


 <p>Haus für Experimentelle Therapie</p>  <p>UNIVERSITÄT BONN</p>  <p>ukb universitäts klinikumbonn</p>	<p>PI</p> <p>Procedural Instruction</p>	<p>Page 1 of 16</p>
<p>VA-TS-001-07</p>	<p>Procedural Instruction</p> <p>Avoidance of breeding surplus</p>	<p>applicable as of 09/05/2023</p>

VA-TS-001-07	Procedural Instruction breeding surplus		
Scope of validity:	<p>This PI regulates the procedure for the avoidance of breeding surpluses and the handling of breeding surpluses at the House for Experimental Therapy (HET).</p> <p>This PI applies to all work groups affiliated with the HET.</p>		
Input:	No breeding management	Output:	Breeding management
Input:	Breeding surplus	Output:	Controlled breeding surplus
Responsibility:	Head of the HET		
Distribution list:	Employees of work groups affiliated with the HET		
Rel. laws:	<p>German Animal Welfare Act (TierSchG)</p> <p>German Regulation for the Protection of Animals Used for Experimental or Other Scientific Purposes (German Animal Welfare Regulation Governing Experimental Animals (TierSchVersV))</p>		
Means to audit/verify:	<p>Documentation of breeding planning</p> <p>Self-training</p> <p>Training list</p>		




created: Dr. Kerstin Hagemeister	Rev./rel.: Andrea Pieper	File name: VA-TS-001-07ZuchtplanungEN
Date: 08/30/2023	Date: 09/05/2023	Replacement for: VA-TS-001-06ZuchtplanungEN

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1 Aim

The aim of this document is to regulate the avoidance and handling of breeding surpluses.


2 Related documents

Dokument	Dokumententitel
HHO version 1.10 (5/2022)	House and Hygiene Code
FB-MM-007	Schulungsliste
FB-MM-006	Selbstschulung
FB-TS-007	Zuchtplanung

3 Abbreviations and definitions

Term/abbreviation	Definition
AG	Work group
HET	House of Experimental Therapy
HHO	House and Hygiene Code
LANUV	State Agency for Nature, Environment and Consumer Protection of North Rhine-Westphalia, Germany
HETL	Head of the HET
MTA	Material Transfer Agreement
TierSchG	German Animal Welfare Act

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4 Process description

At the HET, breeding laboratory animals has to be performed bearing in mind the needs of the animals and in the sense of the 3R principle. Cryopreservation is to be targeted for the conservation of species instead of conservation breeding. Breeding of non-genetically modified animals is not envisaged; such animals are obtained from commercial breeders. Exceptions from this procedure must be justified by the experiment. Breeding records must be maintained; experiments are subject to an obligation to keep records (see § 9 TierSchG).

Experimental animals that are no longer needed are protected by the prohibition of killing in § 17 number 1 TierSchG, i.e. they may only be killed if there is a good reason for doing so. Considerations of a purely economic nature or the aim of saving costs, work and time are not sufficient to represent a good reason.


According to the Animal Welfare Act § 17, anyone killing a vertebrate without good cause is liable to imprisonment up to three years or to the payment of a fine.

The killing of breeding surpluses always requires careful consideration of the benefits and interests in each individual case.

In this context, the options currently offered by needs-oriented breeding of laboratory animals (e.g. cryopreservation) must also be a top priority issue in the planning of breeding for experimental projects in order to reduce animal numbers from the beginning.

In order to reduce the killing of laboratory animals to the essential minimum, the aspects described below should be respected.

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4.1 Breeding consultation

Basically, breeding animals can be divided into two categories:

- Conservation breeding
- Animals used in experiments

Conservation breeding can be minimised by cryopreservation. It must also be determined whether animals from conservation breeding can be used again in animal experiments in the foreseeable future.



A certain population level is required to establish genetically modified animals for experimental use. Careful breeding and temporal planning should be applied to minimise animal numbers.

If the production of surplus animals can be avoided or reduced by means of careful breeding and project management, the killing of surplus animals represents a breach of the TierSchG.

Breeding consultation by the HET is conducted as an obligatory measure for the avoidance/minimisation of surplus animals. The responsible principal investigator must keep an appointment for breeding consultation at the HET.

