

New Features in PCDART to Schedule Protocols

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Introduction

The PCDART protocol management system is a **series of chores** to complete for each animal in a specific order. A protocol may specify a single chore or multiple chores such as “de-worm after calving” or “treat with dextrose and flush in the morning”. All dairies use written or verbal protocols to **instruct workers what to do** throughout the day.

PCDART’s Protocol Management System enables the dairy manager to develop protocols for **most aspects of animal management**. After a protocol for an event is defined, the protocol should be assigned to animals that have completed the event (i.e. Calved or Dried) or are expected to complete the event (i.e. Expected Dry or Expected Calved).

Contrary to using PCDART reports where report specifications must identify all animals that require action, protocols are assigned to animals. Then, a report can identify the animals that require a chore on a specific day. The direct assignment of a protocol to animals is **simpler and more complete** than a series of reports with convoluted controls.

Therefore, protocols will ensure that **no animal “falls through the cracks”** and fails to receive chores. Furthermore, until a chore is reported as being completed (done), the animal will remain on a protocol-driven report.

Some examples of cow-management protocols include:

- ✓ **Flag – Unplanned or ad hoc Events** - hoof trim or treatment for metritis, DA or ketosis
- ✓ **After Birth Date** - heifer vaccinations
- ✓ **After Bred** - preg checks
- ✓ **Expected Dry** - hoof trim
- ✓ **After Dry** - dry treat
- ✓ **Expected Fresh** - move to close-up lot
- ✓ **After Calved** - fresh cow monitoring

Cows or heifers can be assigned to various appropriate protocols by any of the following methods:

- ✓ Explicitly in “Assign Protocol” from Input Desk or Input Button in CowPage
- ✓ In a chain when an event occurs (i.e. “Calving” and “Assign Protocol”)
- ✓ Identify eligible animals with report “900 – Protocols – Eligible for Enrollment”

Specific protocols are made up of chores, which are cow management tasks that fit into the routine. The assignment of these chores to a designed routine allows the herd management team to establish a method of getting all routine actions applied to all animals, at the proper time. Technicians can be assigned in the protocol system to keep up with who is responsible for which chores.

Chores for which a drug is given where a milk or meat with-holding time is appropriate are so noted. When each chore is defined, with-holding times for milk and meat are required. These allow for delivery of cow lists which help notify workers of animals whose meat or milk is not ready for market.

Protocol Types

There are three types of protocol all of which are date-dependent:

Protocols that are triggered by an unplanned event

These protocols are usually assigned to animals because of the occurrence of some non-routine event. Examples are protocols for treating abscess, lameness, bloat or metritis. These protocols are called **Flags** because animals are flagged as needing chores only after specific events happen.

Protocols that are triggered by a routine event in the PAST

These types of protocols are triggered by routine events that occur either in the life of all heifers that will survive to enter the milking herd or during the lactation of cows that will complete a lactation. The categories are Birth Date, Bred Date, Dry Date and Calved Date.

Protocols that depend on a routine event in the FUTURE

Animals that are likely to be enrolled in these types of protocols are expected to experience a particular event in the future. For example, pregnant milking animals are expected to be dried and calve in the future. The options are Expected Dry Date and Expected Fresh Date.

Overview of Protocol Setup and Use in PCDART

1. From the PCDART desktop, click on **File** and select **Protocols**.
2. Define chores that will be used in a protocol.
3. Define the protocol by identifying which chores should be done and when they should be completed.
4. Define technicians that will administer the protocols and chores.
5. Use the input procedure "Assign Protocol" to "attach" a protocol to an animal's record whenever an animal's status changes so that she becomes eligible for the protocol.
6. After a chore is completed or "done", use input procedure "Chore Done" to indicate such. Any chore in the list can be entered as done, whether or not it is part of a protocol.
7. Monitor protocol and chore activity for individual animals with CowPage screens F2 and F12.
8. Use standard report 900 to identify animals that should/could be assigned a specific protocol.
9. Use standard reports 901 or 902 to identify animals that have scheduled chores.
10. Use standard report 903 to help manage animals whose meat or milk should be withheld from the market.
11. Use standard report 904 to find animals with missed chores.

