mu-ku<sub>x</sub>(DU) Za-an-nu-um sipa
5. zabar-dab<sub>5</sub> maškim
6. 1 maš<sub>2</sub> e<sub>2</sub>-uz-ga
7. mu-ku<sub>x</sub>(DU) Ku-na-[ma]-tum / mar-tu
8. A-a-kal-la maškim
9. 3 gu<sub>4</sub> 3 ab<sub>2</sub>

Rev.

10. 13 udu 15 u<sub>8</sub>
11. 2 ud<sub>5</sub> šu-gid<sub>2</sub> e<sub>2</sub>-muḥaldim
12. mu aga<sub>3</sub>-us<sub>2</sub>-e-ne-š<sub>e</sub><sub>3</sub>
13. Ur-niġar<sup>gar</sup> šu ba-ti

- 
15. u<sub>4</sub> 11-kam
  16. ki Na-sa<sub>6</sub>-ta
  17. ba-zi
  18. iti šu-eš-ša
  19. mu us<sub>2</sub>-sa Ki-maš<sup>ki</sup> / ba-ḥul

[B] AUCT 1:876

Obv.

1. 13 udu
2. 15 u<sub>8</sub>
3. 2 ud<sub>5</sub>
4. e<sub>2</sub>-muḥaldim
5. u<sub>4</sub> 11-kam

Rev.

6. zi-ga
7. ki Ur-ku<sub>3</sub>-nun-na
8. iti šu-eš<sub>5</sub>-ša
9. mu us<sub>2</sub>-sa Ki-maš<sup>ki</sup> ba-ḥul

[A] “1 barley-fed lamb (for) the god Enlil: delivery of Ur-niġar. 1 lamb (for) the goddess Ninlil: delivery of Zannum the shepherd. The zabar-dab<sub>5</sub> (was) the requisitioner. 1 goat (for) the e<sub>2</sub>-uz-ga: delivery of Kuna-matum the Westerner. Aja-kala (was) the requisitioner.

3 oxen, 3 cows, 13 sheep, 15 ewes, 2 female goats: šu-gid<sub>2</sub> (for) the kitchen for the guards. Ur-niġar received (them).

On the 11<sup>th</sup> day disbursed from Nasa. Month of Šueša. Year after (the year) Kimaš was destroyed.”

[B] “13 sheep, 15 ewes, 2 female goats (for) the kitchen.

On the 11<sup>th</sup> day withdrawn from Ur-ku-nuna. Month of Šueša. Year after (the year) Kimaš was destroyed.”

These documents could perhaps indicate that Ur-ku-nuna routed the corresponding animals first to Nasa, and that Nasa was then responsible for distributing them. This procedure was not only prevalent with regards to animals sent to the kitchen from the bureau of Ur-ku-nuna, but for all of Ur-ku-nuna’s expenditures (zi-ga/ba-zi). The tablets below, both dated to Š.47.08.22, show this:



[A] RA 74:2 a (OIP 115: 316)

Obv.

1. 1 sila<sub>4</sub> <sup>d</sup>Utu
2. mu-ku<sub>x</sub>(DU) Ad-da-tur
3. 1 sila<sub>4</sub> mu-ku<sub>x</sub>(DU) Šu-<sup>d</sup>Nin-šubur
4. 1 sila<sub>4</sub> mu-ku<sub>x</sub>(DU) Ur-niĝar<sup>gar</sup>
5. <sup>d</sup>Inana
6. zabar-dab<sub>5</sub> maškim
7. 1 amar maš-da<sub>3</sub> e<sub>2</sub>-uz-ga
8. mu-ku<sub>x</sub>(DU) ensi<sub>2</sub> Mar<sub>2</sub>-da<sup>ki</sup>
9. A-a-kal-la maškim
10. 1 gu<sub>4</sub> 6 udu 4 maš<sub>2</sub>
11. niĝ<sub>2</sub>-mussa(sa<sub>2</sub>) Ri-is-DIĜIR / sa<sub>12</sub>-ti-um

Rev.

12. [e<sub>2</sub>?] Da-a-a-ni muḥaldim-še<sub>3</sub>
13. Urdu<sub>2</sub>-ĝu<sub>10</sub> maškim
14. 2 gu<sub>4</sub> 4 ab<sub>2</sub>
15. 8 udu 20 u<sub>8</sub> 2 ud<sub>5</sub>
16. šu-gid<sub>2</sub> e<sub>2</sub>-muḥaldim mu aga<sub>3</sub>-/  
us<sub>2</sub>-e-ne-še<sub>3</sub>
17. Ur-niĝar<sup>gar</sup> šu ba-ti
18. u<sub>4</sub>22-kam

19. ki Na-sa<sub>6</sub>-ta ba-zi

20. iti šu-eš-ša

21. mu us<sub>2</sub>-sa Ki-maš<sup>ki</sup>/ ba-ḥul

[B] MVN 8: 108

Obv.

1. 6 udu 4 maš<sub>2</sub>
2. niĝ<sub>2</sub>-mussa(sa<sub>2</sub>) Ri-is-DIĜIR
3. 8 udu 20 u<sub>8</sub>
4. 2 ud<sub>5</sub>

Rev.

5. e<sub>2</sub>-muḥaldim u<sub>4</sub> 22-kam
6. zi-ga ki Ur-ku<sub>3</sub>-nun-na
7. iti šu-eš<sub>5</sub>-ša
8. mu us<sub>2</sub>-sa Ki-maš<sup>ki</sup>/ ba-ḥul

[A] “1 lamb (for) the god Utu: delivery of Adda-tur. 1 lamb: delivery of Šu-Ninšubur; 1 lamb: delivery of Ur-niĝar; (for) the goddess Inana. The zabar-dab<sub>5</sub> (was) the requisitioner.

1 gazelle fawn: delivery of the governor of Marad. Aja-kala (was) the requisitioner.

1 ox, 6 sheep, 4 goats: betrothal gift of Ris-ilum the Easterner for the house of Dajani the cook. Urdu-ĝu (was) the requisitioner.

2 oxen, 4 cows, 8 sheep, 20 ewes, 2 female goats: šu-gid<sub>2</sub> (for) the kitchen for the guards. Ur-niĝar received (them).

On the 22<sup>nd</sup> day expended from Nasa. Month of Šueša. Year after (the year) Kimaš was destroyed.”

[B] “6 sheep, 4 goats: betrothal gift of Ris-ilum.

8 sheep, 20 ewes, 2 female goats: (for) the kitchen.

On the 22<sup>nd</sup> day withdrawn from Ur-ku-nuna. Month of Šueša. Year after (the year) Kimaš was destroyed.”

This administrative peculiarity indicates that there was close cooperation between the office of the chief official and that of the shepherds, while the officials of the disbursal of-

office were working independently of the chief official. Only later, for the closing of their accounts, were the officials of the disbursal office obliged to report to the chief official's office.

### 3.3 *The Official Šulgi-iriĝu (AS.03 – IS.02)*

Šulgi-iriĝu headed the office for dead animals from AS.03 until the central agency ceased to function, and about 900 extant tablets document his receipt of dead animals from several officials of the disbursal office, mainly from the branches of the *nakabtum*, Tummal and Ur/Nippur (see figure 1). Since it is not possible to cite all the relevant texts here, a few examples will be given regarding his transactions.