The service of the HET does not include the assumption of the breeding planning for the users. During the breeding consultation, a plausibility check of the breeding plans will be performed and information on careful breeding project management in line with animal welfare provided.

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4.2 Planning of breeding

A written breeding plan, which has to be submitted to the HET, is prepared as an obligatory measure, in order to avoid/minimise surplus animals. Form FB-TS-007 must be used for this purpose¹. The HET will review the breeding plan. Lines with a harmful phenotype are additionally released by the LANUV in the course of the application for approval.

The review by the HET serves the purpose of reducing breeding surpluses to an indispensable level by education and in dialogue with researchers.


The breeding plan should be exemplified (e.g., time period of one year). If the need changes, notification to the HET is required.

The breeding plan should be exemplified (e.g., time period of one year). If the need changes, notification to the HET is required.

¹The following information is required:

- Information on the line (name, genetic background)
- Applied mating scheme
- Use (animal testing, organ removal, breeding)
 - short description of the aim of the use
- Required animals
 - sex, genotype
- Use of possible breeding surpluses
 - control group, education, training and further education
- Details of whether alternatives to conservation breeding have been considered
 - information whether cryopreservation or commercial acquisition is possible

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4.3 Breeding surplus


Breeding surplus includes animals that cannot be used for the purpose for which they were bred due to breeding-related reasons, as well as animals that cannot be used for animal experiments or for further breeding as part of specialised genetic breeding due to their genotype.

The killing of vertebrates is only allowed for a good reason in accordance with the TierSchG. Before an order to kill animals is issued, an attempt must always be made to place them elsewhere. The placement assignment is generated in PyRAT.

Animals available for placement are listed in PyRAT:



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Creation of the placement order

1. First, the animals available for placement have to be selected.
2. By selecting the QS function, a new window opens (Quick Select).
3. By setting a check mark, the selected animals can be added to the pool of shared animals.

Additional information:

- A. For animals requiring an "Aktenzeichen" for breeding and husbandry due to a harmful phenotype, this must be indicated by appropriate marking.
- B. For animals with a Material Transfer Agreement (MTA)² this must be indicated by a comment.

Transfer of animals with the comment "**MTA**" is allowed only after prior consultation of the owner.

Orders "**Tiertransfer aus Vermittlung**" can only be released if a comment as follows is included in the request:

"Consultation made, use by owner permitted".