Details on Setting up Protocols in PCDART

1. When **Protocols** is selected from the **File** menu
 - a. PCDART scans the animal and herd records for protocols and chores.
 - b. The scan determines whether previously defined protocols or chores in the PCDART database have been assigned to animals.
 - c. Protocols or chores that have not been used can be modified or deleted.
 - d. After the scan, this screen displays three tab choices (**Protocol, Chores and Technician**). The chores must be defined first, so its tab is the default.
2. Next, define a chore:
 - a. Enter a **Chore Name** using eight characters or less. Names should be as short as possible and easily recognized by workers.
 - b. If there are multiple dosages for a drug chores, such as "Dextrose 500 ml" and "Dextrose 1000 ml", consider using names like "Dext500" and "Dext1000".
 - c. Only **Chore Descriptions** of up to 20 characters are accepted; include any additional instructions or background information such as "20 ml".
 - d. **Chore Usage** describes the type of chore. Each chore should receive an appropriate usage type:

- i. **Maintenance:** “regular” activity such as group movement or trim hooves
 - ii. **Vaccination:** immunizations
 - iii. **Medication:** administering medication
 - iv. **Diagnostic:** investigative or problem solving
 - e. If the chore requires a milk or meat withholding period, follow the drug manufacturer’s recommendations and enter **Number of days to withhold milk or meat**. Otherwise enter 0.
3. Click ‘Save as a New Chore’ button to continue.
4. To sort, delete, print or modify chores, follow these steps:
 - a. Change Sort Order by clicking the title of the respective columns in the display box for all chores. Another click will reverse the sort order.
 - b. Print a List of All Chores, click ‘**Print Chores**’.
 - c. Delete or modify an Unused chore, select the unused chore and click “**Delete Unused Chore**” or ‘**Modify Unused Chore**’, respectively. Used chores cannot be deleted or modified.
5. Now **Create a Protocol** by first clicking the **Protocols** tab.
 - a. Choose from the following Protocol Types:
 - **Flag – Unplanned Chores.**
 - **Birth Date – Chores After Birth.**
 - **Bred – Chores After Bred.**
 - **Expected Dry – Chores Prior to Dry.**
 - **Dry – Chores after Dry.**
 - **Expected Fresh – Chores Prior to Fresh.**
 - **Calved – Chores After Calved.**
 - b. Click “**Create New Protocol from Scratch**” and enter **Name** and a brief **Description** of the new protocol. Names should be as short as possible and easily recognized by workers. Use capitalizations and numerals to help recognize abbreviations.
 - c. Select chores to be performed in the protocol.
 - d. Click “**Save New Protocol**” when finished.
 - e. “**Modify Unused Protocol**” – original settings of an existing protocol can be modified using this button; “Save Modified Protocol” when changes are completed.
6. Click the **Technicians** tab to Register Technicians.
 - a. For each Technician, enter a 3-character **Short ID** and **Name**. Note that these “Technicians” are the different people who will assign protocols to others or do a chore themselves. Although the breeding technician is designated as a 2-digit number, three characters provide more flexibility in their identities. It’s probably wise to identify all technicians at one time so that a thorough thinking of all possible duplications can be made.

