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PUBLICATIONS DE L'INSTITUT ORIENTALISTE DE LOUVAIN

71

GREATER MESOPOTAMIA STUDIES 1

Edited by Eric GUBEL, Kathleen ABRAHAM, Cecile BAETEMAN and Jan TAVERNIER

Topography and Toponymy in the Ancient Near East

Perspectives and Prospects

edited by

Jan TAVERNIER, Elynn GORRIS,
Kathleen ABRAHAM and Vanessa BOSCHLOOS

UNIVERSITÉ CATHOLIQUE DE LOUVAIN
LOUVAIN-LA-NEUVE

PEETERS
2018

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IN SUSA'S FIELDS
ON THE TOPOGRAPHY OF FIELDS IN OLD BABYLONIAN
ADMINISTRATIVE DOCUMENTS FROM SUSA¹

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Introduction

Old Babylonian legal, economic and administrative documents involving real estate from Mesopotamia in general, and those from the richly documented city of Sippar in particular, usually give a very detailed description of the geographical location of the real estate involved. Especially when real estate was transferred, through sale, exchange, donation or inheritance, it was necessary to give an adequate and meticulous description of its location, not only because these documents served as title deeds, but especially as they referred to earlier documents concerning the real estate involved. On the occasion of the transfer, the whole dossier concerning the real estate – the so-called ‘chain of transmission’ – was given to the new owner².

In legal, economic and administrative documents involving fields and orchards from Old Babylonian Sippar, the location of the fields and orchards is described by giving the irrigation district (*ugārum*) in which it is situated, as well as its neighbours, be it other fields or orchards, canals, levees or other topographical features. The neighbours of a field are given as follows: both the right and left side are indicated by the Sumerian *DA* or Akkadian *ita* (adjacent to), the front and rear sides are indicated by the Sumerian *SAG.BI.1.KAM* and *SAG.BI.2.KAM* or *SAG.BI* and *EGIR.BI*. Exceptionally, the administrative territory (*eršetum*) in which fields and orchards are located is given.

¹ I would like to thank Béatrice André-Salvini from the Louvre as well as Simin Piran from the National Museum of Iran for their most hospitable welcome during my stays in Paris and Tehran to study the Susa tablets. My thanks go also to Michel Tanret who read the draft version of this paper and offered insightful comments and suggestions.

² See Charpin 1986; Janssen, Gasche & Tanret 1994; Tanret & Janssen, forth.

Thanks to the detailed information in these texts, an overall picture of the arable land within the administrative territory of Sippar can be drawn, as is shown by Tanret (1998, 71-72) who was able to locate no less than 33 irrigation districts and five canals in the area between the Euphrates and the Irnina.

Unfortunately, it is as yet not possible to delineate such a detailed picture of the geographical location of the fields in the territory of Susa. The reason for this is threefold:

- 1) our geographical knowledge of the area around Susa in the 2nd millennium BCE is not at all comprehensive,
- 2) our corpus of administrative texts from 2nd millennium BCE Susa describing locations of fields is much smaller, and
- 3) the way in which the location of the fields is described in the Susa texts is completely different.

In what follows, I will give an overview of which data we have at our disposal concerning the description of fields and orchards in the Susa texts and how we can possibly interpret them regarding to the geographical situation of the Susa area in the 2nd millennium BCE.

Corpus

The data for this study are extracted from 62 lease contracts, 42 sale contracts, 5 divisions and 3 exchange contracts in which fields and orchards, being leased, sold, divided or exchanged, are described. Only those contracts in which at least one geographical element (area in which it is located, irrigation outlet of the canal by which it is irrigated or neighbours) is used in the description of the fields or orchards have been considered for this study.

All of the texts considered date from the so-called Sukkalmah period, corresponding roughly to the first half of the 2nd millennium BCE or what is known in Ancient Near Eastern history as the Old Babylonian period. The majority of the texts have been collated at the National Museum of Iran (Tehran) and the Musée du Louvre (Paris).

In most texts, the objects to be transferred are fields: 60 fields are leased, 39 fields are sold, eight fields are divided and three fields are exchanged. In most cases, these fields are simply indicated by the logogram a.šà. Sometimes the field is further specified as being an unimproved

Table 1: Overview of the fields and orchards

	leases	sales	divisions	exchanges	
a.šà	59	32	4	2	97
a.šà <i>birīti</i>	1				1
a.šà <i>bīru</i>			3		3
a.šà <i>burubalūm</i>		1			1
a.šà im.an.na ù pa ₅		1			1
a.šà NI-IK- <i>lam qadu</i> a.šà Šušu ^{ki}		1			1
a.šà <i>qadu</i> ^{giš} išīšū		1			1
a.šà ù an.za.gar				1	1
a.šà ù kiri ₆		1	1		2
a.šà 'ú'-[ša-al]- <i>la</i>		1			1
<i>huptu</i>		1			1
<i>šiqītum inīti</i> PN		1			1
kiri ₆	1	5	5		11
kiri ₆ <i>qadu bīrīšu</i>	1				1
kiri ₆ ù é.dù.a		1			1
	62	46	13	3	124

plot of land (a.šà *burubalūm*³), a field watered by rainfall (a.šà im.an.na), an irrigated plot of land (*šiqītum*⁴) including the services of an ox team of someone (*inīti*⁵ PN), a field located in the lowlands (*ušallum*), or a field subject to special legal restrictions (*huptu*⁶). One field is designated as a.šà NI-IK-*lam*⁷ (*MDP* 23 219: 4) and sold together with a Susian field (*qadu* a.šà Šušu^{ki}). It is not clear to me what is meant by NI-IK-*lam*⁸ As it

³ Cf. *CAD* B *sub* burubalū A.

⁴ Cf. *CAD* Š₃ *sub* šiqītu b).

⁵ Cf. *CAD* I/J *sub* inītu A 1.

⁶ Cf. *CAD* H *sub* huptu A (b).

⁷ Read by Scheil (1932, 73-74) as *ni-iq-dingir* ('un champ de Niq-ili'). Collation showed that the last sign is to be read LAM instead of DINGIR.

⁸ Possible readings are: *niglam* cf. *CAD* N₂ *sub* niglu (a garment), possibly a Sumerian loanword, and *niklam* cf. *CAD* N₂ *sub* niklu 1. ingenuity 2. trick, deception. None of these interpretations make sense in this context. It might be a scribal error for *niggallu*, *niggallū* or *niggulū* cf. *CAD* N₂ *sub* niggalu 1. sickle; *niggallū* property and *niggulū* (mng. uncert.), but even then it is not quite clear what is meant.

is sold together with a Susian field, one might consider NI-IK-*lam* indicating in some way ‘not in the Susa area’ as opposed to a.šà Šuš^{ki}. There is, however, no toponym (N/L)Ig/k/qlum known.

Other fields are transferred together with a balk or ridge (*birītu* and *bīru*⁹), with trees (^{gi}šišū), with a tower or fortified area (an.za.gar¹⁰) or with an orchard. In a few texts, the objects to be transferred are orchards: Seven orchards are sold, among which one together with a house, six orchards are divided, and two are leased, among which one with its balk.

Irrigated Fields vs. Fields Watered by Rainfall

In the Old Babylonian Susa texts, both irrigated fields (*a.šà šiqītum*) and fields watered by rainfall (*a.šà im.an.na*) are mentioned, which is of course not the fact in, for example, texts from Old Babylonian Sippar, where all fields were watered through irrigation canals. However, this does not come as a surprise, as it is known that the Susiana plain, although geographically an extension of the Lower Mesopotamian Plain, climatically differs from it in one important respect, viz. the possibility of dry farming. According to Moghaddam (2012, 525), most of the plains in Greater Susiana received roughly 250 mm of rainfall, which is near the minimum necessary for dry farming. It is thus likely that a form of dry farming was practiced, although particularly in the vicinity of Susa, the natural position of the Karkheh river levee above the level of the plain facilitated irrigation agriculture.

This is indeed apparent from the texts in our corpus, where the majority of fields and orchards – ca. 70% – are said to be irrigated by a canal. Only few fields are explicitly said to be watered by rainfall¹¹, implying that the ca. 30% of the fields and orchards in our corpus not explicitly said to be irrigated by a canal are not automatically to be interpreted as watered by rainfall. We must thus conclude that the majority of the fields in the vicinity of Susa were irrigated by canals, which is also apparent from the way in which the location of the fields is described.

⁹ Cf. *CAD B sub* birītu 1. balk (between fields and gardens) and bīru C 1. balk (between fields) 2. ridge (between furrows).

¹⁰ Cf. *CAD D sub* dimtu 2. b)

¹¹ *MDP* 22 003 (= 18 202; adoption): 10: a.šà im.an.na ù šī-qi-ta; 22 086 (= 18 222; lease): 2-3: qa-du-um a.šà im.an.na ù ú-ša-al-li-šu; 22 137 (donation): 9: a.šà im.an.na ù šī-qi-ta; 22 138 (donation): 9: šī-qi-ta ù a.šà im.an.na; 22 169 (division): 10: ‘a.šà’ [...] ù a.šà im.<an>.na; 38 & 40: a.šà 0.2.3.0 numun bal.3.kam ù a.šà ‘im.<an>.na’; 24 356 (sale): 2: ù a.šà im.an.na; 24 382 (donation): 7: a.šà im.an.na ù šī-qi-ta and 28 420 (sale): 1: [a.šà] 0.3.2.0 numun-šu a.šà im.an.na. Most of these fields watered by rainfall are not described as being located in a specific area and are thus not incorporated in our corpus.

Description of Fields and Orchards in the Old Babylonian Susa Texts

In our corpus, the fields or orchards to be leased, sold, divided or exchanged are described according to a more or less regular pattern, consisting in its most complete form of the following four points:

1. the size of the field or orchard
2. the BALA sector or area in which the field or orchard is located
3. the irrigation outlet of the canal by which the field or orchard is watered
4. the neighbours of the field or orchard

Surprisingly, the fields or orchards in the lease contracts are described in the most complete way, covering mostly all four above mentioned points. One would expect the sale contracts to contain the most exhaustive descriptions, as they served as title deeds and were to be kept and passed on in case of a property transfer. This is, however, not the case. Although in many cases quite elaborate, the description of the fields and orchards in the sale contracts is usually less complete than those in the lease contracts. The divisions are least complete, but this is not surprising as they refer to title deeds with a more elaborate description.

The Size of the Field

The size of the field or orchard is normally not indicated by a surface measure such as a number of bur (6.48 ha), eše (2.16 ha) or iku (3600 m²) as it is the case in the Old Babylonian Sippar texts, but by the amount of seed necessary to cultivate the field or orchard in question, expressed by the phrase a.šà x numun-šū “a field requiring x litres of seed” (literally “a field x litres (is) its seed”)¹². In one exchange (*MDP* 24 366) and four sale contracts (*MDP* 22 057, 23 217 and 219 and 24 360), the amount of seed necessary to cultivate the field is not given. 18 fields, five orchards and one tower are described as *išū u mādu* “be it less or more” – on one occasion (*MDP* 22 087) the scribe added *mali ibaššû* “as much as there is”.

The amount of seed necessary to cultivate the fields and orchards varies from one bán to 10 gur (10 to 3000 litres). In about 18% of the sale contracts, the amount of seed necessary to cultivate the field is followed

¹² In one sale contract (*MDP* 22 070) this is written in Akkadian: *ze-er-šū*.

by the phrase *šiddāt tupšarrim* “according to a survey by the scribe”. This proves that the amount of seed was indeed correlated with the surveyed actual size of the field. These calculations never took into account what specific crop was to be grown on the field – barley, sesame or peas – which means that one crop, no doubt barley, was taken as a standard for these correlations. The most common amounts of seed necessary to cultivate fields mentioned in the lease contracts are 0.1.1.0 or 70 litres (8×), 0.1.4.0 or 100 litres (6×), 0.2.3.0 or 150 litres (5×) and 1.0.0.0 or 300 litres (4×). In the sale contracts the most common amounts of seed necessary to cultivate the fields are 0.1.4.0 or 100 litres (3×) and 1.0.0.0 or 300 litres (3×).

If we take the standard sowing rate, being 1 gur/būr (cf. Halstead 1990, 187 and Maekawa 1984, 87), as a guideline, this would mean that most common surfaces of fields in Susa were 0.0.4 20 sar or 1,51 ha (8 leases), 0.1.0 or 2,16 ha (6 leases and 3 sales), 0.1.3 or 3,24 ha (5 leases and 2 sales) and 1.0.0 or 6,48 ha (4 leases and 3 sales). For all fields and orchards for which a readable amount of seed necessary is mentioned, the following overview can be given:

Table 2: Equivalence amount of seed / surface

leases	sales	amount of seed	surface
1	2	0.0.1.0	60 sar
2	—	0.0.2.0	0.0.1 20 sar
1	—	0.0.2.5	0.0.1 50 sar
1	1	0.0.3.0	0.0.1 80 sar
1	2	0.0.4.0	0.0.2 40 sar
3	—	0.0.5.0	0.0.3
—	2	0.1.0.0	0.0.3 60 sar
8	—	0.1.1.0	0.0.4 20 sar
1	1	0.1.1.5	0.0.4 50 sar
2	—	0.1.3.0	0.0.5 40 sar
6	3	0.1.4.0	0.1.0
2	—	0.1.5.0	0.1.0 60 sar
1	—	0.1.5.5	0.1.0 90 sar
—	1	0.2.0.0	0.1.1 20 sar
—	1	0.2.2.0	0.1.2 40 sar

leases	sales	amount of seed	surface
5	2	0.2.3.0	0.1.3
—	2	0.3.2.0	0.2.0
1	2	0.4.0.0	0.2.2 40 sar
4	3	1.0.0.0	1.0.0
1	—	1.1.1.0	1.0.4 20 sar
—	1	2.2.0.0	2.1.1 20 sar
1	—	3.0.0.0	3.0.0
—	1	4.0.0.0	4.0.0
1	—	10.0.0.0	10.0.0

It goes without saying that the field surfaces calculated above are hypothetical.

Two sale contracts use surface measures to indicate the size of their fields:

- (1) *MDP* 24 349: 0.1.3. a.šà: a 3,24 ha field (bought by Puzur-Manzat from Mihihī, Atta-harut and Sîn-bani).
- (2) *MDP* 24 350: 0.2.6 (sic!) a.šà ... ša *Abi-ili* ... *ina aplī ša Abi-ili* ha.la *Puzur-Baba Ipquša irtenede* 0.1.0 iku ša 0.2.6 (sic!) a.šà: a 6,48 ha field ... belonging to *Abi-ili* ... among the heirs of *Abi-ili*, the share of *Puzur-Baba, Ipquša* will take possession of it: 2,16 ha of the 6,48 ha field (bought by *Ipquša* from *Puzur-Baba*).