4. QS has to be applied to complete the process.

² **INFORMATION:**

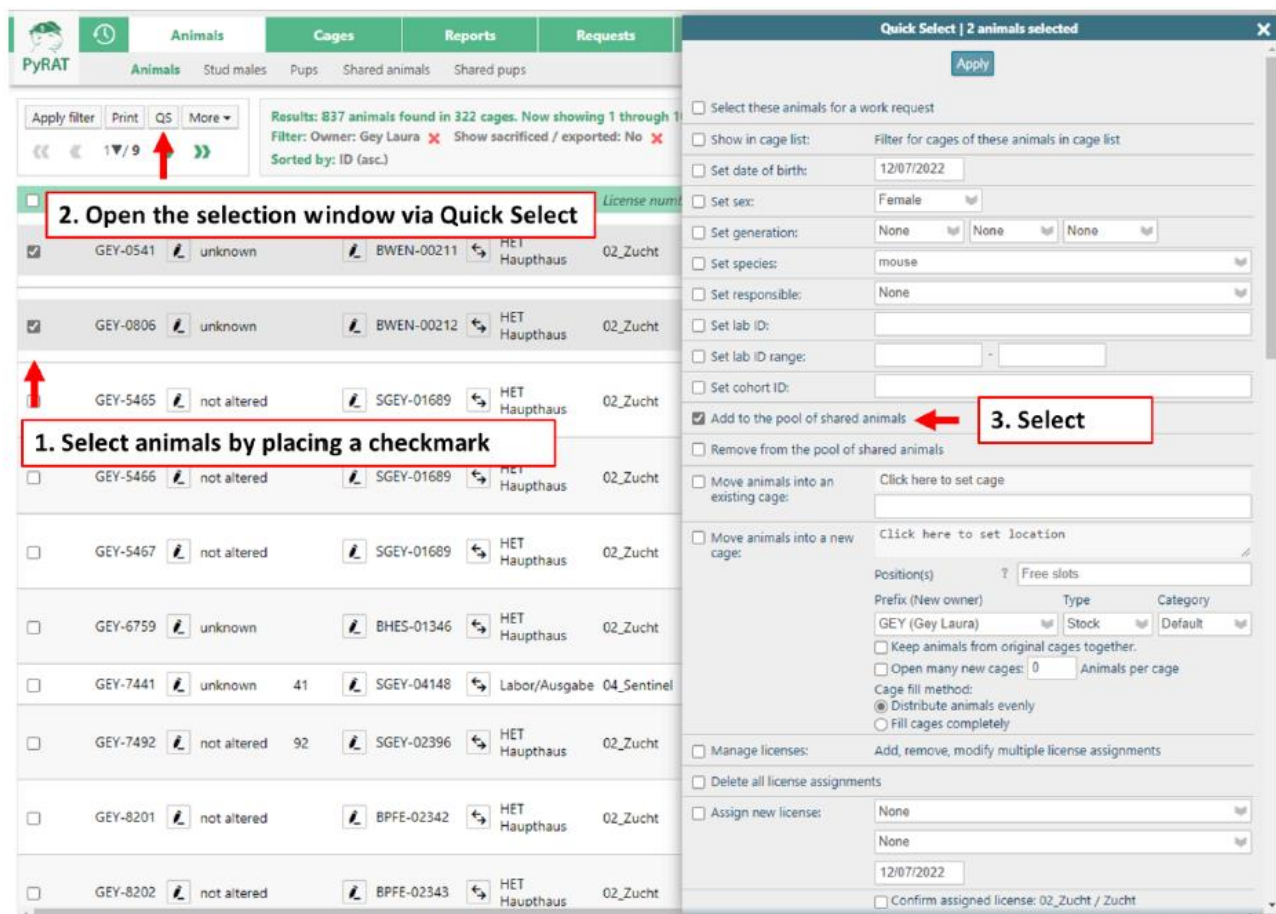
It is possible that animals or lines are protected by a Material Transfer Agreement (MTA) and placement cannot occur for this reason. Please check for existing MTAs prior to creating the placement order. If an MTA is in place, there is an option to transfer it to new owners. This possibility should be discussed with the "manufacturer" before creating the placement order.

For new MTAs in the future, it should be checked whether a mediation can take place after completion of your work and a precise definition of further use/transfer (e.g. for training purposes) should already be specified in the MTA.

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It is possible to limit the visibility of animals in placement to a certain group of people. This significant restriction of the placement success contradicts the animal protection in the sense of the reduction of animal numbers and is to be expressly omitted. If such restriction is applied, all responsibilities will be transferred to the responsible users³.




