

# PDA- Herdman for field data recording:

(Program language: VB.NET and Database SQLite)

The Pocket PC (PDA)-based Herdman software enables the students / field workers capture animal data instantly while providing services. Lifetime records of up to 2000 cows and buffaloes can be maintained in the PDA. For example, while carrying out treatment or A.I. the details can be entered in the Pocket PC. The veterinary staff / students can access the previous records of the animal and also generate farmer reports.

**The salient features are:**



- ◆ Each Herdman-PDA is an independent software application that can manage database of several villages. With addition of memory cards, the data storage capacity can be further enhanced. Lifetime records of more than 2000 animals can be maintained.
- ◆ The data is stored in stratified way so that data access is easy. For example the AI worker / veterinarian can select the village and then within the village he can select the farmer from the combo box, which displays all the animals of this farmer registered in

PDA. Clicking over the animal ID leads to opening of the animal folder.

- ◆ Data entry is multilevel
- ◆ There is facility of information processing so that the AI Worker / Veterinarian can generate 'Daily Action List' and 'Alarm List'. This enables him schedule the activities.
- ◆ Most of the information is provided so that the veterinary staff has to just select from the combo box. There is no need to type. This makes data entry very quick. It hardly takes 30 seconds to enter the data of an activity.

- ◆ At the time of data entry, other details of the animals can also be accessed. For example, at the time of heat entry, details such as heat sequence, last sire used, last date of calving, lactation days, etc. are displayed. The user can also access other information by just clicking over the menu.

**Data Syncing is very convenient:** Data syncing from PDA to server / desktop or from desktop to PDA is very easy and convenient. It is a single step procedure. The programming is done in such a way that the server / desktop Herdman would recognize the data code of the PDA and the new entries from the database is transferred automatically. The validation of the database is done internally. The new data from the desktop / server also gets updated, so that it is two way process. There is no danger of data corruption at data syncing. Herdman is unique in this respect.

Data can also be transferred through GPRS if the PDA has the capability and is registered.

### Registration:

The image shows a PDA screen displaying the 'Herdman Cattle Registration' form. The form has a blue header with a close button. Below the header are several input fields and dropdown menus. The fields include: Owner (dropdown), Id No (text), AnimalID (dropdown), A. Name (text), Sex (dropdown), Species (dropdown), Breed (dropdown), Birth Wt (dropdown), Birth Dt (text, showing 09/01/2006), Place (dropdown), Source (dropdown), Parity (dropdown), Curnt Parity (text), Last Dt of AI (text, showing 09/01/2006), PD Result (text), Status (dropdown), and Milk Yield So Far (text). At the bottom of the form are three buttons: New, Save, and Close. The PDA is a silver device with a screen and a navigation pad.

Although it is expected that the animal, bull and sire registration will be done at the Server / Desktop, facility has also been provided for registration of new animals / bulls sires. Thus, the farmer need not wait in case a new animal is to be registered.

Similarly facility for disposal of the animal in case it is sold / dies or culled is also provided. While syncing the database is also updated in the server / desktop.

**Animal registration:** This form provides facility of registering any new animal. In routine practice, the initial database is created in Server / desktop and from there through syncing the database is transferred to PDA. This form is used only to create additional animal registration in case there are additions. This is only

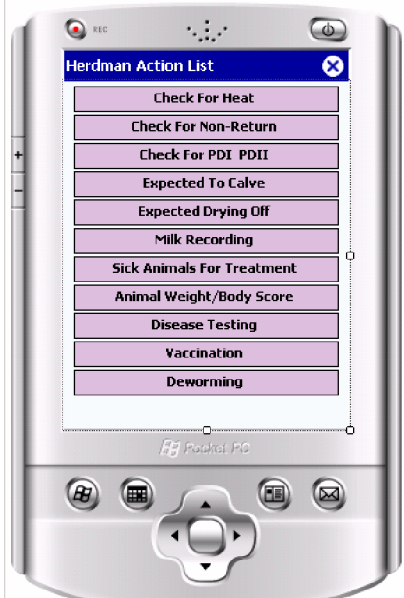


possible only when the farmer is registered. The cattle owner can also be registered through the entry form provided.

The entries such as species, sex, breed etc. can be selected from the combo boxes.

**Sire Registration:** Since it is likely that sires of which semen is supplied might change frequently. Facility therefore has also been provided to register sire. Care however must be taken to ensure that the sire ID is entered correctly.