Both are to be dated very early in the Sukkalmah period, as can be deduced from the oath that is sworn by *Pala-iššan* and *Kuk-kirmaš*. It seems thus that early on they still used the Mesopotamian surface measures they no doubt adopted during the Old-Akkadian and Ur III periods, but changed this to a system of their own, possibly typical Elamite. Note, moreover, that the scribe of *MDP* 24 350 had little knowledge of the Mesopotamian system of area measures, as he wrote twice 0.2.6 whereas this should have been 1.0.0 (as 6 iku equals 1 èše and 3 èše equals 1 bür).

Another sale contract (*MDP* 23 205) combines both systems: *Sîn-inguranni* buys a.šà 2.2.0.0 numun-šu šà 1.0.0 iku *ra-BI-KI* from *Puzur-Mami* and *Inšušinak-ili*. Scheil (1932, 53) translated this as 'a field requiring 2.2.0.0 of seed on the 6,48 ha field of *Rabiki*' (un champ de 2 gur 120 qa d'ensemencement, sur le *bur* de *Rabiki*). Scheil's interpretation poses two

problems: (1) As the personal name Rabiki is not attested elsewhere in the Susa texts, it makes more sense to read *ra-pí-qi* and interpret it as a form of the verb *rapāqum* ‘to hoe’. However, a translation ‘the 6,48 ha field of the hoer’, with *rāqipi* as a part. G sg. masc. gen., does not make much sense either. (2) Scheil’s interpretation implies that the field requiring 2.2.0.0 of seed was located on and thus a part of the 1.0.0 field. However, this does not fit with the traditional equivalency (used above) of one gur per būr as it is more than two gur per būr. Although, as we stated above, this equivalency is hypothetical, it cannot have been that far off the mark.

A much better explanation might be that the scribe wanted to indicate that a part of the field to be sold was already hoed¹³: a field requiring 2.2.0.0 of seed, of which 1.0.0 iku is (already) hoed. This is acceptable since ŠÀ was used in Susa to express the determinative pronoun *ša* (and not only the Sumerogram ŠÀ ‘part of’).

MDP 23 205 is to be dated during the reigns of Temti-agun and Kuk-Našur as can be deduced from the oath. However, as there are two rulers named Temti-agun and at least three named Kuk-Našur, this leaves several options for absolute dating. Since both the Mesopotamian system of area measures and the (probably) Elamite system of expressing the size of a plot, are used in this text – implying there might have been a transitional phase in which both systems were used before they choose to use solely the Elamite system – it seems very likely that this text is to be dated early in the Sukkalmah period and was written during the reigns of Temti-agun I¹⁴ and Kuk-Našur I, which must have been chronologically close to that of Pala-iššan and Kuk-kirmaš.

The BALA Sector or Area in which the Field or Orchard is Located

After the size of the field or orchard, the BALA sector in which it is located is given. This is always one of the three BALA sectors known to us: BALA IGI.URU^{ki}, BALA URU.DAG and BALA GU.LA also known as BALA GAL. This shows that the agricultural area of Susa was divided in three sectors. As yet, we do not know how to translate or to interpret these renderings.

¹³ Although in that case, we would expect *rapqi* (vbl. adj. sg. masc. gen.) instead of *rāqipi* (part. sg. masc. gen.).

¹⁴ Cf. Vallat 2007 for Temti-agun I.

BALA GAL/GU.LA = pilê rabî?

However, one loan contract (*MDP 23 197*¹⁵) gives a syllabic and no doubt phonetic writing of the *BALA GAL*, viz. *pi-le-e ra-bi*. Scheil (1932, 41) read this phrase *ša pi le-e ra-bi* and translated ‘according to the large list’ (*selon la teneur du grand registre*). This, however, makes no sense. As *pi-le-e ra-bi* is added to the name of a month, where normally a *BALA* sector is mentioned (*iti ... šà BALA ...* ‘month ... of the ... *BALA*’), *rabi* is Akkadian for *GAL* and *pi-le-e* echoes *BALA*, there is no doubt that *pi-le-e ra-bi* is an alternative rendering for *BALA GAL*.

How is *pi-le-e ra-bi* to be interpreted? *rabi* is obviously the Akkadian adjective meaning “big” and equals the Sumerian *GAL* or *GU.LA*. It seems thus that the Susians read the logogram *BALA* as *pi-le-e*, but what does *pi-le-e* mean and what language is it? Since *rabi* is clearly Akkadian, it seems logical that *pi-le-e* would also be an Akkadian word: as such, *pilê rabî* would be the Akkadian reading of the logographic *BALA GAL/GU.LA*. This, however, is not without problems.

Whereas *rabi* is the correct Akkadian reading of the Sumerian *GAL* or *GU.LA*, this is not the case for *pi-le-e* and *BALA*. The Akkadian reading of *BALA* is *palû* (*pala’u*) ‘reign, dynasty, term of office’¹⁶. A possible explanation is that *pi-le-e* is a scribal error for *pa-le-e* (*ša palê rabî* ‘that of the big reign, dynasty’). However, even so, this does not seem to make much sense in the context of the texts under study, where *BALA* certainly indicates an area in which fields or orchards are located. A field or orchard cannot be located in or be part of a reign, dynasty or term of office. Moreover, the Akkadian word *palû* is used in the expression *ana dūr u pala* – always written syllabically *a-na du-úr ù pa-la* – one of the standard formulae used in sale contracts in Old Babylonian Susa meaning “for all future time”. It seems rather unlikely that the Susian scribes would use the logogram *BALA* and the syllabically written *pa-la* to express the same word in one and the same text. We must therefore conclude that *BALA* in the expressions *BALA IGI.URU*^{ki}, *BALA URU.DAG* and *BALA GAL/GU.LA* is not used to express the Akkadian word *palû* ‘reign, dynasty, term of office’.

¹⁵ *MDP 23 197*: (1) 3.1.5.0 gur še sag 6 gín kù.babbar (2) ki *a’-li-tillat-ti* (3) *šf-mu-ú-a il-qé* (4) *ri-iš iti a-da-ri-im* (5) *ša pi-le-e ra-bi še-am il-qé* (6) [*i-na e-bu-ri-im i-na iti dingir.mah*] (7) [*še*]-*am* ù *hu-bu-la-šu* kù.babbar ù *máš* (8) *ú-ta’ar-ma* (9-11) punishment clause (12-16) witnesses (1010 litres of barley, the principal, (and) 50 grams of silver, from *Ali-tillati*, *Šimuya* lent. At the beginning of the month *Adaru* of the *BALA GAL* [*pi-le-e ra-bi*], he received the barley. At the harvest, in the month *dingir.mah*, he must return the barley and its interest (and) the silver and (its) interest).

¹⁶ For the Akkadian readings of the Sumerian verb *BALA*, cf. ePSD *sub bala*.

CAD P sub *palû mentions another – not yet attested – Akkadian word *palû* as a reading of BALA in Elam and translates it as ‘sector (?) (a juridical or topographic term describing real estate)’. In other words, according to *CAD P* BALA is to be read *palû* in Akkadian but has another meaning than the known word *palû* and is only attested in Old Babylonian Susa where it is moreover only written logographically. This is of course possible, but there is no evidence whatsoever that BALA was to be read *palû*, at the contrary, the text under consideration (*MDP* 23 197) shows that it was read *pilê* in the genitive, and thus *pilû* in the nominative. However, none of the Akkadian words *pilû* ‘a disease’, *pillû* ‘a plant’, *pîlu* ‘limestone’ or *pillu* ‘a foodstuff’ or ‘a plant’¹⁷ fit the context. Moreover, the ending in -ê implies a root ending in -ā (*pilā’u* > *pilû* and *pilā’i* > *pilê*) excluding *pîlu* and *pillu* anyhow.

BALA = pilku?

According to Scheil (1930, 16 fn. 4), BALA was to be read *pilku* (‘les grandes divisions du territoire de Suse, appelées probablement *pilku*’). Unfortunately, he does not add on what his reading is based. As to the meaning, *pilku* ‘boundary, border’ or ‘district’¹⁸ would perfectly fit the context. It is, however, hard to believe that *pi-le-e* is a scribal error for *pi-il-ki*. Moreover, the word *pilku* appears in some Old Babylonian Susa texts, but clearly with another meaning¹⁹. In the lease contract *MDP* 23 243²⁰, it is stipulated that Inšušinak-šar-māti, the owner and lessor of a field, must pay 4800 litres barley, being the *pilkê* of the field (*pi-il-ke-e* a.šà), to Inšušinak-šilli, the lessee. In another contract, *MDP* 24 368²¹, it is

¹⁷ Cf. *CAD P sub* pilû (a disease) SB; pillu A (*pilû*) (a foodstuff) NA; pillû (a plant) MB, SB (Ú/GIŠ.NAM.TAR/TAL); pîlu (*pêlu*, *pîlu*) limestone OB Elam; pîru A (*pêru*, *pîlu*, *pêlu*) elephant from OB on; pillu B (mng. unkwn.) Nuzi.

¹⁸ Cf. *CAD P sub* pilku A.

¹⁹ *CAD P* includes a word *pilkû* used in Old Babylonian Elam, the meaning of which is unknown. Note, however, that the same attestations are listed as *pi ilki* under pû A 8 c) 3’; cf. also Salonen 1967, 37.

²⁰ *MDP* 23 243: (1) a.šà šà ^dmüš.eren-šar-ma-ti (2) ^{ld}müš.eren-šil-lí i-ri-iš-ma (3) še-a-am šà a.šà wa-aq-ru-tu i-te-sí-ip (4) 16.0.0.0 gur še-a-am pi-il-ki-e a.šà (5) ^dmüš.eren-šar-ma-ti (6) a-na ^dmüš.eren-šil-lí i.ág.e (7) ù 1 1/2 igi.5.gál gín kù.babbar šà udu i-na-di-in (8-13) witnesses (14) oath (The field of Inšušinak-šar-māti, Inšušinak-šilli cultivated (it) and Waqrutu gathered the barley of the field. 4800 litres of barley, the *pilkê* of the field, Inšušinak-šar-māti must pay to Inšušinak-šilli and (he) must give 14 grams of silver of the sheep).

²¹ *MDP* 24 368: (1) [!]be-lu-um (2) [a].šà ḥa.la x-ku-bi x-x (3) a-na [e-si-ip] ta-ba-al (4) a-na a-wi-’lî i-di-in (5) i-na mu ’ku-te-’ir-na-aḥ-ḥu-di (6) ’ù te-’im-tî-a-gu-’un’ (7) ’pî-il-ki-šu [il]-qé (8) a-na še.giš.ì ù [gú].tur (9) ’a-wi-lum ú?’-še₂₀-’šî’ (10-11) penalty

said that Bēlum leased a field to Awilum and that he took his *pilku* (*pi-il-ki-šu*) by the life of Kuter-Nahhunte and Temti-agun. In the verdict *MDP* 23 242²² it is said that Taribatu underwent the *mê leqûm* procedure. Depending on the outcome of this procedure two verdicts are given, one being that he is allowed to take an amount of barley, being the *pilki* of the field (*pi-il-[ki] a.šà-li*), amongst other things. In *MDP* 18 154, it is said that the *pilku* (*pí-el-ku-šu*) of a field of An.za.gar-*rapašti*²³ is 15 gur. These texts clearly show that *pilku* was a specific kind of or a part of the yield of a field, and no indication for an area or district.

Elamite Origin of pilku and pilê?

The various spellings of the word (*pi-il-ke-e*, *pi-il-ki-šu* and *pí-el-ku-šu*) are, however, very interesting and point in my opinion to the fact that this is no Akkadian word, but must be traced to an originally Elamite stem or word, Akkadianized to fit the further completely Sumero-Akkadian context of the texts. The same goes, in my opinion, for the word *pi-le-e*. Unfortunately, we only have one syllabically (phonetically) written attestation of *pilê*, but it is clear that it is no Akkadian word, as shown above.

The use of Elamite words or words to be traced back to Elamite stems in the Old Babylonian texts from Susa, whether Akkadianized or not, does not come as a surprise. When the Elamites were in need of an administrative system to organise their empire at the beginning of the 2nd millennium BCE, they fell back on the administrative and judicial system they learned as part of the scribal education they received during the Akkadian occupation two centuries earlier, which was the only legal and administrative phraseology they were acquainted with as there existed no such Elamite models, and updated it according to the contemporaneous Mesopotamian standards. It goes without saying that by adopting the Akkadian language and writing system and especially Akkadian legal and administrative phraseology and their manner of formulating legal, economic and administrative documents, the Akkadian influence was pervasive in

clause (Bēlum, a field, the share of x-kūbi-x-x, for an *esip tabal* lease, to Awilum (he) gave. By the life of Kuter-Nahhunte and Temti-agun, he took his *pilku*. To (grow) sesame and lentils, Awilum leased (the field)).

²² For the content of this verdict and the seal impressed on it, cf. De Graef *forth.*

²³ An.za.gar-*rapašti* is not listed as geographical name in *RGTC* 11. *CAD* R sub rapšu 1.f) lists it as “Flurname”. As there are several geographical names starting with an.za.gar in the Old Babylonian Susa texts (cf. *RGTC* 11, 12-13), it seems safe to interpret An.za.gar-*rapašti* or *Dimti-rapašti* as the name of a garrison town in the vicinity of Susa.

western Iranian bureaucracy and administration. However, although written in Akkadian, the legal and administrative formulas used in the contracts from Susa, differ considerably from those used in Mesopotamia and seem to be for the most part typically local. This is, amongst others, shown by the existence of several legal and administrative formulas and clauses that, although written in correct Akkadian, are not known or at least not mainstream in Mesopotamia proper. These formulas and clauses no doubt reflect customs and practices from the local Elamite customary law, and contain in some cases Elamite words or expressions, as some notions and concepts were considered untranslatable in Akkadian. Examples of such Elamite words are *kiten* ‘divine emblem’²⁴, *sukkisukki* (a particular class of people?)²⁵, *hawir sukkir* ‘(any) later ruler’²⁶, *parputtu* ‘offspring of a goat’ and *parkutu* ‘offspring of a cow’²⁷ and many more²⁸. Often, these Elamite words have been Akkadianized by adding the Akkadian nominative case ending *-u(m)* and/or genitive case ending *-ê* or *-i(m)*.

This is, in my opinion, exactly what happened to *pilku/pilkê* and *pilê*. Both words are possibly to be traced to the same Old Elamite root *pe-il* or *pi-il*²⁹, which is mentioned in the treaty between the Old Akkadian king Naram-Sîn and an unnamed Elamite ruler (Hinz 1967). The exact meaning of this word is not known. According to Hinz (1967, 90) it might mean ‘depot, deposit’ (see also the word *pe-il-mi-in* in the same text, translated by Hinz [1967, 69] as ‘consignation’). If this is correct, it might refer in some way to the storage of the yield of the fields. If we assume that the arable land around Susa was subdivided in three *pilê* or sectors, this might have been related to three different assembly points or depots where the yield of the fields in each sector was stored and administered.