He received animals in the same way as had his predecessor Ur-niĝar and from the same bureaus: from Šu-Idim and later from Šu-Erra, perhaps Šu-Idim's son, dead equids;<sup>83</sup> from Nalu (of the Ur/Nippur branch);<sup>84</sup> from Šulgi-ajaĝu,<sup>85</sup> Lu-diĝira I-Š and Aĝu-Wer<sup>86</sup> of the *nakabtum* branch; from En-diĝirĝu of the Tummal branch,<sup>87</sup> and later from Kurub-ilak,<sup>88</sup> from Turam-Dagan and Uta-mišaram of the branch for the royal court,<sup>89</sup> and from officials of the branch for rare/exotic animals, most notably Lu-diĝira U-Ĥ (*CST 277; Hirose 151*).

In AS.05, when Šulgi-iriĝu started receiving dead animals from the officials of the branch for the royal court (Turam-Dagan and Uta-mišaram), several ĝiri<sub>3</sub> officials associated with the officials of that branch were named in the transfers.<sup>90</sup> This had nothing to do with the office for dead animals, but was associated with that particular branch of the disbursal office. The same can be seen with Aĝu-Wer during ŠS.02; two officials who are associated with Aĝu-Wer's bureau at the disbursal office (Ur-lugal-banda and Ur-uš-gida) are seen acting as ĝiri<sub>3</sub> in Aĝu-Wer's transfers to Šulgi-iriĝu.<sup>91</sup> Moreover, most of the sealed documents involved with this office were sealed by officials working closely with the sender, such as Duga, Ĥulal and Aĝu-waqar on behalf of Ur-ku-nuna. Some other sealing officials such as Nur-Suen, were associated with the chief official's office. The sealed tablets originating from the bureaus of Ur-ku-nuna or Intaea were sealed by Ur-Šulpae. Babati, the maternal uncle of ŠS, sealed most of the archival labels (bullae) associated with transfers of dead animals from officials of the disbursal office to this department during this period.<sup>92</sup> For example, we have such bullae sealed by Babati for monthly accounts of En-diĝirĝu for the sixth month of AS.06 (*PDT 1: 398*), for transfers of Turam-Dagan for the

<sup>83</sup> E.g. *Nisaba* 8: 305; *Torino* 1: 330; *OIP* 121: 500; *Nisaba* 8: 229.

<sup>84</sup> E.g. *Nisaba* 8: 253; *Hirose* 146; *ASJ* 11: 324, 10.

<sup>85</sup> *Ontario* 1: 122; *MVN* 2: 330; *JCS* 46: 19, 2; *DoCu EPHE* 310.

<sup>86</sup> E.g. *Ontario* 1: 124; *JCS* 52: 9, 21; *MVN* 13: 74; *CST* 279; *BCT* 1: 8.

<sup>87</sup> *BPOA* 7: 2989; *BPOA* 7: 2704; *PDT* 2: 1137; *AUCT* 1: 831.

<sup>88</sup> Note that *Torino* 1: 378 should be dated to ŠS.02.

<sup>89</sup> Always with a ra-gaba acting as ĝiri<sub>3</sub>; see *TCS* 138.

<sup>90</sup> E.g. *TCS* 138 (AS.05.00.22); *OIP* 121: 520 (AS.05.02.19).

<sup>91</sup> E.g. *BCT* 1: 21; *BCT* 1: 22; *Nisaba* 8: 351.

<sup>92</sup> For his seal, see Tsouparopoulou (forthcoming: Cat. No. 48) and references to pertinent bibliography therein.

seventh month of AS.06 (*NYPL* 354), as well as for those of Aḫu-Wer (*BRM* 3: 37, ŠS.06.05), Sukalli (*BRM* 3: 38, ŠS.06.11), Nur-Suen (*PDT* 2: 1200, ŠS.07.03) and others.

Another monthly account is *MVN* 13: 910, which documents the transfer of 34 dead ovines from the bureau of Aḫu-Wer that Šulgi-iriḡu took in charge. This document was in all probability a bulla attached to the container of the pertinent tablets from the bureau of Aḫu-Wer for the ninth month of AS.04. This object was impressed with the seal of Lu-Nanna, the son of Inim-Šara, reminiscent of the patronymic of the previous holder of the same office in the *nakabtum* branch, Lu-diḡira.<sup>93</sup> Interestingly, we have none of the pertinent tablets documenting such a transfer from Aḫu-Wer's bureau for this period.

After ŠS.07, Ur-ku-nuna of the shepherds' office transferred animals to the office for dead animals. Before that date, transfers of dead animals from officials belonging to the shepherds' office are not attested (see figure 1). Ur-ku-nuna always appears in these transactions with a ḡiri<sub>3</sub> official, such as Nur-Adad, Ḫulal or Lu-šalim; after Ibbi-Suen, from among the officials Aḫu-waqar, Duga and Nūr-Suen, two of them act as ḡiri<sub>3</sub>. These ḡiri<sub>3</sub> officials were not associated with the office for dead animals itself but with the officials who had sent the dead animals to Šulgi-iriḡu.<sup>94</sup>

#### 4. The Department of Hides and Carcasses

In this separate department dealing with the carcasses, hides and other by-products within the office for dead animals, Nur-Suen officiated from AS.01 until ŠS.04, and Lu-kala from ŠS.05 until IS.02. Both were also associated with the processing of wool and textiles.

During Šulgi's reign Beli-tab<sup>95</sup> was responsible, as seen in Šulgi-simti's archive, for receiving the hides and carcasses of several animals. In Š.42, Ur-niḡar, the official in the department for dead animals for the kitchen, received together with Beli-arik the cupbearer (*sagi*) carcasses and hides on three occasions, as will be seen below. But with Amar-Suena's ascent to the throne an official named Nur-Suen started receiving them exclusively, independently of Ur-niḡar's bureau. Lu-kala assumed this task in ŠS.04. Closely associated with these two officials were people designated as 'carcass disposers' or 'animal flayers', such as Atu, Dadaja and Ur-šugalama. They received what was left of the carcasses of dead animals from dog handlers after the dogs had had their fill. They also occasionally received animal skins and carcasses from Nur-Suen and later Lu-kala (Cooper 1979; Tsouparopoulou 2012).

The office for dead animals not only directed dead animals to the kitchen but was also responsible for disposing of the carcasses of slaughtered animals and perhaps also processing them. The evidence that exists at Drehem for the management of these by-products, such as skins and carcasses, will now be discussed. Interestingly none of the documents concerned with transfers and distribution of skins, carcasses and other by-products are dated by the day, in contrast to all the documents related to the management of dead animals.

<sup>93</sup> See also *MVN* 15: 320, of the same date (AS.04.09), a transfer of 34 cattle and 126+ sheep from Intaea to Šulgi-iriḡu, mentioning *kišib*<sub>3</sub> (= DUB) Lu-Nanna.

<sup>94</sup> For these officials see Tsouparopoulou (forthcoming).

<sup>95</sup> For his seal, see Tsouparopoulou (forthcoming: Cat. No. 55).