- b. Click **Save as a New Technician** when done. Printing Technician names can be done by clicking on the “Print Technicians” button.
7. The next step is to Assign Protocols to animals. For example, if a calving protocol has been created, then identify cows that have recently calved and enroll them on the protocol.
 - a. From the PCDART desktop, click **Input Desk, Protocol Enrollment** .
 - b. Select animal/s identified for enrollment and assign a protocol from the list of available protocols for the animal.
 - c. select a protocol by typing or clicking the name in the field.
 - d. Choose a Technician and click “Done” or press “Enter” to enroll the animal. The number and days for chores within each protocol are displayed on this screen.
 - e. Other actions available on this screen include:
 - i. “Delete” protocol, which removes any evidence that an animal ever was enrolled on a protocol. Although sometimes this is an appropriate action, this might confuse a manager who may need to know why certain chores were completed
 - ii. “Terminate” protocols leaves the protocol assigned to the animal but the animal will not appear on any of the reports that look for chores that should be done.
 - iii. “Remove Term” removes a terminated protocol and essentially re-enrolls an animal on a previously assigned protocol.
 - iv. “F6-View Input” will display newly input information.
8. After Chores have been completed, return to PCDART Input Desk and click “Chore Done”.
 - a. Select animal/s.
 - b. Key or click the name of the completed chore and the name of the Technician.
 - c. Click “Done” or press Enter when finished.
 - d. A screen displays “Available Chores” that can be selected. “Chore-done Date” and the 3-digit Technician code can also be selected. All “Protocols Assigned to the Animal” and “Chores *not yet* Done for This Animal” are also displayed.
 - e. If a check is inserted in the “Delete a Chore” box, available chores for deletion will show up to the right of the screen. “Click on Chore to be deleted; then select “Yes” to delete or “No” to cancel
9. To view protocol information, see pending chores for the day (if any) and review warnings about milk or meat withholding check the cow or heifer page. The F12 tab shows **Chores Not Yet Done, Chores Done** and **Protocols Assigned to the Animal**. Additional information including Timed AI, Bred/Heat Date, are also displayed.

PCDART Protocol Reports

A series of new reports have been developed to facilitate using the PCDART Protocol feature. These reports, each designed for a different purpose, provide lists of eligible to enroll and enrolled animals complete with dates and chores to be performed based on selected protocols. The reports are:

Report 900 – Protocols – Eligible for Enrollment

Tip: Begin the process of enrollment by running this report first.

- All protocols and chores must have been defined by this point.
- Listed animals are eligible for enrollment into all or specified protocols.

All Protocols Reports From the PCDART Desktop, access Reports Screen:

- 1) Select Report 900 and a list of options will appear under two tabs: **General & Protocols**.
- 2) Click **“Preview”** to run the report.
- 3) Click the printer icon to print the report.

Details on selecting desired options to modify the report’s output.

Under **General** tab:

- a) To select startup eligibility periods, choose **Standards for Eligibility With Respect to Reference Date**
 - i) **Not Past Earliest Chore** – this option lists animals eligible for a protocol where the first chore is pivotal and cannot be missed. For example, chores (or injections) of a Timed AI protocol where the first injection cannot be missed. If the first injection is missed, the animal must start the protocol again from scratch. Therefore, if the specified period (based on system reference date) is not past the animal’s earliest chore, she will be eligible to enroll and will show on the report. Otherwise, she will be ineligible and not show on the report.
 - ii) **Not Past Latest Chore** -- this option is more tolerant of missing a previous chore before qualifying an animal eligible for enrollment. For example, when starting animals on a post calving protocol, there will be cows at different stages of their lactation; some earlier chores of this protocol may have already been missed. Therefore, if the specified period is not past the cow’s latest chore, she will be eligible for enrollment and will appear on the report.
 - iii) **All** – this option qualifies animals for enrollment if they met all the requirements of each specified protocol. Care should be exercised to use thorough knowledge of chore importance associated with protocols used under this option.
- b) Use drop down arrow to select a control option: **None, Group or Temp-Group**.
- c) Enter minimum and maximum group numbers to control with.

- d) When **Assign Temp-Group #** is specified, eligible cows will be assigned to a temporary group. Then use **Temp-Group #** to enroll all animals into one protocol.
- e) Enter the number of cows to enroll or all eligible cows will be displayed/placed in the specified Temp-Group.
- f) Filter the list by **Highest DIM**, by **Lowest DIM**, or by **List Order**. The default is **List Order**.
- g) Sort the list by **Index** (default), **Group then Barn name** or **Group then Index**.
- h) Select **Which** type of animals to list: **Cows Only** or **Heifers only**.

Under **Protocol** tab:

- i) All **Protocols** will be displayed and the default is **All** protocols are selected. However, five individual protocols may be selected.
- j) If desired, check the box to **Insert a Blank Line Between Each Animal** on the report.
- k) Click "Preview" to see the report on screen. Displayed items include Group, Animal ID, Protocol and Trigger Date, animal's code and date for current and repro status.

- If **Assign Temp-Group** was selected in step d) above, the animals will be assigned to the specified temporary group.