²⁴ Best known from the penalty clause *ša ibbalakkatu rittašu u lišāššu inakissū kiten Inšušinak ilput imât* (‘He who breaks the agreement, they will cut off his hand and tongue; (because) he has touched the *kiden* of Inšušinak, he will die’) commonly used in economic and legal documents. For this penalty clause, cf. De Graef *forth*.

²⁵ Cf. *CAD S sub* *sukkisukki*.

²⁶ Cf. Reiner 1953 and De Graef *forth*.

²⁷ Used in cattle pledges, cf. Oers *forth*.

²⁸ These and other Elamite words and expressions have been discussed in my paper ‘Bilingualism and Biculturalism in Ancient Susa (Western Iran)’ read at the Forging Linguistic Identities Conference held at Towson University in 2013. Publication of this paper is in preparation.

²⁹ Cf. *EIW I sub* *pe-il*.

Does BALA/pilê Refer to a Three-field System?

As mentioned above, a BALA sector is generally added to month names in the Old Babylonian Susa texts. The reason why this is done is not clear to me. As mentioned above, BALA (*palû* in Akkadian) can be translated as ‘regnal year, reign, dynasty, term in office, period of office’³⁰, but as there are only three different BALA (IGI.URU^{ki}, URU.DAG and GAL/GU.LA) they can hardly refer to a (year of) reign, dynasty or period of office. The corpus of texts in which fields and orchards are mentioned, currently under study, clearly shows that the three BALA refer to geographical locations. As some month names can be combined with more than one BALA, a possible explanation is that each of these BALA sectors used its own administrative calendar, in which case it was necessary to add to a month name the BALA sector in order to know which calendar to apply. Note, moreover, that the Middle Elamite stem *pi-el* means ‘year’³¹, which might explain the use of the logogram BALA which has also both a chronological and a hydro-geographical connotation: apart from *palû* ‘reign, dynasty, term of office’, it is used, amongst others, in the expression BAL.RI (*eberta*) ‘on the other bank’³².

The fact that each BALA sector seems to have used its own administrative calendar might have been related to the periodization of producing and processing the various crops, especially as both irrigation- and dry-farming was practised in the Susa area. As such, this might refer to a three-field system. As the arable land of Susa was divided into three BALA sectors, one might consider this to be linked to a regime of crop rotation. The fields in one BALA sector would have been used to grow winter crops, the fields in the second BALA sector to grow summer crops and the fields in the third BALA sector would have been left fallow. With each rotation, the fields of each BALA sector would have been used differently, hence the necessity of different administrative calendars. One might even consider that the three agricultural sectors in Susa were named after the Ur III BALA taxation system, in which the payments of the provinces of the empire rotated month by month throughout the year³³ – the basic meaning of BALA being ‘rotation’ after all.

³⁰ Cf. *CAD P sub palû A* and *AhW II sub palû(m)*.

³¹ Cf. *EIW 1 sub pi-el*.

³² For other expressions with hydro-geographical connotation, cf. De Graef 2007, 49-50.

³³ Cf. Sharlach 2004 on the Ur III BALA taxation system.

It goes without saying that this three-field system hypothesis needs further research (I will come back on it in a later publication), but if it appeared from the texts that the Susians indeed applied an early version of the three-field system, this puts new light on the technique of crop rotation in the ancient Near East, as it is generally assumed that in the whole ancient Near East a two-field system was in use.

Three BALA Sectors

As mentioned above, three different BALA sectors, used to designate the different areas of the arable land around the city of Susa, are known to us:

- (1) BALA IGI.URU^{ki}
- (2) BALA URU.DAG
- (3) BALA GU.LA = BALA GAL = *pilê rabi*

We have no idea where these three BALA sectors are to be situated geographically with regard to the city of Susa. Apart from the exception discussed above (*pi-le-e ra-bi*), they are always written logographically, which makes it all the more difficult to grasp their meaning. Apart from the BALA GU.LA/GAL or *pilê rabi*, which obviously must have been large, the BALA IGI.URU^{ki} might have been located in front of or opposite the city as IGI means ‘front’ (*maḥrum* or *pānū*), and the BALA URU.DAG might refer to a location which was inhabited as DAG means ‘dwelling’ (*šubtum*).

In three cases, something is added to the BALA sector. In *MDP* 22 62, a field, 40 litres (is) its seed, (located in) the BALA IGI.URU^{ki} (at?) the dike of Dūr-erēš-ili (a.šà 0.0.4.0 numun-šū BALA IGI.URU^{ki} ‘i’-ki BÀD-URU₄.DINGIR³⁴) is sold. This might indicate that the IGI.URU^{ki} sector bordered a nearby located (fortified?) village called Dūr-erēš-ili³⁵. In *MDP* 24 366 a field (located in) the BALA URU.DAG of Dimat-šarrim (‘a.šà’ BALA URU.DAG šà AN.ZA.GAR-LUGAL) is exchanged. This might imply that not only Susa but also nearby villages such as Dimat-šarrim had BALA sectors or that this field is to be located in that part of the BALA URU.DAG bordering the village of Dimat-šarrim, which must have been located close to Susa as it

³⁴ Vallat (1993, 60) reads DÜR.NIN.DINGIR. Collation shows, however, that the original reading by Scheil (1930, 74-75) as *Dūr-APIN-ili* is correct.

³⁵ For other localities starting with Dūr- (BÀD-) in the Old Babylonian Susa texts, cf. *RGTC* 11, 59-61.

is mentioned in nine other texts from this city³⁶. A similar situation is to be found in *MDP* 22 101 where a field, 3000 litres (is) its seed, (located in) the BALA IGI.URU^{ki} of ... (a.šà 10.0.0.0 numun-[šū BALA] IGI.URU^{ki} šà x x (x)) is leased. Scheil (1930, 115) read [BALA] IGI.URU^{ki} šà *an-nu-ni-[tum]* and concluded this field belonged to the deity Annunītum. Collation of the tablet shows, however, that the signs after šà are certainly not to be read *an-nu-ni-[tum]*. The first sign might be a GI, the second and possibly third are illegible. Moreover, Annunītum is never attested in the Susa texts. Parallel to *MDP* 24 366, it was probably a toponym.

A Fourth Sector: eberti Zamun

Two fields are said to be situated *eberta* 'on the other bank' (*MDP* 22 90 and 103), 3 fields and 1 orchard are said to be situated *eberti Zamun* 'on the other bank of the *Zamun*' (*MDP* 23 216, 217, 218; 28 417) and 1 field is said to be located *eberti Zama* 'on the other bank of the *Zama*' (*MDP* 23 209). In all probability, *eberta*, *eberti Zamun* and *eberti Zama* are indications for the same area, viz. the area at the other bank of the *Zamun* watercourse – *Zama* being an alternative spelling. According to *EIW* *Zamun* is the name of a ford in the vicinity of Susa³⁷. *MDP* 28 502, a docket stating the receipt of 60 litres of lentils, mentions an irrigation canal (pa₅) *Zamu* located in the BALA IGI.URU^{ki}. It is, however, very unlikely that the *Zamun* (*Zama*) watercourse was but a small irrigation canal. Especially as the seven fields and orchard mentioned above are not located in a BALA sector, on the contrary: their location *eberta* / *eberti Zamun* (*Zama*) is given exactly where we would expect a BALA, implying the area at the other bank of the *Zamun* is mentioned instead of a BALA sector, or in other words, that the area on the other bank of the *Zamun* is a fourth sector where fields and orchards could be located, situated outside of the three BALA. It seems thus that an irrigation canal running through the BALA IGI.URU^{ki} had the same (or similar) name as a larger watercourse, maybe because it was a branch of this watercourse. The idea of an area on the other side of a watercourse clearly reminds of the situation in the Sippar region, where we have the territory of Sippar-Jahrūrum, south of the Euphrates and the territory of Sippar-Amnānum, divided in two parts, viz. a part between the Euphrates and the Irnina and a part at the other bank

³⁶ *MDP* 10 63, 72, 78; 18 181; 24 389; 28 440, 487, 515, 518 and 533.

³⁷ Cf. *EIW* 2 *sub* za-mu-un 'aE Name einer Furt im Raum Susa', but cf. also *sub* za-mu-un 'N.pr.m. aE' and *sub* za-mu 'aE Name eines Kanals(?)'.

of the Irnina, a tributary of the Euphrates flowing north and parallel of the latter³⁸. The area around the Irnina was considered a kind of natural border area of northern Babylonia in the Old Babylonian period, where garrisons and towns with military presence, such as Hirītum, Šarrum-Laba and possibly Halhalla, were situated³⁹. The same might have been the case at Susa, where the territory of arable land was divided in three BALA sectors plus an extra area of arable land at the other bank of the Zamun, to be considered a kind of natural border of the agricultural territory of Susa.

Question is therefore which watercourse the Zamun was. Susa is located between two major rivers, the Karkheh in the west and the Dez, a tributary of the large Karun River, in the east. Unfortunately, the ancient Elamite names of the Karkheh nor the Dez are known to us. It has been proposed to identify the Dez with the Hithite river, mentioned in an inscription of Šutruk-Nahhunte I, – probably to be identified with the Idid and (Nār-)Hudhud from the Neo-Assyrian sources⁴⁰. The Ula, Ulaya or Ulay, known from Middle-Elamite and Neo-Assyrian sources and the Bible book Daniel has been identified with the Karkheh, the Karun and the Shaur, the small river alongside Susa. The same goes for the Uknû or Uqnû, which has been identified with the Karkheh, the Karun and the Dez⁴¹. At present, it is unfortunately impossible to identify this Zamun River, but it must have been within a 10 to 20 kilometre radius from the city of Susa and it might have been one of the ancient branches of the present Karkheh or Dez rivers.

Half of the fields and orchards described as being located in a BALA (or other location), are located in the IGI.URU^{ki} sector, almost one quarter are located in the URU.DAG sector and only 14% is located in the GU.LA/GAL sector. This seems odd at first sight, the GU.LA/GAL sector being the largest as its name suggests. However, if we assume that the IGI.URU^{ki} sector was located in front of or opposite – and thus nearest to – the city, it seems logical that the majority of fields were located in a sector close to where the texts in which they are mentioned were found. If so, we can assume that the URU.DAG and GU.LA/GAL sectors were located farther from the city which is corroborated by the fact that a mere 8% of the fields is

³⁸ Cf. Cole & Gasche 1998, 16-23 and maps 5-8, and Tanret 1998, 71-72.

³⁹ Cf. De Graef 2002, 74-77.

⁴⁰ Cf. *RGTC* 11 *sub* Hithite.

⁴¹ Cf. *RGTC* 11 *sub* Ulā and *sub* +Uknu.

located at the other bank of the Zamun, which was probably situated at the border of the agricultural territory of Susa.

One lowland field⁴² is said to be located in the irrigation district Atu (a.ḡàr a-tu). This is the only Susa text mentioning the term *ugārum* so commonly used in Mesopotamia. Atu is a personal name, also attested in the legend of an early 2nd millennium cylinder seal impression from Susa⁴³. Based on the shape (vertical) and palaeography, this tablet is certainly to be dated in the early Sukkalmah period, which might explain the use of the Mesopotamian *ugārum*, just as Mesopotamian surface measures were used early on.

A field and an orchard are said to be situated in the city of Zappiya, bordering the *libāru* trees, adjacent to the property of Temti-ḥaštuk and that of Šîn-rabi. The field and orchard belong to Išmeanni, son of Šamaš-šemê and is mentioned in two sale contracts as the field to be pledged if the field Išmeanni sold should be claimed⁴⁴. According to *RGTC* 11, Zappiya is possibly to be identified with Zappi, known from the Persepolis Fortification Tablets and to be located according to Koch in the present-day region of Khuzestan⁴⁵. It seems indeed very logical that the city of Zappiya was located in the Susiana plain, at a reasonable distance of Susa. It is, however, remarkable that a field and orchard in another town were

⁴² *MDP* 18 208 = *MDP* 22 57: 1: a.šà 'ú'-[ša-al]-la.

⁴³ *MDP* 43 23: lum-ma / dumu a-tu / ugula zadim 'Lumma, son of Atu, overseer of the stone-cutters'.

⁴⁴ *MDP* 23 206: LoE 20-Rev 28a: a.šà 0.0.4.0 še.numun šà pi-i ṭup-pí an-ni-im 'ib'-ba-qa-ar-ma i-na a.šà ù ⁸⁸kiri₆ °erasure° 0.2.0.0 še.numun-šu šà ^{uu}za-ap-pí-ia' šà li-ba-ri da te-em-ti-ha-aš-tu'-[uk] ù sin-gal dumu i-ba-aš-si-dingir šà 'x' [...] ⁸⁸gag 'šà it-ti'-dingir-ba-'li'-[it] ma-ah-sa-at and *MDP* 23 234: LoE 18'b-Rev 26'a: a.šà 0.0.4.0 še.numun [a]-'na' pi-i ṭup-pí an-'ni'-[im] 'ib'-ba-qa-ar-ma 'i-na' a.šà ù ⁸⁸kiri₆ 0.1.0.0 še.numun-šu šà ^{uu}za-ap- /pí-ia paṭ šà ⁸⁸li-ba-ri da te-em-ti-ha-aš-tu-uk ù sin-gal dumu ì gál-dingir ⁸⁸gag mah-sa-at 'Should the field of 240 litres of seed, according to the word of this tablet, be claimed, in the field and orchard, 60 (*MDP* 23 206: 120) litres (is) its seed, of the city of Zappiya, bordering the *libāru* trees, adjacent to the property of Temti-ḥaštuk and Šîn-rabi, son of Ibašši-ilum (*MDP* 23 206: which ...), the wooden peg (*MDP* 23 206: of Itti-ilim-baliṭ [the buyer]) is driven'. Note that according to *MDP* 23 206 the field and orchard require 120 litres of seed, whereas according to *MDP* 23 234 they require 60 litres of seed. This might be a scribal error – especially after the scribe of *MDP* 23 206 wrote 0.2.0.0 še.numun after an erasure implying he was not certain. Another explanation might be that a greater part of the field and orchard was to be pledged in case of claim in *MDP* 23 234. As the owner and all neighbours are the same in both texts, it seems pretty clear that it concerns the same field and orchard. *MDP* 23 206 is to be dated during or after the reigns of Tan-uli, sukkal and Kuk-našur as it is said that the field is bought after the *kubussû* regulations Tan-uli and Kuk-našur established (Rev 29-33a: ar-ki ku-bu-us-sé-e ... šà¹ tan^{uu}-nu-li sukkal ù ku-uk-na-šur-[ú] ik-bu-sú). In other words, both texts are to be dated in the latter part of the Sukkalmah period.