#### 4.1 Management of Slaughter By-products during Šulgi's Reign

During Šulgi's reign the management of hides and carcasses within the Puzriš-Dagan central agency was less clearly structured. However, we have a single text, *OIP* 115: 325 (Š.47.01) that refers to the final disposal of carcasses during the reign of Šulgi. It is an expenditure document of Nasa, the chief official, which mentions carcasses given to weavers for food,<sup>96</sup> carcasses that Ur-niġar received for the storeroom<sup>97</sup> and hides given to the workshop.<sup>98</sup>

Even though there is less evidence for the management of the slaughter by-products during this period, three people were consistently involved: Ur-niġar from the office for dead animals, the chief official Nasa and Naram-ili. During Šulgi's reign, Naram-ili once sent more than 17,000 hides and 1200 carcasses to Lugal-ša<sub>4</sub>-[ga]-su<sub>3</sub> (*PDT* 1: 388), and on another occasion he transferred over 5000 carcasses to Ur-niġar (*Princeton* 1: 118). The pertinent documents are presented in table 3.

#### 4.2 The Official Nur-Suen

During Amar-Suena's reign, especially from AS.02 onwards, the distribution of hides and carcasses was organised around just one man, Nur-Suen (table 4). Until then the management was partly under Ur-niġar, the head of the office for dead animals, and partly under Naram-ili. Ur-niġar received all the dead animals, most probably destined for the kitchen, but from AS.02 onwards he no longer received any by-products. Naram-ili appears sporadically dealing with hides until AS.03, but from AS.01.03 until ŠS.03.11 it is Nur-Suen who deals with hides, carcasses and tendons. Nur-Suen never handled animals described as ba-ug<sub>7</sub>, which implies that he was responsible only for by-products. Veldhuis (2008) has very convincingly shown that in all the tablets stemming from Nur-Suen's bureau the scribe consistently wrote ad<sub>6</sub> (LU<sub>2</sub> × BAD) to denote carcasses.

At the beginning and until Š.47 this bureau had close connections with the archive of Naram-ili, then later with the dog handlers working for the army (Tsouparopoulou 2012) and those related to Gula. Two phrases are found often in relation to this department: e<sub>2</sub>-kišib-ba-še<sub>3</sub> ba-an-ku<sub>4</sub> (brought into the storeroom) in texts of the chief official Nasa, and e<sub>2</sub>-gal-la ba-an-[ku<sub>4</sub>] (brought into the palace) in texts from Enlila's bureau of the shepherds' office.

Nur-Suen's responsibilities seems to have been similar in some respects to those of Naram-ili earlier. He also dealt with many equids as well as with textiles and wool from AS.02,<sup>99</sup> and once he transferred a large number of hides to Puzur-ili, the head of the leather workshop at Puzriš-Dagan. This is reminiscent of Naram-ili's dealing with the leather workshop at Puzriš-Dagan (*JCS* 35: 184, 2).

<sup>96</sup> ad<sub>6</sub>?-bi 12-am<sub>3</sub> geme<sub>2</sub> uš-bar e<sub>2</sub>-amar <sup>d</sup>Šul-gi-ra-ke<sub>4</sub> ba-ab-gu<sub>7</sub>.

<sup>97</sup> ad<sub>6</sub>?-bi 20 la<sub>2</sub> 1-am<sub>3</sub> e<sub>2</sub>-kišib-ba-še<sub>3</sub> Ur-niġar<sup>BAR</sup> šu ba-ti.

<sup>98</sup> kuš-bi geš-kin-ti-a ba-an-ku<sub>4</sub>.

<sup>99</sup> *CST* 239 (AS.01.10); *TRU* 304 (AS.01.11); *JEOL* 26: 52, 15 (AS.02.08); *PDT* 1: 421 (AS.02.12); *MVN* 13: 11 (AS.03.08); *AAICAB* 1/1, Ashm. 1924-0553 (AS.03.08); *JCS* 52: 9, 23 (AS.04.09); *OIP* 121: 502 (AS.04.12); *BPOA* 7: 2854 (AS.08.09); *Princeton* 2: 438 (ŠS.03.02); *SAT* 3: 1274 (ŠS.02.08.10); *ASJ* 19: 208, 26 (ŠS.03.03.20); *PDT* 1: 624 (ŠS.03.04); *BIN* 3: 563 (ŠS.03.04); *AUCT* 3: 351 (ŠS.03.04.19).

Even though he seems to have been replaced by Lu-kala in ŠS.04, Nur-Suen continued acting as  $\hat{g}iri_3$  in Lu-kala's transactions. In one text he is mentioned as a scribe of the palace (dub-sar e<sub>2</sub>-gal) (*PDT* 2: 1073). Similarly, the scribe Nur-Suen, who acted as  $\hat{g}iri_3$  and sealer in many of the transactions of the chief officials' office and other bureaus starting from the last years of Amar-Suena's reign and continuing well into the reign of Ibbi-Suen, could be the same Nur-Suen. This would mean that his position was simply managerial and did not require any affiliation to a specific group or profession. It is to be compared to the position of Ur-niġar of the department for the dead animals for the kitchen, or the positions of the intermediaries between the shepherds and the state. Nur-Suen was just one more scribe and bureaucrat who could do equally well in a department managing wool, skins and carcasses or in a department checking and writing tablets documenting everyday transactions of transfers of live animals.

### 4.3 The Official Lu-kala

Until ŠS.03 Nur-Suen continued dealing with hides and carcasses. But from ŠS.04 (*MVN* 15: 298), and more consistently from ŠS.07, Lu-kala appears to be associated with these by-products. Lu-kala mostly dealt with wool,<sup>100</sup> and in his documents Nur-Suen and Nanna-maba acted as  $\hat{g}iri_3$ . Information regarding his association with the hides and the carcasses comes mainly from long annual accounts of other officials (sporadically from daily accounts), but this is enough to classify him as the successor to Nur-Suen's office. Based on the information given in Table 5<sup>101</sup> it is easy to speculate that there are no pertinent tablets documenting the dealings of Lu-kala with hides and carcasses, although it is evident from the monthly and annual accounts that he was indeed involved in such business. As mentioned previously, the sign a<sub>3</sub> (UDU × BAD) to indicate a carcass was introduced by the scribes working in Lu-kala's office (Veldhuis 2008).

<sup>100</sup> *BPOA* 7: 2513 (ŠS.04.04.05); *AUCT* 3: 192 (ŠS.04.08.29); *AUCT* 3: 212 (ŠS.04.09.26); *AUCT* 3: 191 (ŠS.04.12.21); *PDT* 1: 312 (ŠS.04.12.24); *Princeton* 1: 550 (ŠS.05.03.22); *BIN* 3: 356 (ŠS.05.07.28); *PDT* 1: 490 (ŠS.05.08.18); *Nisaba* 8: 379 (ŠS.05.13); *BIN* 3: 455 (ŠS.07.06.23); *MVN* 18: 385 (ŠS.07.07.03+); *BPOA* 6: 1470 (ŠS.07.08.29); *AUCT* 3: 361 (ŠS.08.06.04); *AUCT* 3: 209 (ŠS.08.09.16); *RA* 80: 12, 8 (ŠS.08.10.07); *JCS* 52: 11, 49 (ŠS.09.06); *MVN* 13: 45 (ŠS.09.08.22); *MVN* 13: 46 (ŠS.09.08.24); *PDT* 2: 1058 (ŠS.XX.00.06); *TAD* 63 (IS.01.03.28); *BPOA* 6: 790 (IS.01.09.06).