2. Open the selection window via Quick Select

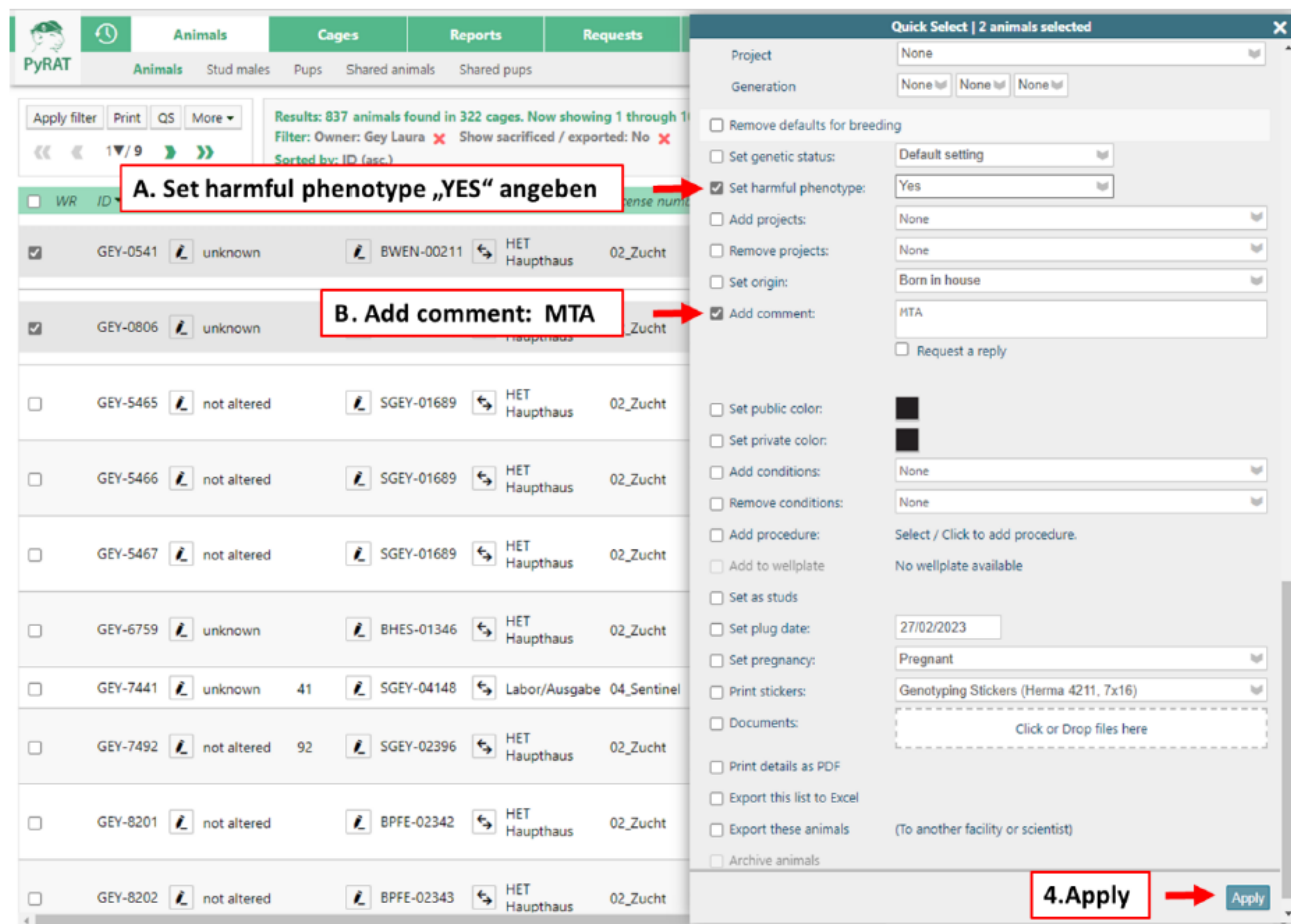
1. Select animals by placing a checkmark

3. Select

Animal ID	Sex	Age	Location	Cage
GEY-0541	unknown		HET Haupthaus	02_Zucht
GEY-0806	unknown		HET Haupthaus	02_Zucht
GEY-5465	not altered		HET Haupthaus	02_Zucht
GEY-5466	not altered		HET Haupthaus	02_Zucht
GEY-5467	not altered		HET Haupthaus	02_Zucht
GEY-6759	unknown		HET Haupthaus	02_Zucht
GEY-7441	unknown	41	Labor/Ausgabe	04_Sentinel
GEY-7492	not altered	92	HET Haupthaus	02_Zucht
GEY-8201	not altered		HET Haupthaus	02_Zucht
GEY-8202	not altered		HET Haupthaus	02_Zucht

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A. Set harmful phenotype „YES“ angeben