⁴⁵ Cf. *RGTC* 11 sub Zappi and *Zappiya, with references.

to be pledged in case a field in the Susa area would be claimed. That is, if we assume that the fields sold by Išmeanni in *MDP* 23 206 and 234 were located in the area of Susa, which is not certain since the first lines of both tablets are broken. It is clear though that the fields Išmeanni sold to Itti-ilim-baliṭ bordered on the property of Temti-ḥaštuk, who also owned property in Zappiya, implying that both Išmeanni and Temti-ḥaštuk had property in both Susa and Zappiya, or that all fields in question were located in Zappiya.

One field requiring 40 litres of seed is said to be part of the royal orchard⁴⁶ and irrigated by the Etemmu canal. An orchard also irrigated by the Etemmu canal, is mentioned together with a field located in the URU.DAG sector⁴⁷, implying this royal orchard must have been situated either in or near the URU.DAG sector.

Table 3: Fields and orchards per geographical sector

	fields	orchards
BALA IGI.URU ^{ki}	41	4
BALA URU.DAG	20	1
BALA GU.LA/GAL	12	—
<i>eberti Zamun</i>	6	1
Other	4	—
	83	6

The Irrigation Canals by which the Fields and Orchards are Irrigated

After the BALA sector or area in which the field or orchard is located, the *mašqītum* or irrigation outlet of the *atappum* (pa₅) or small canal by which the field or orchard is watered, is mentioned. More than 40 different small canals are mentioned in our texts, in 9 of which the name is unfortunately broken⁴⁸. On two occasions, a few signs are legible where

⁴⁶ *MDP* 23 167: Obv 7-8: a.šà 0.0.4.0 numun-šū šà^g kirī₆ é.gal-lim ma-aš-qī-it pa₅ e-te-em-mi ‘a field, 40 litres (is) its seed, part of the orchard of the palace, irrigated by the Etemmu irrigation canal’.

⁴⁷ *MDP* 23 176: Obv 8-9: a.šà i-’šum’ [ù] ma-du BALA URU.DAG ’ù’^g kirī₆ [ma-aš-qī]-it pa₅ e-te-em-mi ‘a field, be it less or more, (located in) the BALA URU.DAG and an orchard irrigated by the Etemmu irrigation canal’.

⁴⁸ *MDP* 22 101: 2: ma-aš-qī-it ’pa₅’ [...] ’x’-x-li-bi-im. Scheil (1930, 115) read the name of this canal [šū]-pal na-bi-im and translated ‘beneath Nabim’ (sous Nabim (?)). Collation

we expect the irrigation canal to be mentioned, but as *mašqīt* nor pa_5 are preserved, it is not certain whether it concerns parts of names of canals⁴⁹.

27 of them only occur once. 15 of them occur more than once. 30 of these canals can be located in one of more BALA sectors. Three of them flow through two different BALA sectors: the Šubarū and Zahakī canals flow through the GU.LA and IGI.URU^{ki} sectors whereas the Kimasū canal flows through the IGI.URU^{ki} and URU.DAG sectors, which implies that both the GU.LA and URU.DAG sectors bordered on the IGI.URU^{ki} sector. The fields located on the other bank of the Zamun are irrigated by the Ḫunnunu, Mē Zapmuri and Kiššitu canals.

Two orchards and one field are said to border on the bank of the *atap-pum* without mentioning its name⁵⁰. One field in the IGI.URU^{ki} sector is irrigated by two different canals, viz. the Kubla and Rakib canals⁵¹. The same seems to go for a field in the GAL sector that is irrigated by the Šabra and Nabûm canals⁵².

showed that the last part of the canal's name is to be read *libbim* – the rest being unfortunately illegible. This canal irrigates a field located in BALA IGI.URU^{ki} šà x x (x), read by Scheil as *an-nu-ni-[tum]* which collation proves to be wrong (cf. *supra*). Two canals with broken names are located in the BALA GAL: *MDP 28 429: 2: 'ma'-aš-<qī>-it pa₅ 'bi'-ib'-x-x'-[...]* and *MDP 22 128: 2: ma-aš-qī-it a-ta-ap in-[...]*. One canal with a broken name is located in the BALA IGI.URU^{ki}: *MDP 23 253: 2: ma-aš-qī-it' pa₅ tu-x-x(x)*. Scheil (1932: 117) read *tu-di(?) -da(?)*, followed by *EIW II*, whereas Vallat (*RGTC 11 sub *Turdu?*) reads *tu-ur?-du?*. Collation showed that none of these proposals are satisfactory: the two (or three?) signs after *tu* are illegible. Five canals with broken names cannot be located in a specific BALA sector: *MDP 22 104: 2: [ma-aš]-qī-it pa₅ e-la'-[...]*, *MDP 22 127: 2: ma-aš-qī-it pa₅ a-bi-[...]*, *MDP 22: 129: 2: [ma-aš-qī]-it pa₅ ba-[...]*, *MDP 23: 202: 2: šà pa₅' x'-[...]* and *MDP 24 370: 2: 'ma'-aš-qī-it 'ú-x'-[...]*.

⁴⁹ *MDP 23 222: 2: [...]-hu* and *231: 2: [...]-x'-ri-bi*.

⁵⁰ *MDP 22 110: Obv 1-2: a.šà 1.0.0.0 gur numun-šu BALA IGI.[URU^{ki}] i-ki a-tap* 'a field, 300 litres (is) its seed, (located in) the BALA IGI.URU^{ki}, adjacent to the bank of the small irrigation canal'. As the scribe wrote the construct state *atap*, it is clear that he forgot to write the name of the *atappum*. *MDP 24 358: Obv 1: ^{gi8}kiri₆ gú <pa₅>* 'an orchard bordering the bank of <the small irrigation canal>' and *MDP 24 359: Obv 7: da ^{gi8}kiri₆ gú pa₅* 'adjacent to the orchard bordering the bank of the small irrigation canal'. In these two texts, it is likely that it concerns one and the same orchard.

⁵¹ *MDP 23 261: Obv 1-2: a.šà 1.0.0.0 gur numun-šu BALA IGI.URU^{ki} ma-aš-qī-it pa₅ ra-ki-ib ù pa₅ ku-ub-la* 'a field, 300 litres (is) its seed, (located in) the BALA IGI.URU^{ki}, (irrigated by) the Rakib canal and the Kubla canal'.

⁵² *MDP 24 359: Obv 1-4: a.šà 0.2.2.0 numun-šu BALA GAL ha.la PN₁ ù ha.la PN₂ pa₅ šabra zi-ri-ti pa₅ na-bu-um* 'a field, 140 litres (is) its seed, (located in) the BALA GAL, share of PN₁ and share of PN₂, (irrigated by) the Šabra canal, *zirītu* of the Nabûm canal'; the meaning of *zirītu* or *širītu* is not known, cf. *CAD Z sub zirītu*.

Table 4: Overview of the irrigation canals per geographical sector

BALA URU.DAG	BALA IGLURU ^{ki}	BALA GU.LA/GAL	<i>eberti Zamun</i>
Meranum (4)	Kubla (19)	Rabi (3)	Mê Zapmuri (2)
Nārum (3)	Rakib (4)	Šabra (2)	Hunnunu (1)
Abuni (2)	Iškuzzi (3)	Simallu (2)	Kiššitu (1)
Eššum (2)	Dalatamti (2)	^ʿ bi ^ʿ -ib ^ʿ -x-x ^ʿ -[...] (1)	
Kimasîm (2+2)		In-[...] (1)	
Etemmu (2)	Agarinnu (1)	Likrîm (1)	
Aplušalim (1)	Šbaru (1+1)		
Harum (1)	Zahaki (1+1)		
Hutti (1)	Nāhiru (1)	Nabûm (1)	
Ikitulatu (1)	Qaddatu (1)		
Šer ^ʿ ānu (1)	Šugurri (1)		
	Tu-x-x-(x) (1)		
	Zianu (1)		

In most cases, the etymology, origin and meaning of the canal names are unknown, uncertain and unfortunately impossible to retrieve. Especially as the Sumero-Akkadian cuneiform writing system was not always appropriate to express foreign sounds – not to mention the fact that our present reading of the names might be wrong. Some of them are unmistakably Sumerian or Akkadian, such as *šabra* ‘chief administrator of a temple or other household’, *nārum* ‘watercourse’ and *eššum* ‘new’, but the majority is ambiguous and can be Elamite, Akkadian or foreign. This is not surprising, as the names of these canals can be derived from various languages (Elamite and other (older?) indigenous languages or substrata). As a matter of fact, it is even remarkable that part of them is Sumero-Akkadian, implying these canals must have been (re?-)-named in a period of Sumerian and/or Akkadian rule, viz. the Old-Akkadian and Ur III periods. In what follows, I will give possible origins and meanings for some of the canal names, but it goes without saying that these are all highly hypothetical.

Irrigation Canals in the IGLURU^{ki} Sector

We know of 12 canals flowing through the IGLURU^{ki} sector. The *Kubla* canal (cf. *RGTC* 11 *sub* *Kubla) is by far the most attested canal: 14 fields⁵³

⁵³ *MDP* 23, 229, 249, 250, 251, 254, 262, 263, 264, 265, 267, 278, 279, 280 and 281.

and three orchards⁵⁴, all located in the IGI.URU^{ki} sector, are said to be irrigated by the Kubla canal. One field, also located in the IGI.URU^{ki} sector, is irrigated by the Kubla and Rakib canals (cf. *supra*). Of one field irrigated by the Kubla canal⁵⁵, the sector is not mentioned, but it seems safe to assume that it was located in the IGI.URU^{ki} sector. The origin or meaning of the name Kubla is not clear to me. The reason why the Kubla canal is mentioned so often, is no doubt due to the fact that the sale and lease documents mentioning fields and orchards irrigated by this canal, were found together and belong to one or two dossiers, which is also corroborated by the fact that all these texts have more or less successive publication numbers. In eight out of sixteen lease contracts and one out of three sale contracts, the lessee and buyer is Nūr-Inšušinak, whose patronymic is unfortunately not mentioned, but must be one and the same person. The same goes for Awīliya, who is lessee in six lease contracts and buyer in one sale contract. It goes without saying that these documents must originally have been kept in the archives of both persons. Whether Nūr-Inšušinak and Awīliya were related, implying the documents were kept in one family archive, is at present impossible to say.

Four fields⁵⁶, all located in the IGI.URU^{ki} sector, are irrigated by the Rakib canal (cf. *RGTC* 11 *sub* *Rakip). As one of these fields is also irrigated by the Kubla canal, both canals must have flown close to each other at a certain point. The name Rakib might originate from the Akkadian *rākibu* 'a type of levee' (cf. *CAD* R *sub* rākibu A). An irrigation canal named *Rākibu* is also known in Old Babylonian Dilbat (cf. *RGTC* 3 *sub* Rākibu). It seems therefore more likely to read Rākib instead of Rakip, as suggested by Hinz and Koch in *EW* and followed by Vallat in *RGTC* 11. All fields irrigated by the Rākib canal were leased by Nūr-Inšušinak, no doubt to be identified with his namesake mentioned above, implying these documents were kept in his archive.

Three fields⁵⁷, two of them located in the IGI.URU^{ki} sector, are irrigated by the Iškuzzi canal (cf. *RGTC* 11 *sub* *Iškuzzu). The origin or meaning of the name Iškuzzi/u is not clear to me⁵⁸. The two fields in the IGI.URU^{ki} sector were leased by Nūr-Inšušinak, again no doubt the person mentioned above.

⁵⁴ *MDP* 23 230, 244 and 245.

⁵⁵ *MDP* 23 228.

⁵⁶ *MDP* 23 259, 261, 266 and 277

⁵⁷ *MDP* 18 224 = *MDP* 22 89, *MDP* 23 257 and 260.

⁵⁸ The interpretation as Akkadian *iškussi* (*iš-ku-us-sī*), a 3 sg. preterite + pron. suff. 3 sg. fem. accusative 'he/she/it dried her out', does not make much sense.

Two fields⁵⁹, one of which said to be located in the IGLURU^{ki} sector, are irrigated by the Dalatamti canal (cf. *RGTC* 11 *sub* *Dalatamti). Again, the origin or meaning of the name Dalatamti is not clear to me. Two fields⁶⁰, both in the IGLURU^{ki} sector, are irrigated by the Kimasîm canal (cf. *RGCT* 11 *sub* *Kimasû). Two other fields⁶¹, located in the URU. DAG sector, are also irrigated by this canal, implying it flowed through both sectors. The origin nor meaning of Kimasûm/îm are clear to me.

Eight canals in the IGLURU^{ki} sector are only mentioned once: Agarinnu, Nāhiru, Qaddatu, Šugurri, Šubaru, Tu-x-x-(x), Zianu and Zahaki. The Šubaru and Zahaku canals also ran through the GU.LA/GAL sector. Three of these have Akkadian names: Agarinnu ‘(first) beer mash’⁶², Nāhiru ‘whale, spout’⁶³ and Qaddatu⁶⁴. Three of them have possibly Elamite names: Šugurri (derived from the Old Elamite deity Šugu?)⁶⁵, Zianu (Akkadianised form of the Old Elamite *siyan* ‘temple’?)⁶⁶, and Šubaru (derived from the Elamite deity Šubara and/or from the Elamite word *šupir* ‘worshipper’?)⁶⁷. The origin and meaning of Zahaki is not clear to me⁶⁸.

⁵⁹ *MDP* 23 167 and 173.

⁶⁰ *MDP* 22 88 and 93.

⁶¹ *MDP* 22 91 and 126.

⁶² Cf. *RGTC* 11 *sub* *Agarin(n)u, *RGTC* 3 *sub* Agarinnu and *EIW* I *sub* a-ga-ri-in-ni. According to *CAD* A₁ (*sub* agarinnu 1.c)), *agarinnu* means ‘(first) beer mash’. Scheil (1939, 91) translates it as ‘reservoir’, see also *AhW* I (*sub* agarinnu(m)) ‘Bassin’. The same canal is also mentioned in three administrative documents, to be dated early 2nd millennium BCE: *MDP* 18 123 (4: a.šà a-ga-ri-nu-um) and 131 (I 2’: pa₅ a-ga-ri-nu-um’) and *MDP* 28 447 (10: gú a-ga-ri-nu-um). A watercourse named Agarinnu is also mentioned in a tablet dated to the reign of Ammišaduqa published in Pinches 1897 (nr 2: 3-4: ša i-na mu-uh-hi a.šà še.giš.ì ša íd a-ga-ri-in-ni), which proves that there was also a watercourse called Agarinnu in Mesopotamia. Unfortunately, as it is not known where the tablet originates from, we do not know where in Mesopotamia exactly. As it was clearly a watercourse or canal (pa₅ in Susa and íd in Mesopotamia), it cannot be interpreted as a basin or reservoir.