<sup>101</sup> Only the tablets for which we have enough information to place them within an office are included here. For other texts dealing with hides and carcasses, see Veldhuis (2008) and *TRU* 14; *AUCT* 2: 195; *NABU* 2002: 76; *PDT* 1: 515.

Table 3: Management of slaughter by-products during the reign of Šulgi

Date	Publication <sup>a</sup>	Products	From	Transaction	Receiver	Details
Š.40.03	<i>PDT</i> 1: 647 <sup>b</sup>	276 kuš udu maš <sub>2</sub> ħi-a	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	mu-ku <sub>x</sub> (DU)	Ur- <sup>d</sup> Lugal-banda <sup>da</sup>	
Š.40.06	<i>PDT</i> 1: 388 <sup>c</sup>	2264 kuš gu <sub>4</sub> ab <sub>2</sub> ħi-a, 14710 kuš udu maš <sub>2</sub> ħi-a, 133 ad <sub>6</sub> gu <sub>4</sub> ab <sub>2</sub> ħi-a, 11061 ad <sub>6</sub> udu maš <sub>2</sub> ħi-a, 11061 ad <sub>6</sub> udu maš <sub>2</sub> ħi-a, ad <sub>6</sub> kuš gu <sub>4</sub> udu ba-ug <sub>7</sub>	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	mu-ku <sub>x</sub> (DU)	lugal [(x)]	sealed by Lugal-ša <sub>4</sub> -[ga]-su <sub>3</sub>
Š.41.04	<i>PDT</i> 1: 218 <sup>d</sup>	18 kuš gu <sub>4</sub> 4 kuš gu <sub>4</sub> šu-gi <sub>4</sub> 2 kuš amar dusu <sub>2</sub> , 20 kuš udu maš-li <sub>2</sub> -um 16 kuš udu x 17 ad <sub>6</sub> ? [x] kuš gu <sub>4</sub> x [xx?]	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	mu-ku <sub>x</sub> (DU)	Lugal-ša <sub>3</sub> -la <sub>2</sub> šu ba-ti	
Š.2.11	TIM 6: 27 ( <i>Sumér</i> 24: 71, 7)	42 ad <sub>7</sub> gu <sub>4</sub> 40 la <sub>2</sub> 1 ad <sub>7</sub> amar, 13 ad <sub>7</sub> amar ga, 1063 ad <sub>7</sub> udu maš <sub>2</sub> ħi-a	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	mu-ku <sub>x</sub> (DU)	Be-li <sub>2</sub> -a-ri <sub>2</sub> -ik u <sub>3</sub> Ur-niġar <sup>gar</sup> šu ba-an-ti	
Š.42.11	<i>BIN</i> 3: 611	78 ad <sub>7</sub> gu <sub>4</sub> , 11 ad <sub>7</sub> amar ga, 312 ad <sub>7</sub> udu maš <sub>2</sub> ħi-a, ad <sub>7</sub> gu <sub>4</sub> udu ba-ug <sub>7</sub>	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	mu-ku <sub>x</sub> (DU)	Be-li <sub>2</sub> -a-ri <sub>2</sub> -ik u <sub>3</sub> Ur-niġar <sup>gar</sup> šu ba-an-ti	

<sup>a</sup> Only those texts presumably attributed to the Puzriš-Dagan central agency are included in this list.

<sup>b</sup> Collation: *Orient* 24: 121.

<sup>c</sup> Collation: *Orient* 24: 114.

<sup>d</sup> Collation: *Orient* 24: 114.

Š.42.12	AOS 32:S05 (NYPL 278)	159 ad <sub>7</sub> gu <sub>4</sub> 25 ad <sub>7</sub> amar, 31 ad <sub>7</sub> amar ga, 1385 ad <sub>7</sub> udu maš <sub>2</sub> ħi-a, 16 ad <sub>7</sub> maš <sub>2</sub> sila <sub>4</sub> ħi-a	ki Na-ra-am-i <sub>3</sub> - li <sub>2</sub> -ta	mu-ku <sub>x</sub> (DU)	Be-li <sub>2</sub> -a-ri <sub>2</sub> -ik u <sub>3</sub> Ur-niġar <sup>gar</sup> -ke <sub>4</sub> šu ba-an-ti-eš <sub>2</sub>	envelope sealed by both Ur-niġar and Bel-arik
Š.42.12	RA 75:84 (MVN 8:146)	šu-niġin <sub>2</sub> 484 kuš gu <sub>4</sub> , šu-niġin <sub>2</sub> 484 ad <sub>7</sub> gu <sub>4</sub>	ki [x]-gibil-ta	e <sub>2</sub> -kišib-ba-še <sub>3</sub> ba-an-ku <sub>4</sub>		
Š.43.09	BIN 3:6	103 ad <sub>7</sub> udu ba-uš <sub>2</sub>	ki Na-ra-am- i <sub>3</sub> -li <sub>2</sub> -ta	mu-ku <sub>x</sub> (DU)	Ur-niġar <sup>gar</sup> šu ba-ti	
Š.43.12	Nik. 2:526	šu-niġin <sub>2</sub> 31 kuš gu <sub>4</sub> šu-niġin <sub>2</sub> 131 ad <sub>6</sub> gu <sub>4</sub>	ki Na-sa <sub>6</sub> -ta	e <sub>2</sub> -kišib-ba-še <sub>3</sub> ba-an-ku <sub>4</sub>	ġiri <sub>3</sub> : <sup>9</sup> En-il <sub>2</sub> -la <sub>2</sub> , A <sub>2</sub> -na-na, Ku-li, ensi <sub>2</sub> Šuruppag <sup>ki</sup>	
Š.44.12	Princeton 1: 118	637 ad <sub>6</sub> gu <sub>4</sub> , 304 ad <sub>6</sub> amar, 4212 ad <sub>6</sub> udu maš <sub>2</sub> ħi-a	ki Na-ra-am- i <sub>3</sub> -li <sub>2</sub> -ta	šu ba-ti	Ur-niġar <sup>gar</sup> šu ba-ti	
Š.46.08	TRU 277 <sup>e</sup>	231 u <sub>8</sub> , 50 udu, 70 la <sub>2</sub> 1 ud <sub>5</sub> , 34 maš <sub>2</sub> ba-ug <sub>7</sub>	ki Na-sa <sub>6</sub>	zi-ga <sup>f</sup>		ad <sub>7</sub> -bi Ur-niġar <sup>gar</sup> šu ba-ti kuš-bi geš-kin ba-an-ku <sub>4</sub>
Š.46.08	PDT 1:39 <sup>s</sup>	384 kuš udu, 384 ad <sub>6</sub> udu	ki Na-sa <sub>6</sub> -ta	e <sub>2</sub> -kišib-ba-še <sub>3</sub> ba-an-ku <sub>4</sub>		ša <sub>3</sub> udu A-dam- DUN <sup>ki</sup> ġiri <sub>3</sub> -gid <sub>2</sub> -da <sup>ki</sup> šeš-ri <sub>2</sub> -ba-a
Š.47.00	SA 49 (Pl.5)	8 kuš anše, ad <sub>6</sub> -bi ur-ġir <sub>15</sub> -re ba-ab-gu <sub>7</sub>		e <sub>2</sub> -kišib-ba-še <sub>3</sub> ba-an-ku <sub>4</sub>		ša <sub>3</sub> Ur-niġar <sup>gar</sup> sipa ur-ġir <sub>15</sub> -ra

<sup>e</sup> See also *Studies Sigrisr* 119.