**Generation of Action List:** The PDA-Herdman enables the User process the animal information to generate 'Action List for the User. The list displays the ID number of animals that are due for::



*Estrus detection / insemination*

*Inseminated animals due to pregnancy test I and II*

*Pregnant animals due for calving*

*Lactating animals due for drying off*

*Lactating animals due for milk recording (based on predefined parameter)*

*Animals due for treatment / vaccination / deworming*

**Generation of Alarm List:** The PDA-Herdman can also generate 'Alarm List', indicating ID numbers of animals that are underperforming compared to the predefined standards. This generates list of animals underperforming for various parameters, such as:



*Delayed first heat in heifers*  
*Delayed first heat after calving*  
*Heat interval problems*  
*Fertility problems*  
*Repeat breeders*  
*Low lactation yield (100 days)*  
*Low lactation yield*  
*Sires with low fertility*  
*Straw ordering*  
*Variation in Milk Production*

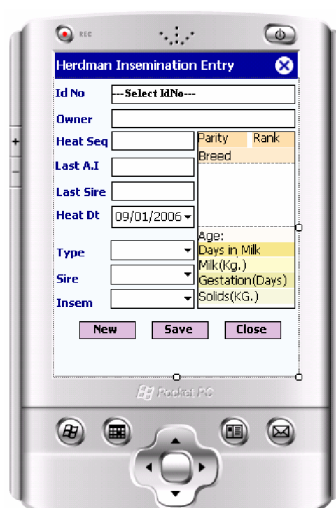


### Data Entry in Field:

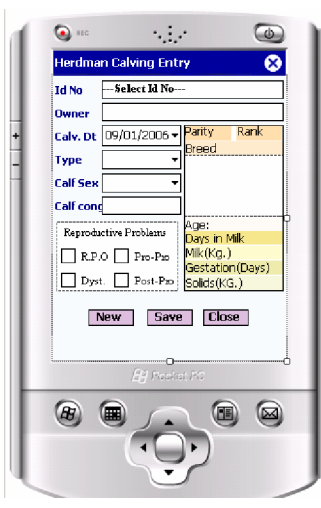
PDA-Herdman offers convenience of data entry in the field. The animals due for an activity can be either identified from the 'Action' or 'Alarm' lists and the data entry can be done from the list so generated. Alternatively, the entry can also be done directly through the entry forms provided:



Insemination Entry



PD Entry

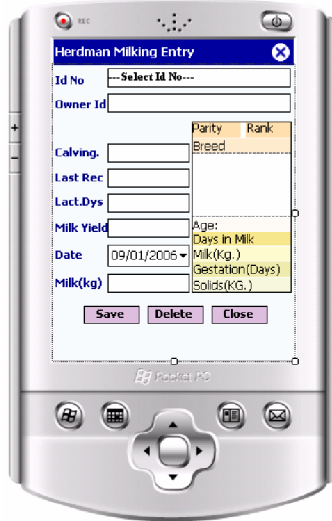


Calving Entry

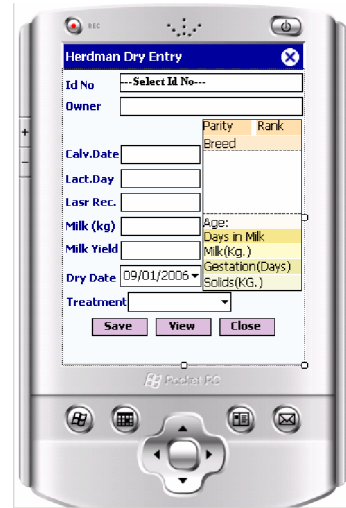
The general procedure is: that once you enter your password, then select the village / herd or the center. This will connect the database of that village. Now in case the User wants to enter insemination details, he can select insemination entry, the select the farmer from the combo box and then the animal ID. He can just enter the date (in case it is not default), sire ID and other details by selecting the combo box.



Weight Entry

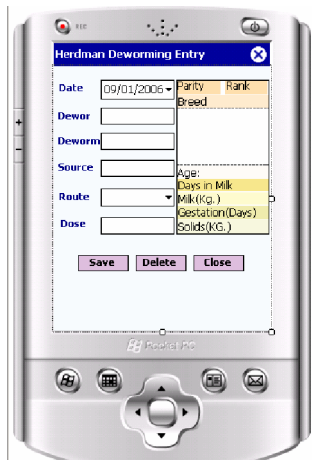


Milking Entry

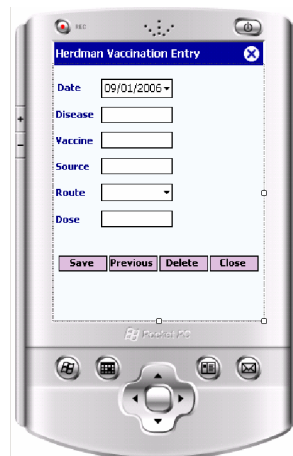


Drying off entry

PDA Herdman also provides facilities for entering production related records, such as milk weight and composition, weight and drying off entries. Similarly health related records, such as, deworming,, disease testing, treatment, vaccination etc., can also be entered through the entry forms displayed below.