⁶³ Cf. *RGTC* 11 *sub* *Nāhiru and *CAD* N₁ *sub* nāhiru.

⁶⁴ Cf. *RGTC* 11 *sub* *Qaddatu. *Qaddātu* is possibly to be interpreted as a verbal adjective (pl. fem.) from *qadādu*, cf. *CAD* Q *sub* qadādu 1. to bow, to bend down (intrans.), to incline.

⁶⁵ cf. *RGTC* 11 *sub* *Šugurri and *EIW* II *sub* šu-gur-ri ‘aE Name eines Kanales bei Susa, von d.šu-gu abgeleitet’ d.šu-gu ‘aE Gottheit in Susa, vermutlich die Göttin des Gesanges(?)’. Note, however, the Akkadian words *šugrû* (*šugurû*, *šugarrû*) ‘basket’, *šugurru* ‘(a mat?)’ and *šugarrû* (*šugurrû*) ‘(a type or processed form of dates)’ listed in *CAD* Š₃, implying that the canal’s name might be Akkadian and linked to an area with date palms.

⁶⁶ cf. *RGTC* 11 *sub* *Ziani and *EIW* II *sub* zi-ani ‘aE (akkadisierter?) Names eines Kanals in Susa, zu ziyān Tempel gehörig’.

⁶⁷ cf. *RGTC* 11 *sub* *Šubarû and *EIW* II *sub* šu-ba-ri. Cf. also *EIW* II *sub* šu-ba-ra ‘elamische Gottheit in Akkad. Beschwörungsformel’ and šu-bi-ir (šu-pi-ir, šu-pír) ‘Anbeter’?. Note, however, the Akkadian words *šubarrû* ‘freedom from service obligations’ and *šubarû* ‘from Subartu, in the style of Subartu’ listed in *CAD* Š₃, implying that the canal’s name might be Akkadian and linked to an area with fields free from service obligations or with the North-Mesopotamian region of Subartu. The Šubaru canal is also mentioned in *MDP* 28 452 (cf. *infra*).

⁶⁸ *EIW* II mentions an Neo-Elamite word *za-h*, but gives no translation, cf. also *sa-h* ‘mE, nE *ich zog, reiste*’, *sa-h* ‘nE Bronze(tafel)’ and *sa-h* ‘nE Pfeilspitze’.

Irrigation Canals in the URU.DAG Sector

We know of 12 canals flowing through the URU.DAG sector. Four fields⁶⁹, all located in the URU.DAG sector, are irrigated by the Meranum canal (cf. *RGTC* 11 *sub* *Meranum). This canal is also mentioned in *MDP* 28 452, a small early 2nd millennium BCE administrative text, mentioning on the obverse large surfaces followed by small irrigation canals, indicating probably the surface of arable land irrigated by the irrigation canals mentioned⁷⁰. If this is correct, 60 b̄ur or 388,8 ha of arable land was irrigated by the Meranum canal, and 30 b̄ur or 194,4 ha by the above mentioned Šubarū canal, which flowed through both the IGI.URU^{ki} and GU.LA/GAL sectors. These are huge surfaces, especially as the surface of the three fields irrigated by the Meranum canal (the surface of the fourth one is not mentioned) is only 1.1.3 iku or 9,72 ha, 1/40 of the total surface watered by Meranum, implying the canal irrigated ca. 120 fields. On average, the canals mentioned in *MDP* 28 452, irrigated 36 ½ b̄ur or 236,52 ha of land. As we know of more than 40 canals, the total surface of irrigated land in the Susa area must have been more than 9460 ha. Meranum might have been an Akkadian name⁷¹, although *mera(h)-* is also attested in Old Elamite personal names⁷². The early date of the tablet and the fact that four canal names are clearly Sumerian (šabra, dingir.ra, kur.ra and Dada), might imply that Meranum and Šubarū are to be interpreted as Akkadian, in which case these names might have been given in the Old-Akkadian or Ur III periods.

Three fields⁷³ in the URU.DAG sector are irrigated by a canal called *nārum*, Akkadian for ‘watercourse’. All three are leased by Belī and were thus retrieved from (what remains of) his archive. Two fields⁷⁴, one of which located in the URU.DAG sector, are irrigated by the Abuni canal (cf. *RGTC* 11 *sub* *Abuni), Akkadian for ‘our father’, also used as personal name. Two fields⁷⁵ in the URU.DAG sector are irrigated by the new

⁶⁹ *MDP* 24 349, 350 (cf. *supra* for this text; both the large field of 1.0.0 iku and the small part (0.1.0 iku) of it that is sold were irrigated by the Meranum canal) and 366.

⁷⁰ *MDP* 28 452: (1) 30.0.0 pa₅ šu-ba-ri (2) 41.0.0 pa₅ šabra (3) 7.0.0 pa₅ dingir.ra (4) 40.0.0 pa₅ da-da (5) 38.0.0 pa₅ kur.ra (6) 40.0.0 zi-ki⁷¹-ru-um (7) 60.0.0 iku me-ru-nu-um (8) 2 me-ru 6.0.0 (= 260.0.0). Note that the sum of the surfaces is 256.0.0 and not 260.0.0.

⁷¹ Cf. *CAD* M₂ *sub* merānu ‘(a plant)’, mērēnu (*mērānu*, *mērinnu*) ‘nakedness, empi-ness’ and mērēnū (*mērānū*) ‘naked’.

⁷² Cf. *ElW* II *sub* me-ra-h.i-da-du, me-ra.mur-ti and me-[r]a-ra.

⁷³ *MDP* 23 252, 256 and 258.

⁷⁴ *MDP* 22 70 and 23 248.

⁷⁵ *MDP* 22 98 and 105.

canal (pa₅ ešši, cf. *RGTC* 11 *sub* *Ešši). Two fields⁷⁶, one in the URU.DAG sector, the other part of the royal garden, probably to be situated in the same sector (cf. *supra*), are irrigated by the Etemmu canal (cf. *RGTC* 11 *sub* *Etemmu). The origin or meaning of the name Etemmi/u is not clear to me. Five irrigation canals in the URU.DAG sector are only mentioned once: Aplušalim, Harum, Hutti, Ikitulatu and Šer'ānu. Only one name is unmistakably Akkadian, viz. šer'ānu 'sinew, tendon, vein, muscle' (cf. *CAD* Š₂ *sub* šer'ānu). The names of the other canals are uncertain: Aplušalim and Ikitulatu might be Akkadian⁷⁷ and Hutti might be Elamite⁷⁸.

Irrigation Canals in the GU.LA/GAL Sector

Nine canals are known to have flowed through the GU.LA/GAL sector. Two fields⁷⁹, one of which located in the GAL sector, are irrigated by the large canal (pa₅ gal, *atap rabi*, cf. *RGTC* 11 *sub* *Rabi). The two (?) fields sold in *MDP* 22 66 are probably also irrigated by this canal⁸⁰, but the beginning of the tablet is too broken to be sure. Two fields in the GAL sector are irrigated by the canal of the šabrû or temple administrator (pa₅ šabra, cf. *RGTC* 11 *sub* *Šabru), one of which seems also to have been irrigated by the Nabûm canal (cf. *supra*). The canal of the šabrû also appears in the above mentioned administrative text *MDP* 28 452, where it is said to have irrigated 41 bûr or 265,68 ha. Two fields⁸¹, one in the GAL sector, are irrigated by the Simallu canal (cf. *RGTC* 11 *sub* *Simalli). The origin or meaning of the name Simalli/u is not clear to me. Six irrigation canals in the GU.LA/GAL sector are only mentioned once: Likrîm, Nabûm, Šubarû, Zahaku and two with broken names ('bi²-ib²-x-x'-[...] and In- [...]). Likrîm is possibly an Elamite name⁸², whereas Nabûm might be Akkadian (cf. *CAD* N₁ *sub* nabû A, B and C) or an Akkadianised form of the Old Elamite word *nap* 'god'⁸³.

⁷⁶ *MDP* 23 167 and 173.

⁷⁷ Aplušalim might be derived from *aplû šālimû* 'the healthy heirs' or from *aplû ušallim* 'the heir kept well' and Ikitulatu/i might be derived from *iki tûlāti* 'the dyke of the worms, maggots'.

⁷⁸ Cf. *EIW* I *sub* hu-ut-ti 'aE, mE Werk(?)'.

⁷⁹ *MDP* 23 167 and 247.

⁸⁰ *MDP* 22 66: 1'-4': [a.šà ? ...] 'x' [... a.šà x.x.x] 'x' sila 'še'. [numun-šu ma-aš-qî-it pa₅] 'ra'-bi da [...] ù [da ...] 'a-bu-um' 'šu'. [nigin a.šà x.x.x.x] sila <<a.šà>> še.numun-šu.

⁸¹ *MDP* 22 96 and 109.

⁸² Cf. *EIW* II *sub* li-ik-ri-in 'mE *Dankbarkeit* (?)' and li-ki-ir 'mE *Dankopfer* (?)'.

⁸³ Cf. *EIW* II *sub* nap and *CAD* N₁ *sub* nābu A 'god' Elam. lw. The Nabûm canal is also mentioned in the early 2nd millennium BCE administrative text *MDP* 28 447, where

Irrigation Canals at the Other Bank of the Zamun

Three canals ran at the other bank of the Zamun. Two fields⁸⁴ are irrigated by the Mê Zapmuri canal, meaning 'water of Zapmuri'. According to *EIW* II (*sub za-ap-mu-ri*), Zapmuri is a toponym. It is, however, not mentioned in *RGTC* 11 and is otherwise not attested in the Susa texts. It seems more likely that Zapmuri is a hydronym, from which the irrigation canal was branched off, indicating by its name that its water came from the Zapmuri River. Two canals at the other bank of the Zamun are only mentioned once: Hunnunu and Kiššitu. Hunnunu is possibly derived from the Old Elamite word *hun* 'light'⁸⁵. The origin and meaning of Kiššitu are hard to fathom⁸⁶.

The Neighbours of the Fields and Orchards

Last but not least, the neighbours of the field are given. Contrary to what we are used to see in Mesopotamia, and especially Sippar, these are not indicated by giving the right and left side neighbours, *DA* or *ita*, followed by the front and rear sides, *SAG.BI.1.KAM* and *SAG.BI.2.KAM* respectively, but by two logograms, namely *TI* and *DA*.

As for *DA*, this is no doubt to be interpreted in the same way as it is in the Old Babylonian Sippar texts, namely 'adjacent to'. In most cases, there is only one *DA* neighbour, sometimes there are two and exceptionally even three *DA* neighbours. In most cases the sign *DA* is followed by a personal name, indicating most probably the owner of the field adjacent to the field to be leased. In nine cases, one of the *DA* neighbours is no individual.

The field in the *BALA URU.DAG* of Dimat-šarrim (*MDP* 24 366, cf. *supra*) is said to be adjacent to the field of *tērum* (a.šà *te-ru-um*). Scheil (1933, 56) interprets *te-ru-um* as a personal name (à côté du champ de Terum). Although *te/ir* is a known element in Elamite names (cf. *EIW* I *sub te-ir*),

it is said that 5 allotments (a total of 5 *būr*) are located at the bank of the Nabûm canal (*gú na-bu-um*).

⁸⁴ *MDP* 23 209 and 218.

⁸⁵ Cf. *EIW* I *sub hu-un-nu-u[n]-nu* 'aE Koseform zu *hun Licht (?)*' and *hu-un* 'aE *Licht (?)*'.

⁸⁶ According to *EIW* I *sub ki-iš.si-ti* it might mean '*biervesund(?)*'. However, it might also be linked to *kištum* 'forest, grove', an Akkadian loanword in Elamite (*EIW* I *sub ki-iš-tu₄-um*) or other Akkadian words, such as *kiššitu* 'from Kiš' or *kiššu* 'bundle (of reeds)' (cf. *CAD* K).

Terum is never attested as a personal name in our texts. Moreover, Akkadian *tērum* or *fīrum* might indicate a topographical feature (cf. *CAD T sub tēru* and *tīru D*) or mean ‘courtier, attendant (a member of the palace or temple staff)’ (cf. *CAD T sub tīru A*). The ‘field of the courtier’ fits well with the fact that the field is located in a place called Dimat-šarrim ‘Royal Tower’, but we would have expected a.šà *tērim* in that case. A(n unfortunately unknown) topographical feature (‘the *tērum* field’) seems therefore the best interpretation at present. One field in the IGI.URU^{ki} sector (*MDP 24 359*) is adjacent to an orchard and another in the same sector (*MDP 23 208*) is adjacent to the City Canal (pa₃ uru^{ki}). This canal is otherwise not attested, but proves again that the IGI.URU^{ki} sector must have been located close to the city, as the City Canal no doubt ran through the city. Seven fields and one orchard are said to be adjacent to the *ummatu* which is possibly to be interpreted as a reservoir⁸⁷. Four fields⁸⁸, two in the IGI.URU^{ki} and one in the URU.DAG sector, are adjacent to the *ummatu*, Two fields⁸⁹, one in the IGI.URU^{ki} sector, are adjacent to the lower (*šapilti* and *šupalīti*) *ummatu* and a field and orchard⁹⁰ are adjacent to the *ummatu* of Madi turri (ma-di tur-ri-i), a place name the origin nor meaning of which are clear to me.

As for TI, it is not very clear how to interpret this⁹¹. The first question is which language is rendered here: it is well known that the Old Babylonian administrative documents from Susa were written to a large extent in syllabic Akkadian, but they were peppered with Sumerian logograms as well as Elamite words and expressions. As there seem to be no meaningful options in Akkadian⁹² nor Elamite, the Sumerian reading TEG₄, meaning ‘to approach’, *teḥû* in Akkadian (cf. ePSD *sub teḡ*), seems the most appropriate. Derived from the Akkadian verb *teḥû* are the nouns *teḥḥû* ‘client, dependent, neighbour’ and *teḥu* ‘proximity’⁹³. However, this last noun,

⁸⁷ Cf. *AhW III sub ummatu 5* aB Susa ‘ein Sammelbacken?’ and *CAD U/W sub ummatu C* (a topographical feature) OB Elam.

⁸⁸ *MDP 22 91*, *MDP 23 261*, *265* and *MDP 24 370*.

⁸⁹ *MDP 22 70* and *MDP 23 253*.

⁹⁰ *MDP 23 174*.