<sup>f</sup> The final transaction is the expenditure from the account of Nasa; before that the carcasses were received by Ur-niġar from an Ur-ba-a, and the skins were transferred to the workshop.

<sup>s</sup> Collations: *Orient* 24 108; *OrAnt* 14:154; *Studies Sigrisr* 119.



Table 3, Continued

Date	Publication <sup>a</sup>	Products	From	Transaction	Receiver	Details
Š.47.00	<i>OIP</i> 115:478	1 kuš <sup>anše</sup> kunga <sub>2</sub> , 26 kuš dusu <sub>2</sub> , 340 kuš udu, ad <sub>6</sub> -bi ur-gir <sub>15</sub> -re / ba-ab-gu <sub>7</sub>	[ki] DIĠIR-ba-ni PA.[UDU] / [ur]- gir <sub>15</sub> -ra-ta	e <sub>2</sub> -kišib-ba-še <sub>3</sub> ba-an-ku <sub>4</sub>		
Š.47.01	<i>OIP</i> 115:325	ad <sub>6</sub> kuš 20 gu <sub>4</sub> 11 ab <sub>2</sub> ba-ug <sub>7</sub>	[ki] Na-sa <sub>6</sub> -ta	ba-zi		geme <sub>2</sub> uš-bar e <sub>2</sub> - Amar <sup>d</sup> Šul-gi-/ra-ke <sub>4</sub> ba-ab-gu <sub>7</sub> , e <sub>2</sub> -kišib- ba-še <sub>3</sub> , kuš-bi giš- kin-ti-a / ba-an-ku <sub>4</sub>
Š.47.01	<i>SAT</i> 2:548	[x] kuš gu <sub>4</sub> sig <sub>2</sub> mu <sub>2</sub> , [x] kuš ab <sub>2</sub> peš sig <sub>2</sub> mu, 7 kuš gu <sub>4</sub> šu-gi <sub>4</sub> , 11 kuš ab <sub>2</sub> peš šu-gi <sub>4</sub> , 44 kuš amar šu-gi <sub>4</sub> , 4 kuš dusu <sub>2</sub> , [x] kuš udu kurušda, 165 kuš udu du <sub>10</sub> - gan, 30 kuš maš <sub>2</sub> sig <sub>2</sub> e-sir <sub>2</sub> , kuš a-GAR gu <sub>7</sub> -a, 9 kuš maš <sub>2</sub> sig <sub>2</sub> e-sir <sub>2</sub> , 342 kuš udu du <sub>10</sub> -gan, kuš udu ba-ug <sub>7</sub> sig <sub>2</sub> mu <sub>2</sub> -am <sub>3</sub>	ki Na-ra-am- i <sub>3</sub> -li <sub>2</sub> -ta	šu ba-an-ti	Lu <sub>2</sub> - <sup>d</sup> Nin-šubur	
Š.47.02	<i>SAT</i> 2:531	1 kuš dusu <sub>2</sub> , 44 kuš udu maš <sub>2</sub> ħi-a sig <sub>2</sub> -mu <sub>2</sub> -am <sub>3</sub>	ki Na-ra-am- i <sub>3</sub> -li <sub>2</sub> -ta	šu ba-an-ti	Ulu <sub>3</sub> -lal <sub>3</sub>	

Š.47.05	<i>Princeton</i> 1:131	13 kuš gu <sub>4</sub> , 11 kuš ab <sub>2</sub> gir, 13 kuš ab <sub>2</sub> gir šu-gi <sub>4</sub> , 380+ [x]+2 kuš udu du <sub>10</sub> -gan kuš gu <sub>4</sub> udu [...]	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	šu ba-ti	Ur! -lal <sub>3</sub>	
Š.47.09	<i>TRU</i> 383	6 kuš gu <sub>4</sub> , 2 kuš ab <sub>2</sub> gir, 51 kuš udu du <sub>10</sub> -gan kuš sig <sub>2</sub> mu <sub>2</sub> -am <sub>3</sub>	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	šu ba-ti	Ulu <sub>3</sub> -lal <sub>3</sub>	
Š.47.09	<i>BIN</i> 3: 349	3 kuš dusu <sub>2</sub>	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	šu ba-ti	Ulu <sub>3</sub> -lal <sub>3</sub>	ġiri <sub>3</sub> <sup>d</sup> Šul-gi-na-da, kišib <sub>3</sub> Lugal-igi-ġuš
Š.47.09	<i>PDT</i> 1:18 <sup>b</sup>	kuš, ad <sub>6</sub> 225 udu ba-ug <sub>7</sub>	ki Na-sa <sub>6</sub> -ta	ba-zi		ša <sub>3</sub> gu <sub>2</sub> A-dam-DUN <sup>[k]</sup> ; kuš-bi giš-kin-ti ba-an-ku <sub>4</sub> ; ad <sub>6</sub> -bi e <sub>2</sub> -kišib-[ba]-še <sub>3</sub> ba-an-ku <sub>4</sub>
Š.47.12	<i>Babyl.</i> 8:HG 6	1 kuš gu <sub>4</sub> , 1 kuš ab <sub>2</sub> gir, 1 kuš amar gu <sub>4</sub>	ki Na-ra-am-i <sub>3</sub> -li <sub>2</sub> -ta	šu-ba-an-ti	Ulu <sub>3</sub> -lal <sub>3</sub>	
Š.48.10	<i>OIP</i> 115:355	1 gu <sub>4</sub> 4 ab <sub>2</sub> ba-ug <sub>7</sub>	ki Na-sa <sub>6</sub> -ta	ba-zi		kuš-bi giš-kin-ti-/[še <sub>3</sub> ] ba-an-ku <sub>4</sub> , [...] geme <sub>2</sub> urdu <sub>2</sub> / [x]-[...] -[x]-[ke <sub>4</sub> ?] ba-ab-gu <sub>7</sub> , ġiri <sub>3</sub> Kal-la-mu / ensi <sub>2</sub> Aš <sub>2</sub> -nun <sup>ki</sup>
Š.48.10-12	<i>AUCT</i> 1:895	18 gu <sub>4</sub> 2 ab <sub>2</sub> ba-ug <sub>7</sub> 14 gu <sub>4</sub> ba-ug <sub>7</sub>	ki <sup>d</sup> En-ilil <sub>2</sub> -la <sub>2</sub> -ta	ba-zi		ad <sub>6</sub> ! kuš-bi e <sub>2</sub> -gal-la ba-an-[ku <sub>4</sub> ]

<sup>b</sup> Collation: *Orient* 24:108.