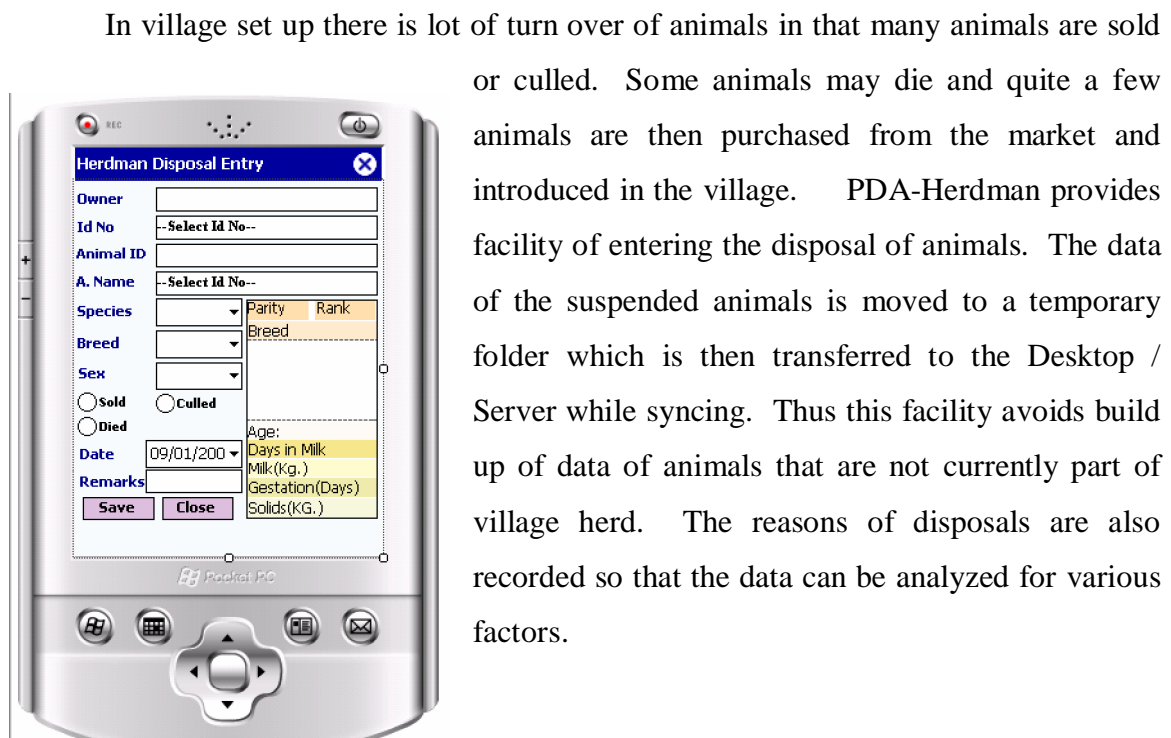


Disease Testing Entry



Vaccination Entry

## Disposal Entry:



## Reports:



## **Optional Modules:**

- 1. Symptom-based Diagnostic Support:** PDA-Herdman has option of helpline to aid you in diagnosis in remote rural areas, where referral is difficult. Based on selection of group of symptoms disease al prioritized list of possible diagnoses are provided. The helpline also provides summary of different diseases, symptoms, etiology, clinical pathology, treatment and control. In short it is a ready reference material as your companion in remote areas.
- 2. Drug directory:** PDA-Herdman provides drug directory wherein details of drugs by generic name have been provided. The details include dose, indications, contraindications, toxicity signs, antidote, etc.
- 3. Toxin / Poison directory:** PDA-Herdman also provide helpline for toxins and poisons commonly encountered in dairy animals. Symptoms, diagnosis, treatment and other details have been provided as a reference material.

In future there is possibility of providing tele-veterinary facility through this system

In short Herdman-PDA is a true companion of Animal Health Worker / veterinarian even in remote difficult areas.

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