⁹¹ Scheil (1930, 102-103) translates TI as ‘front’ as if it was the Susian equivalent of the Mesopotamian SAG (“TI, mis en corrélation constante avec DA = ita, ne peut être que l’extrémité, le front du champ aboutissant à tel ou tel.”) However, there is no reason why the Susians, who use DA to indicate ‘adjacent to’, would have used TI (which does not mean ‘front’) instead of SAG to indicate ‘front’ and ‘rear’.

⁹² *ti* might be the construct state of the Akkadian word *tû* ‘incantation, spell; garment’ (cf. *CAD T sub tû A* and *B*) – but this does not make sense at all – or *ti’u* but the meaning of this word is not known (cf. *CAD T sub ti’u A*, *B* and *tī’u*).

⁹³ Cf. *CAD T sub teḥḥû* and *teḥu 1*.

tēhu, which can also be used as a preposition, *tēhi*, meaning 'next to, adjacent to' and is thus a synonym of *ita*, is written logographically DA according to CAD T *sub* tēhu, which brings us back to square one: if there is no difference in meaning between TI (TEĜ₄) and DA, why would they use two different expressions? It seems clear to me that TI and DA mean something different or are at least indicators of different things in the context of these lease contracts.

Let us have a closer look at the TI's and DA's in the texts. TI, when it occurs, always precedes the DA neighbour or neighbours. Whereas more than 80% of our texts mention at least one DA neighbour, less than 40% of our texts mention a TI neighbour: none of the divisions and exchange contracts and only 6,4% of the sale contracts mention a TI neighbour. The only genre in which a TI neighbour is generally mentioned, are the lease contracts, 74% of which mention a TI. This seems to imply that this TI was mostly important for or connected to lease contracts. Moreover, whereas most of our texts mention one or two, and exceptionally even three DA neighbours, the texts that mention a TI only have one TI. As I mentioned before, the DA's are mostly persons, no doubt the owners of the fields or orchards adjacent to the fields or orchards to be leased, sold, exchanged or divided and in few cases a topographical feature. This is certainly not the case for the TI's, where we see gates, cities, personal names and names of which we do not know whether they are personal or geographical names. Another striking difference between the TI's and the DA's is the variety of names: if we exclude the divisions (where fields with the same DA neighbours are divided), only six persons are mentioned more than once as a DA neighbour⁹⁴ (out of more than 100 different DA neighbours), whereas no less than 9 TI's (out of 35 different TI's) occur more than once, one even up to 5 times.

On four occasions, a field is said to be TI a city or region:

MDP 23 247: a field located in the BALA GAL irrigated by the great irrigation canal (*atap rabi*) [TI] 'x'-ri-a-wa-an^{ki}. Scheil (1932, 110-111) completes [TI ša]r-ri A-wa-an-(ki) (?)⁹⁵. However, a toponym Šarri-Awan^{ki}

⁹⁴ 3 × Aha'u'u (*MDP* 23 251, 263 and 267), 2 × dumu.meš *ummānu* (*MDP* 23 250 and 281), 2 × Nūratum (*MDP* 23 355 and 24 358), 2 × Alimma (*MDP* 23 254 and 268) and the field plus orchard said to be situated in the city of Zappiya, adjacent to the property of Tem-ti-haštuk and that of Šin-rabi, twice mentioned as pledge (*MDP* 23 206 and 234, cf. *supra*).

⁹⁵ Vallat (*RGTC* 11 *sub* *Awan) completes this line as [PN ša]r-ri a-wa-an^{ki} PN, king of Awan' which makes no sense at all, as there is not enough space to insert a personal name and the mentioning of 'PN king of Awan' is totally irrelevant in the description of the location of the field concerned.

is not yet attested. Question is whether we have to interpret 'x'-ri-a-wa-an^{ki} as a whole, in which case X-riawan^{ki} is to be considered a toponym different from Awan, or as two separate words 'x'-ri Awan^{ki}, in which case the field is TI 'something' of Awan. A third option would be to interpret it as a personal name mentioning a toponym (such as *Mār*-GN or *Anih*-GN) – however, as personal names including Awan are not attested as yet, this seems less plausible. In the first case, X-riawan^{ki} would be a city or region bordering the agricultural territory, or more precisely the GAL sector, of Susa. In the second case, ('something' of) Awan would be bordering the GAL sector. The location of Awan, the dynastic seat of late 3rd millennium BCE Elamite rulers, is as yet unknown. However, an inscription of Rimuš⁹⁶ and the 14th year name of Ibbi-Sîn⁹⁷ links Awan with Susa and Adamdun (to be read Adamšah according to Civil 1998). According to Michalowski (2008, 115), Awan is not a city name, but a geographical designation. He further suggests Adamdun to be the main city of the land of Awan, which is indeed very plausible. Steve (2001) proposed to identify Adamdun with Tepe Surkhehgân, near Šuštar, but this is not certain altogether⁹⁸. According to Steinkeller (2012, 297) it is, however, clear that Adamdun is to be located east of Susa, probably on the Karun river, as it could be reached by boat from southern Mesopotamia. So, if the BALA GAL field in question is located near the 'x'-ri of the land of Awan, as *MDP 23 247* seems to suggest, this would imply that the BALA GAL is to be situated (south)-east of Susa, extending as far as the territory of Awan. Obviously, we do not know how large the territory of Awan was, but with Šuštar and the Karun river as its possible centre, it seems likely that the agricultural territory of Susa would border that of Awan somewhere south-east of Susa in the vicinity of the present Dez river. It should be noted, however, that this is highly hypothetical, especially as this would be the only attestation of Awan in a Susa text from the Sukkalmah period (moreover the latter part of this period, as *MDP 23 247* has an oath by Tan-uli and Temti-halki) and it is not clear to me at all what the 'x'-ri might be.

⁹⁶ Cf. *RIME* 2.01.02.06: ll. 33-42: PN šagina za-ha-ra^{ki} šu.du₈[a] in ba-rí-ti a-wa-an^{ki} ù su-si-im^{ki} in i₇ qáb-lí-tim 'PN, general of Zahara, he captured in between Awan and Susa at the middle river'.

⁹⁷ Cf. Michalowski 2008, 115: mu^di-bí-^den.zu lugal uri₅^{ki}-ma-ke₄ šušin^{ki} a-dam-dun^{ki} a-wa-an^{ki}-ka u₄-gin₇ šid bí-in-gi₄ u₄ 1-a mu-un-gurum ù en-bi héš-a mi-ni-in-dab₅-ba-a 'The year in which Ibbi-Sin, king of Ur, howled (over) Susa and Adamdun of the land of Awan like a storm, subdued (them) in one day, and took their rulers prisoner'.

⁹⁸ Cf. Michalowski 2008, 115; Potts 2010, 246-247 and Steinkeller 2012, 297.

MDP 22 100: a field located in the BALA [...] irrigated by the [...] irrigation canal TI *ālu ešši* ‘the new city’⁹⁹. It is not clear to me what new city is meant here. It might also be a new development of Susa.

MDP 22 112 and *23 252*: a field irrigated by the [...] irrigation canal and a field located in the BALA IGI.URU^{ki} irrigated by the *Nārum* canal TI the city of Pilāk (or Pilayak?)¹⁰⁰. There are no other attestations of the toponym Pilāk. Pilāk was no doubt a city or town in the vicinity of Susa, bordering the IGI.URU^{ki} sector.

On two occasions, a field is said to be TI a gate or city quarter:

MDP 22 104: a field irrigated by the Ela-[...] canal [TI] the gate or city quarter of Šamaš (*ba-ab* ^dutu). The gate of Šamaš is not attested elsewhere, but might have been one of the gates in Susa. Other gates mentioned in the Susa texts are the great gate of the king (*MDP 28 456: 4: ká.gal sunki*) and the gate of the *teppir* (*MDP 23 327: Rev 3’: ba-ab te-ep-pir*, cf. Tavernier 2007, 59 and De Graef 2010, 42-43).

MDP 22 128: a field in the BALA GAL irrigated by the In-[...] canal TI the city gate or district of the herdsman (?)¹⁰¹. It is not clear whether *Abulla rā’i* is to be interpreted as a city gate or a district and if it was a city gate, in what city it was located. It might of course be a city gate of Susa, but if the GAL sector is to be situated south-east of Susa (cf. *supra*) it might as well be a city gate of another city or even a place name¹⁰².

In all other texts, the TI neighbours are personal names or names of which we do not know whether they are personal or geographical names.

The most frequently occurring TI neighbour is Zartiya¹⁰³, located in the BALA IGI.URU^{ki}, 4 times in connection with the Kubla canal and once in connection with the Qaddatu canal. Zartiya might be a personal name, but is not as yet attested in other Susa texts¹⁰⁴.

⁹⁹ Note the erroneous spelling *a-lu eš-šī-i* with *ālu* in sg. nom. and *ešši* in sg. gen. with prolonged *ī*.

¹⁰⁰ *EIW I* lists the first attestation under *pi-la-a-a* (URU.KI *pi-la-a-a*) and the second under *ki-pi-la-a-ak* (URU.ki-*pi-la-a-ak*), but as Vallat (*RGTC 11 sub *Pilāk*) points out correctly, it is to be read *uru^{ki} Pilāk* (*uru^{ki} pi-la-a-a-[ak]* and *uru^{ki} pi-la-’a-ak’*). However, Vallat also lists *MDP 23 169: 34* under Pilāk, where this is clearly the personal name Pilaqu (*é.dù.a da pi-la-aq-’q’*) and not the city of Pilāk.

¹⁰¹ *abulla rā’i* (*a-bu-ul-la ra-a-a-i*), with *rā’i* probably to be interpreted as a variant of *rē’i* (note, however, the short *i*/ at the end), cf. *CAD R sub rē’û* (*rējû, rā’û*). Another possibility is *ra’û* ‘friend, companion’ (*CAD R sub ru’u* (*ra’û*)), cf. also *CAD R sub rā’û* (mng. unknw.).

¹⁰² Cf. *MDP 10 125 (6-7)*: *Abullat^{ki} in Zidian^{ki}* (for this reading cf. De Graef 2008, 75).

¹⁰³ *MDP 23 254, 268, 278, 279* and *280*. All are lease contracts and have different lessors and in most cases different surfaces, implying that they are all different fields.

¹⁰⁴ According to *EIW II* Zartiya is derived from the Old Elamite personal name Zarti, attested once as witness in *MDP 23 170* (cf. *sub za-ar-ti-ya*).

The following TI neighbours are each attested twice: *aza/âni*, *hallati*, *luršî*, *šumu dâri(m)* and Tepti-iššan. The last one is no doubt a personal name¹⁰⁵, and *šumu dari(m)* is clearly Akkadian¹⁰⁶. The others might be indications of geographical or agricultural features: *luršî* is an Old Elamite profession, probably meaning ‘farmer, gardener’¹⁰⁷, *hallati* might be derived from the Elamite words *hal* ‘land’, *halat* ‘clay’ or *halla* ‘field’¹⁰⁸ and *aza/âni* (or *assa/âni*) might be linked to Akkadian *asnû* ‘Dilmun date palm’¹⁰⁹.

Two fields, one of which is located in the URU.DAG sector, are TI Adara, two, one of which in the GAL sector, TI Adura, and one, also in the GAL sector, TI Atturu. It might be that Adara, Adura and Atturu are variants for the same, in which case it would be spread over two sectors. The origin or meaning of Ad/ta/ura is ambiguous¹¹⁰.

22 TI neighbours are only attested once, one of which seems to be the storehouse (‘é’.nig). Most others are personal names: Daqqiya, Dulluqu, Himduti, Hun-dahla, Igigi, Inšušinak-rabi, Inzuzu, Kuliya, Lulû, Mâtiammar, Mušezibu, Nabaya’i, Šabidati, Šaha-marši, Šamaš-gamil, Šamaš-tillati, Šammi-ili and Šaqa, the *šati*-priest. Two are broken: [...]li-x and na-PI-el²-ti.

¹⁰⁵ Cf. *EIW I sub* te-ip-ti.iš-šà-an N.pr.m. aE, wohl (Gott) *Tempt erquickend*.

¹⁰⁶ *šumu dâri(m)* can be translated as ‘the name/fame of the everlasting’, or if we do not take into account that *šumu* is sg. nom. and *dâri(m)* is dg. gen. ‘the everlasting name/fame’, cf. *CAD Š3 sub* šumu 1. name, 2. fame, reputation and *CAD D sub* dârû 1. everlasting, enduring, perpetual 2. durable, lasting a) said of name, fame.

¹⁰⁷ *EIW II sub* lu-ur-si, lu-ur-ši, lu-ur-šu aE Berufsbezeichnung, wohl *Bauer* and li-ri-šà aE Berufsbezeichnung, vielleicht *Gärtner*. Cf. also *CAD L sub* liriša (a profession) OB Elam and *sub* luršu (a profession) OB Elam.

¹⁰⁸ *EIW I sub* hal mE, nE *Land*, gelegentlich auch *Stadt*, ha-la-at aE, achE *Lehm*, (*ungebrannter*) *Ton* and *halla* nE *Äcker*. Cf. also hal-la-ti N.pr.m. aE. Another possibility is that it is linked to the Akkadian *hallatu*, cf. *CAD H sub* hallatu A (a kind of dues or tax) (d) in the geographical name URU Hallat(u) (in Nippur), hallatu B (a kind of basket) and hallatu C (mng. unkn.). Note, however that hallatu A and B are only attested in Neo-Babylonian and hallatu C only in lexical lists, and is therefore unlikely to be linked to a term in Old Babylonian Susa.

¹⁰⁹ Cf. *CAD A2 sub* asnû (*ašnû*, *assanû*, *issanu*) 1. Telmun date palm; cf. also the personal names *a-sâ-nu-um* and *a-sâ/sâ-nim* listed *sub* asu(m) II Bär 4) in *AhW I*.

¹¹⁰ It might be linked to Old Elamite *adara*, *adura* or *attari*, *atturi* (cf. *EIW I sub* a-da-ra, a-du-ra ‘N.pr.m. aE’ and at-ta-ri, at-tu-ri ‘N.pr.m. aE *Väterliche, mein Vater*’), or to Akkadian *adâru*, *addaru* or *adurû* (cf. *CAD A1 sub* adâru (*aṭâru*, *aṭâru*) (an indigenous tree), *addaru* (name of the 12th month) and *CAD E sub* edurû (*adurû*) hamlet, rural settlement, etymologically from Sum. é.duru₅ ‘manor or farm on wet ground’.