Table 4: Management of by-products during the reign of Amar-Suena and the first years of Šu-Suen

Date	Publication <sup>a</sup>	Products	From	Transaction	Receiver	Details
AS.01.03	<i>BIN</i> 3: 520	2 kuš dusu <sub>2</sub> ad <sub>6</sub> -bi ur-gir <sub>15</sub> -re ba-ab- gu <sub>7</sub>	ki Dan- <sup>d</sup> Šul-gi sipa ur-gir <sub>15</sub> -ra-ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	
AS.01.06	<i>AUCT</i> 1: 425	19 gu <sub>4</sub> a b <sub>2</sub> ba-ug <sub>7</sub> ad <sub>6</sub> kuš-bi e <sub>2</sub> -gal- la ba-an-ku <sub>4</sub>	ki Na-sa <sub>6</sub> -ta	ba-zi		ša <sub>3</sub> gu <sub>4</sub> a <sub>2</sub> -gi <sub>6</sub> -il <sub>2</sub> -la ġiri <sub>3</sub> Engar-ĤI-lu <sub>2</sub> sanga
AS.01.12	<i>BCT</i> 1: 123	10 kuš dusu <sub>2</sub>	ki <sup>d</sup> Šul-gi-na- da-ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	
AS.01.12	<i>BCT</i> 1: 124	8 kuš gu <sub>4</sub> , 8 ad <sub>6</sub> gu <sub>4</sub> , 2 kuš dusu <sub>2</sub> , sa-bi 2 ma-na	ki Ku-li-ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	
AS.02.00	<i>MVN</i> 3: 227	6 kuš gu <sub>4</sub> ug <sub>7</sub> , 1 kuš amar gu <sub>4</sub> ug <sub>7</sub> , 23 kuš anše ug <sub>7</sub> , 8 2/3 ma-na sa gu <sub>4</sub> , 5 giš gu <sub>4</sub>		kišib <sub>3</sub>		kišib <sub>3</sub> Ep-qu <sub>2</sub> -ša, giš-kin-ti nin-a-še <sub>3</sub> , seal illegible
AS.02.11	<i>PDT</i> 2: 1075	15 kuš udu sig <sub>2</sub> mu <sub>2</sub> , 10 kuš udu [ <sup>kuš</sup> du <sub>10</sub> ]-gan, 30 kuš maš <sub>2</sub> kuš e-sir <sub>2</sub> , kuš udu ba-ug <sub>7</sub> , kuš sig <sub>2</sub> mu <sub>2</sub> -am <sub>3</sub>	ki U <sub>2</sub> -u <sub>2</sub> -mu [...] -ta	mu-ku <sub>x</sub> (DU)	Puzur <sub>4</sub> -i <sub>3</sub> -li <sub>2</sub> šu ba-ti	
AS.03.00	<i>Nisaba</i> 8: 67 ( <i>CT</i> 32: 46, BM 103447)	16 gu <sub>4</sub> 385 udu ba-ug <sub>7</sub> ad <sub>6</sub> kuš-bi	ki Ab-ba-sa <sub>6</sub> - ga-/ta	ba-zi	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	
AS.03.03	<i>SAT</i> 2: 742	4 kuš dusu <sub>2</sub>	ki Dan- <sup>d</sup> Šul-gi-ta	šu ba-ti	Ur- <sup>d</sup> Ba-u <sub>2</sub> šu ba-ti	ġiri <sub>3</sub> Zi-im-zi-la-ab sipa ur-gir <sub>15</sub> -ra

AS.03.04	JCS 35: 184, 2	900 kuš udu AB, 2416 kuš udu du <sub>10</sub> - gan, 360 kuš maš <sub>2</sub> šu e-sir <sub>2</sub> , 35 kuš udu šu-gi <sub>4</sub> , SU.A ni <sub>g</sub> <sub>2</sub> -gu <sub>7</sub> -am <sub>3</sub> , 240 kuš dusu <sub>2</sub> , 214 kuš KU+BAR. HI.x, 60 kuš maš <sub>2</sub> du <sub>10</sub> -gan, 24 kuš udu šu-gi <sub>4</sub> , kuš si <sub>g</sub> <sub>2</sub> mu <sub>2</sub> -am <sub>3</sub>	ki Na-ra-am- i <sub>3</sub> -li <sub>2</sub> -ta	šu ba-ti	Puzur <sub>4</sub> -i <sub>3</sub> -li <sub>2</sub> šu ba-ti	
AS.03.05	AUCT 1: 950	[x] kuš ab <sub>2</sub> gir 10 kuš maš <sub>2</sub> šu-e-BU kuš gun <sub>3</sub> mu <sub>2</sub> -am <sub>3</sub> 70 kuš udu du <sub>10</sub> -gan kuš a x nag-am <sub>3</sub>	ki Nu-ur <sub>2</sub> - <sup>d</sup> Suen-ta	ba-zi	kišib <sub>3</sub> Puzur <sub>4</sub> -i <sub>3</sub> -li <sub>2</sub>	
AS.03.07	JCS 23: 114, 33	20 kuš udu sa-bi 2/3 ma-na ad <sub>6</sub> -bi	ki Lu <sub>2</sub> -di <sub>g</sub> ir-ra dumu Inim- AN.KA-ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	ur-gir <sub>15</sub> -re ba-ab-gu <sub>7</sub> ugula I <sub>3</sub> -lal <sub>3</sub> -lum
AS.03.08	AOS 32: I 15 (NYPL 165)	12 kuš udu sa-bi 1/3 ma-na 4 gin <sub>2</sub> ad <sub>6</sub> -bi	ki Lu <sub>2</sub> -di <sub>g</sub> ir-ra dumu Inim- <sup>d</sup> Sara <sub>2</sub> - ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	ur-gir <sub>15</sub> -re ba-ab-gu <sub>7</sub> ugula I <sub>3</sub> -lal <sub>3</sub> -lum
AS.03.11	Ontario 1: 9	38 kuš udu sa-bi 1 ma-na 16 gin <sub>2</sub> ad <sub>6</sub> -bi	Ki A-ḥu-We-er-ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	ur-gir <sub>15</sub> -re ba-ab- gu <sub>7</sub> ugula I <sub>3</sub> -lal <sub>3</sub> -lum
AS.04.04	SA 44 (Pl. 8)	32 kuš udu sa-bi 1 ma-na 4 gin <sub>2</sub>	ki A-ḥu-We-er-ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	ad <sub>6</sub> -bi ur-gir <sub>15</sub> -re ba-ab-gu <sub>7</sub> ḡiri <sub>3</sub> I <sub>3</sub> -lal <sub>3</sub> -lum
AS.04.04	CTNMC 17	400 kuš udu du <sub>10</sub> - gan kuš a-GAR gu <sub>7</sub> -am <sub>3</sub>	ki <sup>o</sup> Sara <sub>2</sub> -kam-ta	šu ba-ti	Nam-ḥa-ni šu ba-ti	