B. Add comment: MTA

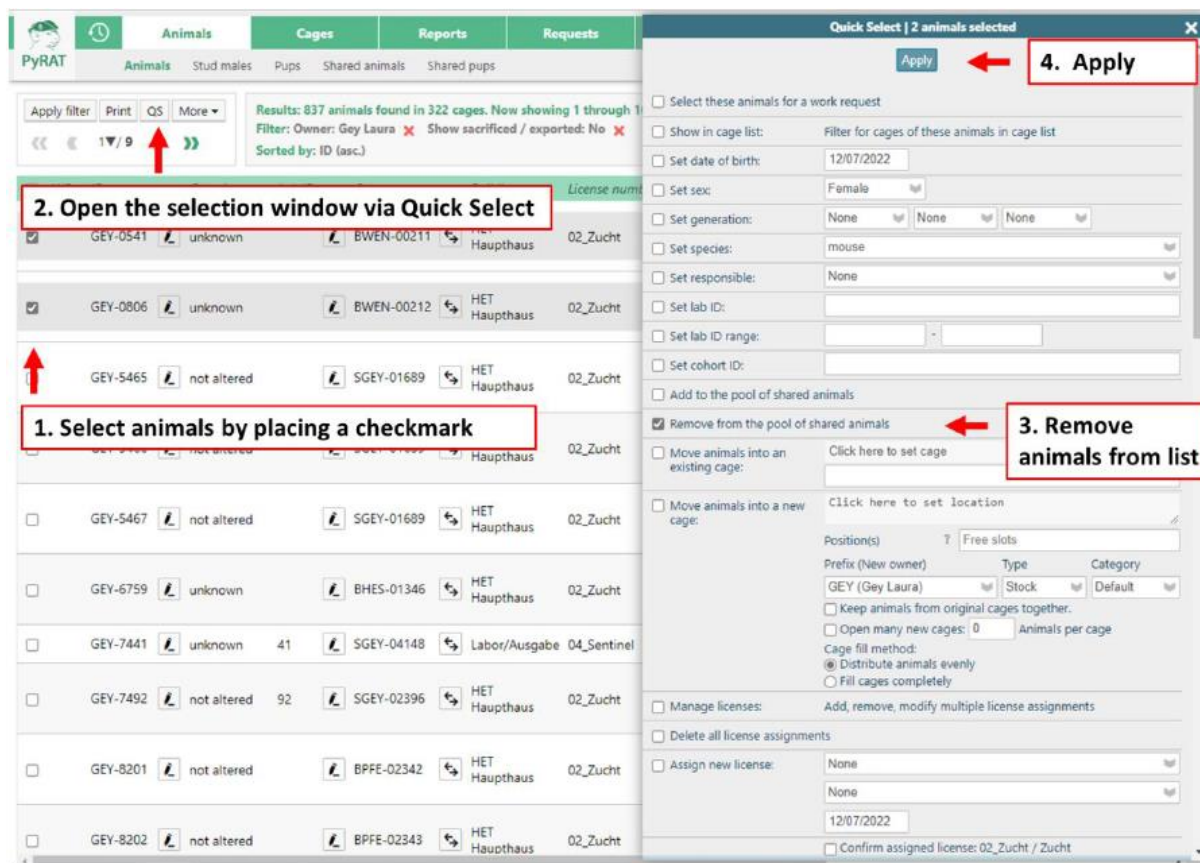
4. Apply

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To remove animals from the list of released animals a corresponding check mark has to be set and


1. First the animals have to be marked by selection.
2. By selecting the QS function a new window opens (Quick Select).
3. By setting a check mark, the selected animals can be removed from the list of released animals.
4. To complete the process, QS is applied.



The screenshot shows the PyRAT software interface. The main window displays a table of animals with columns for ID, status, and location. A 'Quick Select' dialog box is open on the right, with various filters and checkboxes. Red arrows and boxes highlight the steps:

- 1. Select animals by placing a checkmark:** An arrow points to the 'QS' button in the top left of the main window.
- 2. Open the selection window via Quick Select:** An arrow points to the 'Quick Select' dialog box.
- 3. Remove animals from list:** An arrow points to the 'Remove from the pool of shared animals' checkbox in the 'Quick Select' dialog box.
- 4. Apply:** An arrow points to the 'Apply' button in the 'Quick Select' dialog box.

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If the placement attempt is successful⁴, animals can be selected directly from the list for a request:

1. First the animals must be marked by selection.
2. By selecting a request, a new window opens (Enter new request).
3. The request type Tiertransfer aus Vermittlung has to be selected.

Orders must be created per room, barrier, as well as strain.