Table 5: Overview of the TI per geographical sector

BALA IGLURU ^{ki}	BALA GULA/GAL	BALA URU.DAG
Zartiya (5)	Ad/tu/ara (3)	
Aza/ânu (2)	ᵛx'-ri Awan ^{ki} (1)	Šumu-dāri(m) (2)
Hallati (2)	<i>abulla rā'î</i> (1)	Bûzi (1)
Luršî (2)	Lulû (1)	Inzuzu (1)
Tepti-iššan (2)	Mušezibu (1)	<i>na-PI-ᵛel'ᵛ-ti</i> (1)
Daqqiya (1)	x-li-x (1)	Nabaya'i (1)
Dulluqu (1)		Šaqa, šatu-priest
Himduti (1)		uru ^{ki} Pilâk
Hun-dahla (1)		
Igigi (1)		
Inšušinak-rabi (1)		
Kuliya (1)		
Šaha-marši (1)		
Šamaš-gamil (1)		
Šamaš-tillati (1)		

However unclear or ambiguous most of the TI neighbours are, the fact that there is but one TI, that it is always mentioned before the DA neighbours and that it includes cities, regions and gates, implies that TI refers to a larger unit than a neighbouring field or property and cannot simply be interpreted as a synonym of DA and translated as “adjacent to”. How to read and translate TI correctly, remains uncertain for now. It is clear though that it was particularly important for the lease contracts.

The Chain of Description: from Large to Small?

From the preceding we can conclude that there is a certain logic in the description of the fields and orchards in the Old Babylonian texts from Susa. Starting with the largest unit the field or orchard belongs to, namely the BALA sector (or the area on the other side of the Zamun river), they gradually pin-point the field or orchard's location by mentioning first the irrigation outlet of the canal, second the TI, a specific entity or unit to which the field or orchard is near or belongs, and third the fields or orchards neighbouring (DA) the field or orchard in question.

Conclusions

In what precedes, I tried to give an overview of which data we have at our disposal concerning the description of fields and orchards in the Susa texts. The study of 112 Old Babylonian Susa texts showed that fields or orchards to be leased, sold, divided or exchanged are described according to a more or less regular pattern. In its most complete form this pattern consists of the following five points: (1) the size of the field or orchard, (2) the BALA sector or area in which the field or orchard is located, (3) the irrigation canal by which the field or orchard is watered, (4) the TI to which the field or orchard is near or belongs, and (5) the neighbours (DA).

A first remarkable fact is that the Susians express the size of their fields and orchards by giving the amount of seed necessary to cultivate the field or orchard instead of the surface measures used in Mesopotamian contracts. The phrase *šiddāt tupšarrim* “according to a survey by the scribe” proves that the amount of seed was indeed correlated with the surveyed actual size of the field. These calculations never took into account what specific crop was to be grown on the field, implying that one crop, no doubt barley, was taken as a standard for these correlations. Two early sale contracts with Mesopotamian surface measures imply that early on the Susians still used the Mesopotamian surface measures, but changed this to a system of their own, possibly typical Elamite.

A second remarkable fact is that the fields or orchards in the lease contracts are described in the most complete way, covering mostly all of the above mentioned points. This is surprising, as one would expect the sale contracts or title deeds to contain the most exhaustive descriptions.

There is, however, a certain logic in the description of the location of the fields and orchards in the Old Babylonian texts from Susa. Starting with the largest unit the field or orchard belongs to, namely the BALA sector or other area, they gradually pin-point the field or orchard’s location by mentioning first the irrigation canal, second the TI, a specific entity or unit to which the field or orchard is near or belongs, and third the fields or orchards neighbouring (DA) the field or orchard in question.

The way of describing the size as well as the location of a field or orchard in the Old Babylonian Susa texts is all together completely different in comparison with what we are used to read in the Old Babylonian tablets of Mesopotamia proper, and Sippar in particular. This is no doubt

another manifestation of the presence of a basic duality of cultures as a result of the continuous interaction between the traditions, values and influences of the two major ethnicities, Akkadian and Elamite, present in the largest city in the border area between Mesopotamia and Elam.

The arable land around the city of Susa was divided in three large parts: three BALA sectors and the area on the other bank of the Zamun River. Whereas the three BALA sectors were no doubt located in the vicinity of the city, the area on the other bank of the Zamun seems to be located at the edge of the agricultural territory of Susa. Unfortunately, it is impossible to identify the Zamun, but it seems to have formed a kind of natural border of Susa's agricultural territory, with an extra area of arable land on its other bank, in addition to the arable land around the city, subdivided in three BALA sectors. These three sectors are always written logographically – BALA IGI.URU^{ki}, BALA URU.DAG and BALA GU.LA or GAL – which makes it hard to fathom the meaning of their names. On one occasion, however, the BALA GAL is rendered syllabically as *pilê rabî* (the large *pilê*) – *pilê* being no doubt a word to be traced to an Old Elamite root (maybe pi-il 'depot'?). The fact that the arable land of Susa was divided into three BALA or *pilê* sectors, might have been linked to three different assembly points or depots where the yield of the fields in each sector was stored and administered, and even to a regime of crop rotation – possibly an early version of a three-field system? – although this needs further research.

31 irrigation canals and 28 TI can be located within these three BALA or *pilê* sectors. The fact that one irrigation canal, Kimasî(m), runs through both the URU.DAG and IGI.URU^{ki} sectors, two irrigation canals, Šubarū and Zahakī, run through both the IGI.URU^{ki} and GU.LA/GAL sectors, and that one TI, Ad/tu/ara, is located both in the GU.LA/GAL and URU.DAG sectors, proves that all three sectors bordered on each other and must therefore have formed a circular area around the city of Susa. One field located in the BALA GAL is said to be situated TI the 'x'-ri of the territory of Awan, implying that the GAL sector is to be situated (south)-east of Susa, extending as far as the territory of Awan, whose centre Adamdun is probably to be located near Šūštar on the Karun river. The total area of arable land around Susa must have been more than 9460 ha, as the average surface of the land irrigated by the canals mentioned in MDP 28 452 is 236,5 ha and we know of more than 40 canals in total.

This enables us to make the following schematic drawing of the agricultural territory of Susa:

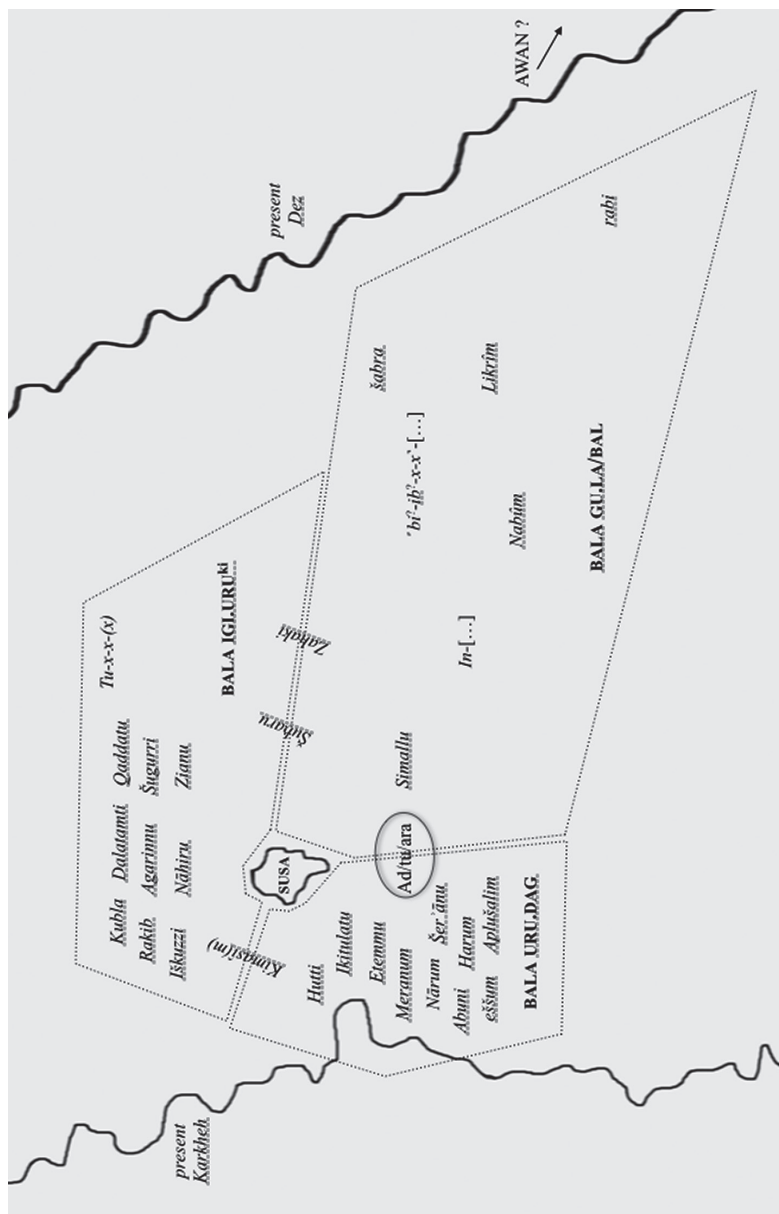


Fig. 1: schematic drawing of the agricultural territory of Susa (© K. De Graef)

Table 6: Fields and orchards located in the IGI.URU^{ki} sector

Text	Genre	Subject	Surface	Canal	TI	DAI	DA2	Date
MDP 23 255	lease	a.šà	0.1.1.0 numun	Agarinnu	Inšūšinak-rābi	Teri-manni	Warad-Bulma	—
MDP 23 167	division	a.šà	0.1.1.0 numun	Dalatamti	—	—	—	Temti-agun/ Kuk-Našur
MDP 22 110	lease	a.šà	1.0.0.0 numun	<i>iki atap</i>	Dulluqu	Ilum-ki	—	—
MDP 23 257	lease	a.šà	0.2.3.0 numun	Iškuzzi	Hallati	Išrupanni	—	—
MDP 23 260	lease	a.šà	0.1.4.0 numun	Iškuzzi	Hallati	Rabiya`unu	—	—
MDP 22 088	lease	a.šà	[x.x.x.x] numun	Kimasī(m)	Tepti-iššan	Šilliya	—	—
MDP 22 093	lease	a.šà	0.0.2.5 numun	Kimasī(m)	Tepti-iššan	Šer'i	—	—
MDP 23 244	lease	kiṛi ₆	0.0.3.0 numun	Kubla	Himduti	Du-[...]-qu	—	—
MDP 23 230	sale	kiṛi ₆	0.0.1.0 numun	Kubla	Hun-dahla	Rabibi	—	—
MDP 23 262	lease	a.šà	īšu u mādu	Kubla	Igigi	—	—	—
MDP 23 279	lease	a.šà	0.1.3.0 numun	Kubla	Zartiya	—	—	—
MDP 23 278	lease	a.šà	1.0.0.0 numun	Kubla	Zartiya	Ahi-wedi	—	—
MDP 23 254	lease	a.šà	0.1.5.5 numun	Kubla	Zartiya	Alimma	—	—
MDP 23 280	lease	a.šà	0.1.3.0 numun	Kubla	Zartiya	Uzalu	—	—
MDP 23 229	sale	a.šà <i>qadu</i> ^{g^{is}} īšū	īšu u mādu	Kubla	—	Damqa	Temmimi	—
MDP 23 245	lease	kiṛi ₆ <i>qadu birišū</i>	īšu u mādu	Kubla	—	ʿKuritu	—	—
MDP 23 249	lease	a.šà	īšu u mādu	Kubla	— (?)	Kubilassu	—	—
MDP 23 250	lease	a.šà	īšu u mādu	Kubla	—	dne Ummanu	—	—
MDP 23 251	lease	a.šà	īšu u mādu	Kubla	—	Haya`u`u	—	—

Text	Genre	Subject	Surface	Canal	TI	DAI	DA2	Date
MDP 23 263	lease	a.šà	<i>īšu u mādu</i>	Kubla	—	Haya`u`u	—	—
MDP 23 264	lease	a.šà	<i>īšu u mādu</i>	Kubla	—	Hunnatu	—	—
MDP 23 265	lease	a.šà	<i>īšu u mādu</i>	Kubla	— (?)	<i>ummātu</i>	Pulayah	—
MDP 23 267	lease	a.šà	<i>īšu u mādu</i>	Kubla	—	Haya`u`u	—	—
MDP 23 281	lease	a.šà	<i>īšu u mādu</i>	Kubla	—	dme Ummanu	—	—
MDP 22 106	lease	a.šà	1.0.0.0 numun	Nāhiru	Azānu	Nabarra	—	—
MDP 23 268	lease	a.šà	0.4.0.0 numun	Qaddatu	Zariya	Alimma	—	—
MDP 23 277	lease	a.šà	0.1.1.0 numun	Rakib	Luršû	f'Zubburtu	—	—
MDP 23 259	lease	a.šà	0.0.3.0+x numun	Rakib	Luršû	Rabiyuti	—	—
MDP 23 266	lease	a.šà	0.1.1.0 numun	Rakib	Šaha-marši	Suqarrupi	—	—
MDP 23 261	lease	a.šà	1.0.0.0 numun	Rakib & Kubla	Daqīya	Ya`eya`e	<i>ummāti</i>	—
MDP 22 108 = MDP 18 223	lease	a.šà	[x.x.x.x] numun	Šubaru	Kuliya	Inšūinak-gamil	—	—
MDP 24 269	lease	a.šà	0.2.3.0 numun	Šugurri	Šamaš-tillati	Dari-ekallim	—	Tan-uli/Temti-halki
MDP 23 253	lease	a.šà	3.0.0.0 numun	Tu-x-x-(x)	—	<i>ummāti šapiti</i>	—	—
MDP 22 116	?	[a.šà]	[x.x.x.x numun]	Za[haki]	Šamaš-ga[mil]	?	?	Temti-raptaš/ Kuduzuluš
MDP 22 107	lease	a.šà	0.2.3.0 numun	Zianu	Azanu	Sarriqu	—	—
MDP 22 064	sale	[a.šà]	<i>šiddār dub.sar</i>	[...]	—	Amu-[...]	—	Šiwe-palar-huppak
MDP 23 208	sale	a.šà	1.0.0.0 numun	—	—	paš uru ^{ki}	—	Temti-halki/ Kuk-Našur
MDP 24 359	sale	a.šà	0.1.4.0 numun	—	—	kirī ₆	—	—
		kirī ₆	<i>īšu u mādu</i>	—	—	—	—	—