Table 4. Continued

Date	Publication <sup>a</sup>	Products	From	Transaction	Receiver	Details
AS.04.09	<i>AUCT</i> 2:319	57 kuš maš <sub>2</sub> -gal a-GAR gu <sub>7</sub> -a, 78 kuš udu a-<GAR> gu <sub>7</sub> -a, kuš sipa-e-ne		šu ba-ti	I-bi <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	e <sub>2</sub> -kišib-ba-ta
AS.04.12	<i>Hirose</i> 164	21 kuš gu <sub>4</sub> 25 kuš ab <sub>2</sub> gir 8 kuš amar gu <sub>4</sub> 433 kuš maš <sub>2</sub> 1080 1a <sub>2</sub> 1 kuš udu [kuš sig <sub>2</sub> ] mu <sub>2</sub> -am <sub>3</sub>	ki Nu-ur <sub>2</sub> - <sup>d</sup> Suen-ta	ba-zi		[kišib <sub>3</sub> ?] Nam-ḫa-ni
AS.05.09	<i>OIP</i> 121:54	60 kuš udu sa-bi 2 ma-na ad <sub>6</sub> -bi	ki <sup>d</sup> Šul-gi-a-a-/ ḡu <sub>10</sub> -ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	ad <sub>6</sub> -bi ur-gir <sub>15</sub> -re / ba-ab-gu <sub>7</sub> (=LU <sub>2</sub> ×BAD) ḡiri <sub>3</sub> E <sub>2</sub> -a-ba-ni / sipa ur-gir <sub>15</sub> -ra ugula I <sub>3</sub> -lal <sub>3</sub> -lum
AS.05.11	<i>PDT</i> 1:114 <sup>a</sup>	kuš dusu <sub>2</sub> ad <sub>6</sub> -bi	ki Lugal-ur <sub>2</sub> - ra-ni sipa ur-gir <sub>15</sub> - ra-ta	mu-ku <sub>x</sub> (DU)	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	ad <sub>6</sub> -bi ur-gir <sub>15</sub> -re ba-ab-gu <sub>7</sub> ugula Du-ug-ra ḡiri <sub>3</sub> Šu-Er <sub>3</sub> -ra
AS.05.12	<i>PDT</i> 2:905	42 kuš gu <sub>4</sub> sig <sub>2</sub> -mu <sub>2</sub> 30 kuš ab <sub>2</sub> gir 30 kuš amar gu <sub>4</sub> 34 kuš gu <sub>4</sub> šu-gi <sub>4</sub> 100 kuš amar gu <sub>4</sub> šu-gi <sub>4</sub> kuš sig <sub>2</sub> - mu <sub>2</sub> -am <sub>3</sub>	ki <sup>d</sup> Šara <sub>2</sub> -kam-ta	šu ba-ti	A-a-ḡu <sub>10</sub> šu ba-ti	ḡiri <sub>3</sub> Lugal-ušumgal
AS.05.01–12	<i>SAT</i> 2:838	8 ma-na 4 gin <sub>2</sub> sa udu ur-re gu <sub>7</sub> -a	ki Nu-ur <sub>2</sub> - <sup>d</sup> Suen	ba-zi		ḡiri <sub>3</sub> En-diḡir-ḡu kišib <sub>3</sub> Puzur <sub>4</sub> -I <sub>3</sub> -I <sub>2</sub>

<sup>a</sup> Collations: *OrAnr* 14:155; *Orient* 24:109, 1.

AS.06.00	<i>AUCT</i> 1:445	38 kuš udu maš <sub>2</sub> ħi-a sa-bi 1 ma-na 16 gin <sub>2</sub> ; 17 kuš udu sa 1/2 ma-na 4 gin <sub>2</sub> ; 15 kuš udu 2 kuš sila <sub>4</sub> sa-bi 1/2 ma-na	ki Nu-ur <sub>2</sub> - <sup>d</sup> Suen-ta		ġiri <sub>3</sub> Ur-gar ġiri <sub>3</sub> Za-zi ġiri <sub>3</sub> Al-la-mu	kišib <sub>3</sub> -bi pisan Du <sub>11</sub> -ga-ka igi kar <sub>2</sub> - kar <sub>2</sub> -dam
AS.06.05	<i>CST</i> 471 <sup>b</sup>	3 kuš <sup>ansē</sup> kuṅga <sub>2</sub> 87 kuš duš <sub>2</sub> 43 kuš amar dusu <sub>2</sub> 155 kuš udu du <sub>10</sub> -gan kuš sig <sub>2</sub> mu <sub>2</sub> -am <sub>3</sub>	ki Nu-ur <sub>2</sub> - <sup>d</sup> Suen-ta	ba-zi		kišib <sub>3</sub> Nam-ħa-ni
AS.06.05	<i>BIN</i> 3:613	3 kuš <sup>ansē</sup> kuṅga <sub>2</sub> 87 kuš dusu <sub>2</sub> 43 kuš amar dusu <sub>2</sub> 155 kuš udu kuš udu mu <sub>2</sub> -am <sub>3</sub>	ki <sup>a</sup> Šara <sub>2</sub> -kam-ta	šu ba-ti	Nam-ħa-ni šu ba-ti	
AS.09.09	<i>PDT</i> 1:349	24 kuš gu <sub>4</sub> , 25 kuš ab <sub>2</sub> gir, 8 kuš amar gu <sub>4</sub> 433 kuš maš <sub>2</sub> kuš! e-sir <sub>2</sub> , 1079 kuš udu du <sub>10</sub> -gan, kuš sig <sub>2</sub> mu <sub>2</sub> -am <sub>3</sub>	ki <sup>a</sup> Šara <sub>2</sub> -kam-ta	šu ba-ti	Nam-ħa-ni šu ba-ti	
ŠŠ.03.04	<i>PDT</i> 1:624	4 uruda gin <sub>2</sub> 2/3 ma-na-ta 3 tibira 10 gin <sub>2</sub> -ta 24 ad-tab sig <sub>2</sub> ud <sub>5</sub> 1/2 ma-na- ta 24 kuš udu	ki Nu-ur <sub>2</sub> - <sup>d</sup> Suen-ta	šu ba-ti	Nam-ħa-ni šabra šu ba-ti	
ŠŠ.03.11	<i>AUCT</i> 1:368	60 gu <sub>4</sub> ba-ug <sub>7</sub> ad <sub>6</sub> kuš-bi	ki Lugal-me-lam <sub>2</sub> - ta	ba-zi	Nu-ur <sub>2</sub> - <sup>d</sup> Suen šu ba-ti	ġiri <sub>3</sub> <sup>d</sup> Šul-gi-diġir- kalam-ma

<sup>b</sup> Collation: *MVN* 12: p. 115.

Table 5: Management of by-products during the reign of Amar-Suena and the first years of Šu-Suen