4. The Responsible is **ALWAYS** the Import Export.


The Import Export automatically checks whether a transfer to the new location is possible. The Import Export automatically assigns the transfer to the responsible animal caretaker after release.

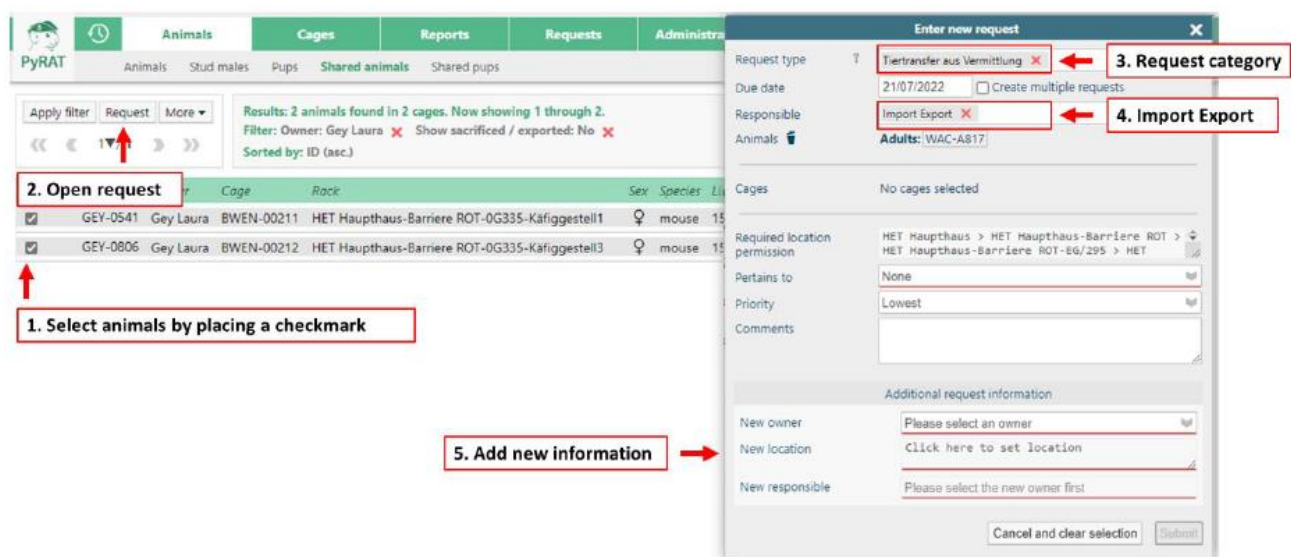
5. New information (owner, location - with room number, as well as the person concerned) have to be selected.

In case of a transfer to GREEN external, please always indicate the corresponding file number in the comment field. After the transfer has taken place and the owner has changed, this must then be assigned to the animals accordingly.

For transfers from the HET main building to HET 3 or to an external housing/laboratory, please enter the date and time of the animal hand out in the comment. You are responsible for the transport of the animals. Please note that orders are created on time (min. 1 day before animal hand out). Thereby, automatically, from the import-export, the order class will be changed after the release of the transfer into an animal hand out (at the time specified by you in the comment) and assigned to the responsible animal keeper.

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The screenshot shows the PyRAT software interface. The 'Enter new request' dialog box is open. Red boxes and arrows highlight the following steps:

- 1. Select animals by placing a checkmark:** In the 'Animals' table, the first two rows are checked.
- 2. Open request:** The 'Request' button is clicked.
- 3. Request category:** The 'Request type' dropdown is set to 'Tiertransfer aus Vermittlung'.
- 4. Import Export:** The 'Responsible' dropdown is set to 'Import Export'.
- 5. Add new information:** The 'Additional request information' section is expanded, showing fields for 'New owner', 'New location', and 'New responsible'.

⁴ You can recognize a transfer request of your animals and thus an ongoing placement by the red letters of the animal ID, as well as by the existing work order (WR) TTV (Tiertransfer aus Vermittlung).