Table 7: Fields and orchards located in the URU.DAG sector

Text	Genre	Subject	Surface	Canal	TI	DAI	DA2	Date
MDP 23 248	lease	a.ša	0.0.5.0 numun	Abuni	Būzi	—	—	Tepti-ahar
MDP 22 059	sale	a.ša	[x.x.x.x.] numun <i>šiddāt</i> dub.sar	Aplušalim	—	Sîn-tayyari	—	—
MDP 22 098	lease	a.ša	0.1.1.5 numun	<i>eššum</i>	Inzuzu	Waqrīya	—	—
MDP 22 105	lease	a.ša	0.1.1.0 numun	<i>eššum</i>	Nabaya'i	Kīma-ahi	—	—
MDP 23 173	division	a.ša u kirī ₆	<i>īšu u mīadu</i>	Etemmu	—	—	—	Tan-uli/Temiti-halki
		a.ša	[x.x.x.x.] numun	Ikitulatu	—	— or [...]	—	—
MDP 24 348	sale	<i>šiqītum inīti</i> PN	1.0.0.0. numun	Harum	—	—	—	Pala-iššan/Kuk-kirwaš
MDP 22 094	lease	a.ša	0.0.2.0 numun	Huttu	Adara	Tukkiya	—	—
MDP 22 091	lease	a.ša	0.0.5.0 numun	Kīmasī(m)	Šumu-dārim	<i>umūtu</i>	—	—
MDP 22 126	lease	a.ša	0.1.4.0 numun	Kīmasī(m)	Šumu-dārim	Ibbum	—	—
MDP 24 349	sale	a.ša	0.1.3 iku	Meranum	—	—	—	Pala-iššan/Kuk-kirwaš
MDP 24 350	sale	a.ša	0.1.0 iku ša 0.2.6 iku	Meranum	—	—	—	Kuk-kirwaš
		a.ša	0.2.6 iku	Meranum	—	—	—	—
MDP 24 366	exchange	a.ša	—	Meranum	—	Zumeme	Puzur-Lamma	—
MDP 23 252	lease	a.ša	0.0.5.0 numun	<i>nārum</i>	uru ^{ki} Pilāk	Erra-šilli	—	—
MDP 23 256	lease	a.ša	[x.x.x.x.] numun	<i>nārum</i>	Na-PI-el?-ti	Tur-[...]	—	—
MDP 23 258	lease	a.ša	0.0.2.0 numun	<i>nārum</i>	Šaqa šattu-priest	Inšūinak-rab-ili	—	—
MDP 24 360	sale	a.ša	—	—	—	—	—	—
MDP 24 363	sale	a.ša	[x.x.x.x.] numun	—	—	—	—	—

Table 8:
Fields and orchards located in the G.U.LA/GAL sector

Text	Genre	Subject	Surface	Canal	TI	DA1	DA2	Date
MDP 28 429	lease	a.šà	[x.x.x.x] gur numun	'bi-ib-x-x'-[...]	x-l-x	Muballišši	—	Tata/ Temti-Agun
MDP 22 128	lease	a.šà	0.1.1.0 numun	in[...]	abulla rā'ī	[...]	Inzuzu	—
MDP 23 247	lease	a.šà	[x.x.x.x] numun	Rabi	'x'-ri Awan ^{ki}	Rabibi	Laru-illum-mada	Tan-uli/ Temti-halki
MDP 24 367	exchange	a.šà u an.za.gar	0.1.2.0 numun	šabra	—	—	—	—
MDP 24 359	sale	a.šà	0.2.2.0 numun	šabra zirīti pa ₃ Nābum	—	Ikunam	—	—
MDP 22 092	lease	a.šà	0.0.1.0 numun	Šer-ānu	Adura	Ibni-Adad	—	—
MDP 22 109	lease	a.šà	0.1.1.0 numun	Simallu	Lulū	Ṭāb-šillīki	—	—
MDP 22 095	lease	a.šà	0.1.1.0 numun	Šubaru	Aitturu	Ibašši-illum	Hunnini	—
MDP 22 102	lease	a.šà	0.0.4.0 numun	Zahaki	Mušezību	Šazi-bani šatu	—	Tan-uli/ Kuk-Našur
MDP 24 351	sale	a.šà	0.2.0.0 numun	Likrīm	—	—	—	Kuk-kirwaš/ Temti-sanit
MDP 22 061	sale	a.šà	īšu u mādu	—	—	Ubar-Sin	—	—
MDP 24 357	sale	a.šà	0.1.4.0 numun šiddāt dub.sar	—	—	—	—	—

Table 9: Fields and orchards located on the other bank of the Zamun

Text	Genre	Subject	Surface	Canal	TI	DA1	DA2	Date
MDP 22 090	lease	a.šà	0.2.3.0 numun	Hunnun- [...]	—	f'Apin-dulti	Lišimuni	—
MDP 22 103	lease	a.šà	0.2.3.0 numun	Kiššitu	—	Imarbutti	—	—
MDP 23 209	sale	a.šà	0.3.2.0 numun <i>šiddāt dub.sar</i>	Mê Zapmuri	—	Išmeanni	Išme-karab-ma-ilum	Temti-halki/ Kuk-Našur
MDP 23 218	sale	a.šà	<i>īšu u mādu</i>	Mê Zapmuri	—	Kanatrî	—	Temti-raptaš
MDP 23 217	sale	a.šà <i>burubalîm</i>	—	[...]	—	Ilabrat-abi	Inzuzu & Aha-lurši	Temti-raptaš
MDP 23 216	sale	a.šà	0.1.0.0 numun <i>šiddāt dub.sar</i>	—	—	Šahî	Naptê	Temti-raptaš
MDP 28 417	?	kiri ₆	0.0.3.0 numun <i>īšu u mādu</i>	—	—	Warad-Bulma	Nūratu	PN ₁ /Temti- [...]

Table 10: Fields and orchards located in other cities or areas

Text	Genre	City/Area	Subject	Surface	Canal	TI	DAI	DA2	Date
MDP 22 057 = MDP 18 208	sale	a.gār Atu	a.šà 'it-[ša-a/]-la	—	—	—	—	—	—
MDP 22 062	sale	IGI.URU.KI <i>iki</i> bād.apin.dingir	a.šà	0.0.4.0 numun	Aku	—	Essà	—	Siruktuh/ Šiwe-palar- huhpak
MDP 22 101	lease	IGI.URU.KI <i>ša</i> ri-x	a.šà	10.0.0.0 numun	[...] 'x' x- <i>libbim</i>	—	—	—	Temti-raptaš
MDP 23 167	division	<i>ša</i> kiri ₆ <i>ekallim</i>	a.šà	0.0.4.0 numun	Etemmu	—	—	—	Temti-agun/ Kuk-Naşur
MDP 23 234	sale	uru <i>ša</i> Zappiya	a.šà <i>ù</i> kiri ₆	0.1.0.0 numun	—	<i>paṭ ṣà</i> ^{gš} / <i>libārī</i>	Temti-haštuk	Sîn-rabi	[...]
MDP 23 206	sale	uru <i>ša</i> Zappiya	a.šà <i>ù</i> kiri ₆	0.2.0.0 numun	—	<i>ša</i> <i>libārī</i>	Temti-haštuk	Sîn-rabi	Tan-uli/ Kuk-Naşur
MDP 24 366	exchange	URU.DAG <i>ša</i> an.za.gar-lugal	a.šà	—	—	—	a.šà <i>tērum</i>	—	—
MDP 22 067	sale	uru ^{ki} Kuk-Naşur	<i>huptu</i>	<i>īṣu u mādu</i>	—	—	—	—	Kuk-Naşur/ Kudu-zuluš

Table 11: Fields and orchards of which the location is broken or not given

Text	Genre	Subject	Surface	Canal	TI	DAI	DA2	Date
MDP 22 058	sale	a.šà	0.0.4.0 numun <i>šiddāt</i> dub.sar	ᵀTuzi	—	—	—	—
MDP 24 358	sale	kirī ₆	<i>īšu u mādu</i>	gú <pa ₅ >	—	Nuratum	—	—
MDP 22 087	lease	a.šà <i>birīti</i>	<i>īšu u mādu</i> <i>mali ibaššū</i>	Pizi	—	—	—	Šimut-wartaš
MDP 22 066	sale	a.šà (x2)	[...]	Rabi (?)	—	[...]	[...]-abum	Tan-uli
MDP 23 167	division	a.šà	0.0.2.0 numun	gal (?)	—	—	—	Temti-agun/ Kuk-Našur
MDP 23 173	division	an.za.gar <i>qadu mišī u a.šà</i>	<i>īšu u mādu</i>	Dalatamti	—	Warad-Kūbi	—	Tan-uli/Temti-halki
MDP 22 08 = MDP 18 224	lease	a.šà	<i>īšu u mādu</i>	Išku[zzi]	— (?)	[...]-dutu (?)	Harran (?)	—
MDP 23 228	sale	a.šà	<i>īšu u mādu</i>	Kubla	—	—	—	—
MDP 23 222	sale	a.šà	0.2.3.0 numun (?)	[...]-hu (?)	— (?)	[...]-qadannu (?)	[...] & Šamaš-ki-[...] (?)	Šimut-wartaš
MDP 23 231	sale	kirī ₆	<i>īšu u mādu</i>	[...]-ribi (?)	—	Kugiya	Bēliya	—
MDP 23 202	sale	a.šà	1.0.0.0 numun	*x ² -[...]	—	—	—	Kuter-Nahhunte/ Temti-agun
MDP 24 370	lease	a.šà	0.1.4.0 numun	<i>ú-x</i> -[...]	—	Ahiya d Šu-[...]	<i>ummāti x</i> -[...] & Ahmarši	Tan-uli
MDP 22 063	sale	a.šà	0.2.3.0 numun <i>šiddāt</i> dub.sar-ri	—	—	dub.sar- <i>ru</i> (?)	—	Šiwe-pakar-huppak/ Kudu-zuluš
MDP 23 234	sale	a.šà	0.4.0.0 numun	— or [...]	— or [...]	[...]	[...]	[...]
MDP 23 206	sale	a.šà	0.4.0.0 numun	[...]	—	Temti-haštuk	Lu-dingira	Tan-uli/Kuk-Našur
MDP 22 097	lease	a.šà	0.1.0.0+x numun	[...]	Adara	Lib-[...]	Šunaya	Inšušinak/ Išme-karab

Text	Genre	Subject	Surface	Canal	TI	DAI	DA2	Date
MDP 22 100	lease	a.šà	0.1.4.0 numun	[...]	<i>ālu eššī</i>	Um-[...]	—	Inšušinak/ Išme-karab
MDP 22 099 = MDP 18 218	lease	a.šà	0.1.4.0 numun	[...]	Māti-am-mar	[...]	—	— or [...]
MDP 22 112	lease	a.šà	0.1.4.0 numun	[...]	uru ^{ki} Piāak	[...] (?)	Ilu-[...]	[...]
MDP 23 208	sale	a.šà	0.3.2.0 numun	[...]	[...]	[...]	[...]	Temti-halki/ Kuk-Našur
MDP 22 127	lease	a.šà	0.1.1.0 numun	Abi-[...]	Šabiduti	Na-x-[...]	—	Inšušinak/ Išme-karab
MDP 22 129	lease	a.šà	[x.x.x.x] numun	<i>ba</i> -[...]	ʿé.níg	ʿPa-[...]-x-a	—	Inšušinak/ Išme-karab
MDP 22 104	lease	a.šà	0.1.5.0 numun	Ela-[...] (?)	<i>bāb</i> <i>šamaš</i>	—	—	[...]
MDP 22 096	lease	a.šà	0.1.5.0 numun	Si-[mallu]	Adura	Sîn-iddimam	—	Inšušinak/ Išme-karab
MDP 22 070	sale	a.šà	[x.x.x.x] gur <i>zēr-šū</i>	Abuni	—	<i>ummāti šupalīti</i>	—	—
MDP 23 269	lease	a.šà	1.1.1.0 numun	—	Šammi-ili	[...]	Iqišu[mi?]	Inšušinak/ Išme-karab
MDP 24 359	sale	kiri ₆	—	gú paš	—	—	—	—
MDP 23 219	sale	a.šà NI-IK-lam <i>qadu</i> a.šà Šušu ^{kr}	—	—	—	Ahuyatu	Tammiya	Temti-raptaš
MDP 23 200	sale	a.šà	<i>īyu u mādu</i>	—	—	Igmillu	—	Šive-palar-huppak/ Kudu-zuluš
MDP 23 355	sale	kiri ₆	0.0.1.0 numun <i>šiddāt dub.sar</i>	—	—	Nuratam	—	—

<i>MDP 23 205</i>	sale	a.šà	2.2.0.0 numun <i>šà 1.0.0 iku rapiqai</i>	—	—	Nuriri	—	Temti-agun/ Kuk-Našur
<i>MDP 24 356</i>	sale	a.šà im.an.na u pa ₅	4.0.0.0 numun <i>šiddāt dub.sar</i>	—	—	Pululuya	—	—
<i>MDP 23 219</i>	sale	a.šà	0.1.4.0 numun	—	—	Rimkiya	Nuriya	Temti-raptaš
<i>MDP 22 060</i>	sale	a.šà	0.1.1.5 numun <i>šiddāt dub.sar</i>	—	—	Warad- ^d Tuzi	—	—
<i>MDP 24 357</i>	sale	kiri ₆	0.0.3.0 numun	—	—	Zinini	—	—
<i>MDP 23 174</i>	division	kiri ₆	0.1.0.0 (numun)	—	—	Adad-ilum	—	—
		kiri ₆	0.1.1.0 (numun)	—	—	fŠušulivvir	—	—
		kiri ₆	0.1.1.0 (numun)	—	—	Nun-abuni	—	—
		a.šà <i>bīru</i>	[x.x.x.x] (numun)	—	—	<i>ummāi šà Madi-turrī</i>	—	—
		kiri ₆	0.1.0.0 (numun)	—	—	<i>ummāi šà Madi-turrī</i>	—	—
		kiri ₆	0.0.5.0 (numun)	—	—	Warad-Ištar	—	—
<i>MDP 23 175</i>	division	kiri ₆	0.1.1.0 (numun)	—	—	fImdi-kitu	—	—
		kiri ₆	0.1.0.0 (numun)	—	—	fŠušulivvir	—	—
		a.šà <i>bīru</i>	0.0.3.0 (numun)	—	—	Nun-abuni	—	—
		kiri ₆	0.0.5.0 (numun)	—	—	Nuriyaki	fŠušulivvir	—
		kiri ₆	0.1.1.0 (numun)	—	—	Nuriyaki	fŠušulivvir	—
<i>MDP 23 176</i>	division	kiri ₆	0.1.0.0 (numun)	—	—	fImdi-kitu	—	—
		kiri ₆	0.1.3.0 (numun)	—	—	Išrupanni	—	—
		a.šà <i>bīru</i>	0.0.3.0 (numun)	—	—	Pir-ilišu	—	—
		kiri ₆	0.0.5.0 (numun)	—	—	Šarru-muštal	—	—
		kiri ₆	0.1.1.0 (numun)	—	—	Warad-Ištar	—	—

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