Date	Publication	Products	From	Transaction	Receiver	Details
ŠS.04.01	MVN 15:298	7 gu <sub>4</sub> ba-ug <sub>7</sub> ad <sub>3</sub> kuš-bi	ki Lugal-me-lam <sub>2</sub> -ta	ba-zi	Lu <sub>2</sub> -kal-la šu ba-ti	ġiri <sub>3</sub> dŠul-gi-diġir-ra kalam-ma
ŠS.05.00	SACT1:120 <sup>a</sup>	1 kuš gu <sub>4</sub> , 1 sa gu <sub>4</sub> , 1 kun gu <sub>4</sub>	(Lu <sub>2</sub> /Lugal-i <sub>3</sub> -zu engar)?	kišib <sub>3</sub>	kišib <sub>3</sub> Lu <sub>2</sub> -diġir-ra	sealed by Lu <sub>2</sub> -diġir-ra dub-sar dumu Lugal-e <sub>2</sub> -maġ-e
ŠS.05.12	BIN3:243	monthly account: obv.17–rev.22: 222 udu-u <sub>2</sub> , 55 maš <sub>2</sub> -gal, 75 u <sub>8</sub> u <sub>2</sub> , 32 u <sub>5</sub> u <sub>2</sub> , 384 udu, ba-ug <sub>7</sub> ad <sub>3</sub> -bi ur-gir <sub>15</sub> -re ba-ab-gu <sub>7</sub> , kuš sa-bi rev.25–31: 3 gu <sub>4</sub> u <sub>2</sub> , 143 udu-u <sub>2</sub> , 11 u <sub>8</sub> u <sub>2</sub> , 33 maš <sub>2</sub> -gal-u <sub>2</sub> , 34 u <sub>5</sub> u <sub>2</sub> , 3 gu <sub>4</sub> 221 [udu], ba-ug <sub>7</sub> ad <sub>3</sub> -bi	ki Ur-ku <sub>3</sub> -nun-[na-ta]	(ba-zi)	Lu <sub>2</sub> -kal-la šu ba-ti	for first entry: ġiri <sub>3</sub> Puzur <sub>4</sub> -dEn-lil <sub>2</sub> sipa ur-ra ugula Na-wi-ir-DIĠIR
ŠS.07.12	BIN3:456	14 gu <sub>4</sub> 3 anše ba-ug <sub>7</sub> ad <sub>3</sub> kuš-bi	ki Lugal-me-lam <sub>2</sub> -ta	ba-zi	Lu <sub>2</sub> -kal-la šu ba-ti	
ŠS.09.01–12	SET87	annual account: rev.iii 4–11:7 udu, 13 u <sub>8</sub> , 21 maš <sub>2</sub> -gal ba-ug <sub>7</sub> al-dar-[ra] ad <sub>6</sub> ! kuš u <sub>3</sub> sa-bi	[Ur]-ku <sub>3</sub> -nun-na	ba-zi	Lu <sub>2</sub> -[kal-la] šu ba-an-ti	
XX.XX.XX	PDT 1:515	annual account?: rev.ii: 14–23:6 gu <sub>4</sub> ba-ug <sub>7</sub> a <sub>2</sub> -sig <sub>3</sub> -ga, 4 gu <sub>4</sub> + 271 udu + maš <sub>2</sub> ba-ug <sub>7</sub> al-dar-ra ad <sub>3</sub> kuš u <sub>3</sub> sa-bi			Lu <sub>2</sub> -kal-la šu ba-an-ti	

<sup>a</sup> Collations: *OrAmr* 20:129, 136.



## 5. Conclusion

It has been demonstrated that early in the reign of Amar-Suena, the management of dead animals at Puzriš-Dagan was divided between two different departments. One was concerned with dead animals for the kitchen, including processing the meat. It was headed by Beli-arik, Ur-niġar and Šulgi-iriġu. The other was concerned with the disposal of carcasses and processing the by-products, such as skins, tendons and wool. Originally probably headed by Naram-ili, it was subsequently run by Nur-Suen and Lu-kala.

The officials of the first department may have had previous connections with the kitchen, as Ur-niġar's father was a cook. But those working at the skinning department were not associated with the kitchen or with the workshops at Puzriš-Dagan. They had nothing to do with the disposal of carcasses and were not in any way related to the slaughterhouse. They were in charge of the storeroom that was possibly associated with the palace and where carcasses and hides were stored until a need arose for them to be distributed. If, however, the father of Nur-Suen, a certain Iddin-Erra, is to be identified with the leather worker responsible for collecting wool and who worked within the Šulgi-simti organization during the reign of Šulgi, then there would be reason to suggest that responsibilities and professions ran in the family in this instance as well.

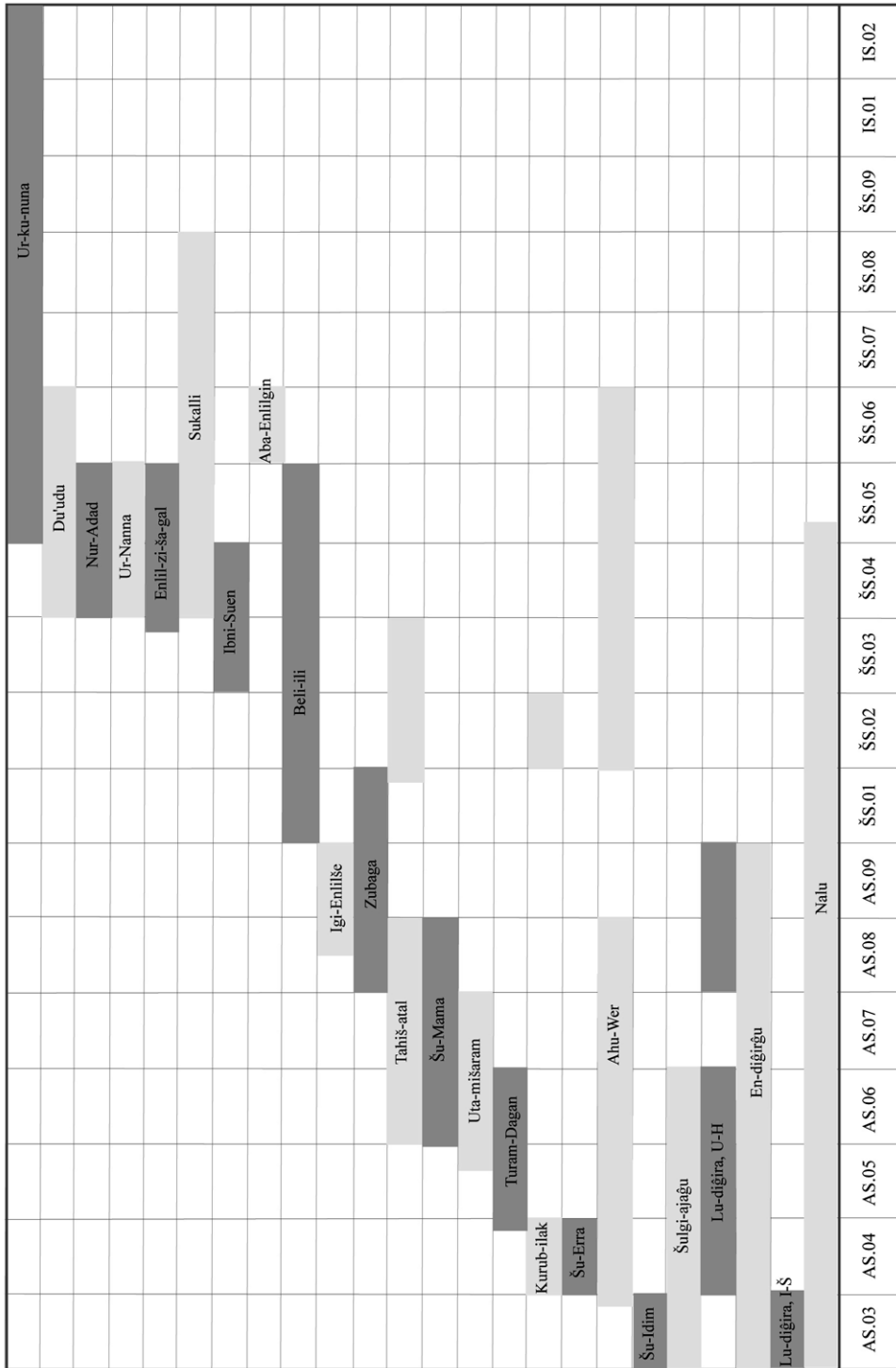


Figure 1: Officials sending dead animals to the bureau of Šulgi-irĝu.

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Christina Tsouparopoulou  
Institut für Ur- und Frühgeschichte und Vorderasiatische Archäologie  
Universität Heidelberg  
Marstallhof 4  
D - 69117 Heidelberg  
tsouparopoulou@uni-heidelberg.de