

Chado Stock Module

From GMOD

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Introduction

The stock module was designed to store information about stock collections in a laboratory. What is called a *stock* could also be called a *strain* or an *accession*. There is a lot in common between a *Drosophila* stock and a *Saccharomyces strain* and an *Arabidopsis line*. They all come from some taxon, have genotypes, physical locations in the lab, some conceivable relationship with a publication, some conceivable relationship with a sequence feature (such as a transgene), and could be described by some ontology term.

It may be that not all critical details about your collection are accomodated, if this is the case it should not be difficult to extend for your own purposes.

Tables

Table: stock

Any stock can be globally identified by the combination of organism, uniquename and stock type. A stock is the physical entities, either living or preserved, held by collections. Stocks belong to a collection; they have IDs, type, organism, description and may have a genotype.

stock Structure

F-Key	Name	Type	Description
	stock_id	serial	PRIMARY KEY
dbxref	dbxref_id	integer	The dbxref_id is an optional primary stable identifier for this

			stock. Secondary indentifiers and external dbxrefs go in table: stock_dbxref.
organism	organism_id	integer	<i>UNIQUE#1 NOT NULL</i> The organism_id is the organism to which the stock belongs. This column is mandatory.
	name	character varying(255)	The name is a human-readable local name for a stock.
	uniquename	text	<i>UNIQUE#1 NOT NULL</i>
	description	text	The description is the genetic description provided in the stock list.
cvterm	type_id	integer	<i>UNIQUE#1 NOT NULL</i> The type_id foreign key links to a controlled vocabulary of stock types. The would include living stock, genomic DNA, preserved specimen. Secondary cvterms for stocks would go in stock_cvterm.
	is_obsolete	boolean	<i>NOT NULL DEFAULT false</i>

Tables referencing this one via Foreign Key Constraints:

- stock_cvterm
- stock_dbxref
- stock_genotype
- stock_pub
- stock_relationship
- stockcollection_stock
- stockprop

Table: stock_cvterm

stock_cvterm links a stock to cvterms. This is for secondary cvterms; primary cvterms should use stock.type_id.

stock_cvterm Structure

F-Key	Name	Type	Description
	stock_cvterm_id	serial	<i>PRIMARY KEY</i>
stock	stock_id	integer	<i>UNIQUE#1 NOT NULL</i>

cvterm	cvterm_id	integer	<i>UNIQUE#1 NOT NULL</i>
pub	pub_id	integer	<i>UNIQUE#1 NOT NULL</i>

Table: stock_dbxref

stock_dbxref links a stock to dbxrefs. This is for secondary identifiers; primary identifiers should use stock.dbxref_id.

stock_dbxref Structure

F-Key	Name	Type	Description
	stock_dbxref_id	serial	<i>PRIMARY KEY</i>
stock	stock_id	integer	<i>UNIQUE#1 NOT NULL</i>
dbxref	dbxref_id	integer	<i>UNIQUE#1 NOT NULL</i>
	is_current	boolean	<i>NOT NULL DEFAULT true</i> The is_current boolean indicates whether the linked dbxref is the current -official- dbxref for the linked stock.

Table: stock_genotype

Simple table linking a stock to a genotype. Features with genotypes can be linked to stocks thru feature_genotype -> genotype -> stock_genotype -> stock.

stock_genotype Structure

F-Key	Name	Type	Description
	stock_genotype_id	serial	<i>PRIMARY KEY</i>
stock	stock_id	integer	<i>UNIQUE#1 NOT NULL</i>
genotype	genotype_id	integer	<i>UNIQUE#1 NOT NULL</i>

Table: stock_pub

Provenance. Linking table between stocks and, for example, a stocklist computer file.

stock_pub Structure

F-Key	Name	Type	Description
	stock_pub_id	serial	<i>PRIMARY KEY</i>
stock	stock_id	integer	<i>UNIQUE#1 NOT NULL</i>
pub	pub_id	integer	<i>UNIQUE#1 NOT NULL</i>