Report 901 – Protocols – 5 Days “To Do”

Details on options and contents of this report

- 1) Displays activity schedule from one to five days including protocols, chores, dates, animal ID and group.
- 2) Chores designated for completion in a Window will be listed with a ~ symbol on eligible days.
- 3) Options for this report include:
 - a) **General** tab reveals a choice for **Number of Days to List Beginning w/Ref Date**.
 - b) Remaining options are similar to those for Report 900.
 - c) Under **Chores and Protocols** tab:
 - i) All **Chores** and **Protocols** are displayed as default but individual or multiple protocols can be selected; up to five individual protocols may be selected.
 - ii) When individual **Protocols** are selected, a maximum of five **Chores** associated with the protocol are displayed.
 - iii) The option to **Insert a Blank Line Between Each Animal** is available.

Report 902 – Protocols – Today’s “To Do”

Details on options and contents of this report

- 1) Shows daily scheduled chores, from all or specified protocols.
- 2) Lists only chores to do on that day.

- 3) Select options under the **General & Chores and Protocols** tabs.
- 4) Options under **Chores and Protocols** tab are similar to those of Report 900.

Report 903 – Protocols – Today’s Milk Withholding

Details on options and contents of this report

- 1) Certain medications require milk and or meat withhold from the food chain; this report lists such animals.
- 2) Complete and record in PCDART the chores requiring withhold time.
- 3) A warning is posted on each of these animals’ cowpage indicating a milk withhold requirement.
- 4) Decide on the following options before previewing this report:
 - a) Whether to **Include Cows Which Are Currently Dry** (the default is to exclude). For example, when a cow is dried off and treated with dry cow medication, her milk is withheld from the food chain until after certain period specified by the drug manufacturer.
 - b) Determine control options and assign the animals to a Temp-Group if desired.
 - i) Maximum number of cows to display on the report (**Limit # Cows**) can be entered.
 - ii) Although the default is **by List Order**, selection by Days In Milk (DIM) is also available.
 - iii) Animal list **Sort** option can be selected by Index, Group, Barn Name or a combination of these, the default is **Index**.
 - iv) This report has two choices (**Aspect**) of cow types to display:
 - **Cows Whose Milk is NOT OK** -- this is the milk being withheld.
 - **Cows Whose Milk is OK to Use** – milk that is free of medication.

Report 904 – Protocols – Missed Chores

Details on options and contents of this report

1. When chores are missed or not reported done after the Start Date and before the End Date, this report will show such chores.
2. To run the report:
 - a) Define the ‘Starting Date’ and ‘Ending Date’ covering period of interest.
 - b) Select the dates and other options from the “General” tab.
 - c) Click the ‘Chores and Protocols’ tab to select chores and protocols to be displayed on the report.
3. Animals will appear on the report if they meet one or more of these conditions:
If enrolled for a ‘Window Chore’ and the last day of the window is:
 - on or after the Enrollment Date
 - before the chore’s Termination Date
 - on or after the Start Date and

- on or before the End Date
4. If enrolled for 'Repeat Chores' (they are handled as individual chores), a single chore is missing if it is:
 - on or after the Enrollment Date
 - before the Termination Date
 - on or after the Start Date and
 - on or before the End Date
 5. This report will also display
 - the first and last dates of all Window Chores eligible for display.
 - enrollment date (if any)
 - last date.
 - Chore Done Date for all Repeat Chores.

PCDART Report 107 (Animal Health List)

This report has been modified to indicate which protocols an animal has been on. The protocol records can be added to the report by a Time Frame of:

- 1) All Lifetime – displays all protocols the animal has ever been associated with.
- 2) Between Dates – expects Starting Date and Ending Date
- 3) Days Prior – number of days required
- 4) Curr Lact -- current lactation protocols only

PCDART Protocols Database Items (DBI)

There are three database items (DBI) available in PCDART for use with the protocols feature. These DBIs provide flexibility in using the control option to create user reports; they are:

- 1) # 339 – Chores To Do
- 2) # 340 – Chores To Do Name (control only)
- 3) # 341 – Chores To Do Next (1 to 5) Days (control only)

Notes