WR	ID	Owner	Cage	Rack	Sex	Species	Line / Strain	Mutations	Background	DOB	Age (w)	Shared (d)
<input checked="" type="checkbox"/>	TTV 704-0818	704 SFB	S704-00253	HET Haupthaus-Barriere ROT-0G330-Käfiggestell1	♂	mouse	411 - MDA5KOB6			01/10/2016	321	0
<input checked="" type="checkbox"/>	TTV 704-0824	704 SFB	S704-00255	HET Haupthaus-Barriere ROT-0G330-Käfiggestell1	♀	mouse	411 - MDA5KOB6			11/08/2016	328	0
<input type="checkbox"/>	704-0825	704 SFB	S704-00255	HET Haupthaus-Barriere ROT-0G330-Käfiggestell1	♀	mouse	411 - MDA5KOB6			11/08/2016	328	0
<input type="checkbox"/>	704-0833	704 SFB	B704-00055	HET Haupthaus-Barriere ROT-0G330-Käfiggestell1	♀	mouse	220 - CD11c.GCDL			10/06/2016	337	153

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If the placement attempt has not led to success after 2 weeks, the animals can be killed. The documentation takes place in PyRat. The reason for the killing ("Animal filter"-> "Reason for killing") must be entered there.

The placement attempts must be archived in PyRAT on the following form and should be reviewed regularly by the user:

ID	Lab ID	Cage	Rack	C	Sex	Gen	Line / Strain	Mutations	Sacrifice reason	Background	DOB	Age (w)
111-0213	213	SKUR-05609	HET Haupthaus- Barriere Grün Intern- OG180- Käfiggestell1	1406	♀	N/A	471 - S100A cre x CR flox		+ Zuchtüberschuss (Vermittlungsversuch erfolglos)	B6	03/07/2017	61
111-0215	215	SKUR-05609	HET Haupthaus- Barriere Grün Intern- OG180- Käfiggestell1	1406	♀	N/A	471 - S100A cre x CR flox		+ Zuchtüberschuss (Vermittlungsversuch erfolglos)	B6	03/07/2017	61

Breeding surplus
(placement attempt
failed)

5 Responsibilities

Breeding plan




The responsibility for needs-oriented breeding and the related obligations to minimize breeding surpluses pass over to the responsible users³.

Killing

By generating the assignment for killing animals, the user assures that the reasonable cause to kill vertebrate animals according to § 17 TierSchG exists and that all alternatives to killing have been exhausted.

³ Owner of the animals or, in the case of an existing file number, the investigator or alternate.

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6 Documentation and archiving

The responsible persons are required to keep stock and breeding records, which can be reviewed at any time by the HET or the approving authority.

7 Change index

Version	Change date	Reason/description of change	Valid as of
01	01/30/2022	New creation	01/31/2022
02	04/12/2022	<p>Adaption</p> <p>4.2 Breeding planning</p> <ol style="list-style-type: none"> 1. Form of breeding planning 2. Review of breeding planning 3. Content of breeding planning <p>4.3 Breeding surplus</p> <ol style="list-style-type: none"> 1. Note on MTAs 2. Export of an animal list from PyRAT 3. Change of the placement interval 4. Marking of the placement attempt in the comment function 5. Creation of kill order after deadline <p>5. Responsibilities</p> <p>7. Change index</p>	06/01/2022

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Version	Change date	Reason/description of change	Valid as of
03		<p>Adaption</p> <p>4.3 Breeding surplus</p> <ol style="list-style-type: none"> 1. Creation of the placement 2. Approval import/transfer <p>7. Change index</p>	07/15/2022
04	11/29/2022	<p>Adaption</p> <p>4.3 Breeding surplus</p> <ol style="list-style-type: none"> 1. Creation of the placement <p>7. Change index</p>	12/01/2022
05	02/27/2023	<p>Adaption</p> <p>4.3 Breeding surplus</p> <ol style="list-style-type: none"> 1. Creation of the placement <p>7. Change index</p>	03/03/2023
06	04/05/2023	<p>Adaption</p> <p>4.3 Breeding surplus</p> <ol style="list-style-type: none"> 1. Creation of the placement <p>7. Change index</p>	04/06/2023
07	08/30/2023	<p>Adaption</p> <p>4.3 Breeding surplus</p> <ol style="list-style-type: none"> 1. Creation of the placement <p>7. Change index</p>	09/05/2023

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