Table: stock_relationship

stock_relationship Structure

F-Key	Name	Type	Description
	stock_relationship_id	serial	<i>PRIMARY KEY</i>
stock	subject_id	integer	<i>UNIQUE#1 NOT NULL</i>
stock	object_id	integer	<i>UNIQUE#1 NOT NULL</i>
cvterm	type_id	integer	<i>UNIQUE#1 NOT NULL</i>
	value	text	
	rank	integer	<i>UNIQUE#1 NOT NULL</i>

Tables referencing this one via Foreign Key Constraints:

- stock_relationship_pub

Table: stock_relationship_pub

Provenance. Attach optional evidence to a stock_relationship in the form of a publication.

stock_relationship_pub Structure

F-Key	Name	Type	Description
	stock_relationship_pub_id	serial	<i>PRIMARY KEY</i>
stock_relationship	stock_relationship_id	integer	<i>UNIQUE#1 NOT NULL</i>

pub	pub_id	integer	<i>UNIQUE#1 NOT NULL</i>
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Table: stockcollection

The lab or stock center distributing the stocks in their collection.

stockcollection Structure

F-Key	Name	Type	Description
	stockcollection_id	serial	<i>PRIMARY KEY</i>
cvterm	type_id	integer	<i>UNIQUE#1 NOT NULL</i> type_id is the collection type cv.
contact	contact_id	integer	contact_id links to the contact information for the collection.
	name	character varying(255)	name is the collection.
	uniquename	text	<i>UNIQUE#1 NOT NULL</i> uniquename is the value of the collection cv.

Tables referencing this one via Foreign Key Constraints:

- stockcollection_stock
- stockcollectionprop

Table: stockcollection_stock

stockcollection_stock links a stock collection to the stocks which are contained in the collection.

stockcollection_stock Structure

F-Key	Name	Type	Description
	stockcollection_stock_id	serial	<i>PRIMARY KEY</i>
stockcollection	stockcollection_id	integer	<i>UNIQUE#1 NOT NULL</i>
stock	stock_id	integer	<i>UNIQUE#1 NOT NULL</i>

Table: stockcollectionprop

The table stockcollectionprop contains the value of the stock collection such as website/email URLs; the value of the stock collection order URLs.

stockcollectionprop Structure

F-Key	Name	Type	Description
	stockcollectionprop_id	serial	<i>PRIMARY KEY</i>
stockcollection	stockcollection_id	integer	<i>UNIQUE#1 NOT NULL</i>
cvterm	type_id	integer	<i>UNIQUE#1 NOT NULL</i>
	value	text	
	rank	integer	<i>UNIQUE#1 NOT NULL</i>

Table: stockprop

A stock can have any number of slot-value property tags attached to it. This is an alternative to hardcoding a list of columns in the relational schema, and is completely extensible. There is a unique constraint, stockprop_c1, for the combination of stock_id, rank, and type_id. Multivalued property-value pairs must be differentiated by rank.

stockprop Structure

F-Key	Name	Type	Description
	stockprop_id	serial	<i>PRIMARY KEY</i>
stock	stock_id	integer	<i>UNIQUE#1 NOT NULL</i>
cvterm	type_id	integer	<i>UNIQUE#1 NOT NULL</i>
	value	text	
	rank	integer	<i>UNIQUE#1 NOT NULL</i>

Tables referencing this one via Foreign Key Constraints:

- stockprop_pub

Table: stockprop_pub

Provenance. Any stockprop assignment can optionally be supported by a publication.

stockprop_pub Structure

F-Key	Name	Type	Description
	stockprop_pub_id	serial	<i>PRIMARY KEY</i>
stockprop	stockprop_id	integer	<i>UNIQUE#1 NOT NULL</i>
pub	pub_id	integer	<i>UNIQUE#1 NOT NULL</i>

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