

crop identification tag and the compartment identification tag with a portable terminal, and stores the cultivation compartment of each crop.

CITATION LIST

5 PATENT LITERATURE

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SUMMARY

A work system includes a storage body, a display unit, a work-schedule
 10 memory, and a work-instruction unit. The storage body has plural storage
 places constituting plural groups each including storage places out of the
 plural storage places adjacent to each other. The storage body is associated
 with plural position identifiers and plural group identifiers. Each of the
 plural position identifiers identifies respective one of the plural storage
 15 places. Each of the plural group identifiers identifies respective one of the
 plural groups. The display unit displays a work performed to work objects
 placed at the plural storage places. The work-schedule memory stores a
 schedule of the works. The work-instruction unit reads the schedule stored
 from the work-schedule memory and displays the work on the display unit
 20 based on the read schedule. The work-instruction unit is configured to
 select whether the work is performed to a certain group out of the plural
 groups of the plural storage places or to a work object stored in one of the
 plural storage places, and displays the work on the display unit, wherein the
 work-instruction unit is configured to;
 25 display the certain group together with the work in a case where
 the work is performed to all of work objects stored in storage places of the
 certain group, and

display a work performed to the storage place together with the storage place in a case where a different work is scheduled or a work is not scheduled for a part of all of the work objects stored in the storage places of the certain group.

- 5 A work assistance system is used in a work system including a storage body and an input unit. The storage body has plural storage places and plural position identifiers each identifying respective one of the plural storage places. The input unit receives an input of the plural position

identifiers by an operator. The work assistance system includes a display unit, a storage-body information memory, a work-schedule memory, and a work-instruction unit. The display unit displays a work to be performed on work objects placed on plural storage places. The storage-body information
 5 memory stores the position identifiers and group identifiers each identifying respective one of plural groups each including storage places out of the plural storage places adjacent to each other. The work-schedule memory stores a schedule of the work. The work-instruction unit reads the schedule stored in the work-schedule memory and displays the work on the display unit
 10 based on the read schedule. The work-instruction unit selects whether the work is performed to a certain group of the plural groups or to one of the plural storage places, and displays the work on the display unit, wherein the work-instruction unit is configured to;

display the work to be performed to the certain group in a case
 15 where the work is scheduled for all of work objects stored in the storage places of the certain group; and

display the storage place together with the work in a case where a different work is scheduled for a part of all of the work objects stored in the storage places of the certain group or a work is not scheduled for a part of all
 20 of the work objects stored in the storage places of the certain group.

The work system and the work assistance system improve work efficiency.

BRIEF DESCRIPTION OF DRAWINGS

25 FIG. 1A is a schematic diagram of a work system in accordance with an exemplary embodiment.

FIG. 1B is a schematic diagram of a rack used in the work system in

accordance with the embodiment.

FIG. 2A illustrates a placement of storage places of work objects in the work system in accordance with the embodiment.

FIG. 2B illustrates the placement of storage places of work objects in
5 the work system in accordance with the embodiment.

FIG. 2C illustrates the placement of storage places of work objects in the work system in accordance with the embodiment.

FIG. 3 is a block diagram of a management system performing data

CLAIMS

1. A work system comprising:

a storage body having a plurality of storage places constituting a plurality of groups each including storage places out of the plurality of storage places adjacent to each other, the storage body being associated with
5 a plurality of position identifiers and a plurality of group identifiers, each of the plurality of position identifiers identifying respective one of the plurality of storage places, each of the plurality of group identifiers identifying respective one of the plurality of groups;

10 a display unit that displays a work performed to work objects placed at the plurality of storage places;

a work-schedule memory that stores a schedule of the works; and

a work-instruction unit that reads the schedule stored in from the work-schedule memory and displays the work on the display unit based on
15 the read schedule,

wherein the work-instruction unit is configured to select whether the work is performed to a certain group out of the plurality of groups of the plurality of storage places or to a work object stored in one of the plurality of storage places, and displays the work on the display unit, , wherein the
20 work-instruction unit is configured to;

display the certain group together with the work in a case where the work is performed to all of work objects stored in storage places of the certain group, and

display a work performed to the storage place together with the
25 storage place in a case where a different work is scheduled or a work is not scheduled for a part of all of the work objects stored in the storage places of the certain group.

2. The work system of claim 1

wherein the storage body is further associated with a plurality of upper-order group identifiers each identifying respective one of a plurality of upper-order groups each including groups out of the plurality of groups adjacent to each other, and

wherein the work-instruction unit is configured to display a certain upper-order group out of the plurality of upper-order groups together with the work in a case where the work is scheduled for all of work objects stored in storage places out of the plurality of storage places of the certain upper-order group.

3. The work system of claim 1, wherein the work-instruction unit is configured to;

display the certain group together with the work in a case where production lots of work objects stored in the storage places of the certain group are identical to one another and the work is scheduled for all of the work objects stored in the storage places of the certain group; and

display the work performed on the storage place together with the storage place in a case where a different work is scheduled or not scheduled, or in a case where the production lots of some of all of the work objects stored in the storage places of the certain group are different from one another.

4. The work system of claim 3,

wherein the storage body is further associated with a plurality of upper-order group identifiers each identifying respective one of a plurality of upper-order groups each including groups out of the plurality of groups

adjacent to each other, and

wherein, in a case where production lots of all of the work objects stored in storage places out of the plurality of storage places of a certain upper-order group out of the plurality of upper-order groups are identical to one another or the work is scheduled for all of the work objects stored in the storage places of the upper-order group, the work-instruction unit is configured to display the certain upper-order group together with the work.

5. A work assistance system configured to be used in a work system including a storage body and an input unit, wherein the storage body has a plurality of storage places and a plurality of position identifiers each identifying respective one of the plurality of storage places, and the input unit receives an input of the plurality of position identifiers by an operator, the work assistance system comprising:

a display unit that displays a work to be performed to work objects placed on a plurality of storage places;

a storage-body information memory that stores the position identifiers and group identifiers each identifying respective one of a plurality of groups each including storage places out of the plurality of storage places adjacent to each other;

a work-schedule memory that stores a schedule of the work; and

a work-instruction unit that reads the schedule stored in the work-schedule memory and displays the work on the display unit based on the read schedule,

wherein the work-instruction unit selects whether the work is performed to a certain group of the plurality of groups or to one of the plurality of storage places, and displays the work on the display unit,

wherein the work-instruction unit is configured to;

display the work to be performed to the certain group in a case where the work is scheduled for all of work objects stored in the storage places of the certain group; and

5 display the storage place together with the work in a case where a different work is scheduled for a part of all of the work objects stored in the storage places of the certain group or a work is not scheduled for a part of all of the work objects stored in the storage places of the certain group.

10 6. The work assistance system of claim 5,

wherein the storage body further has a plurality of upper-order group identifiers each identifying respective one of a plurality of upper-order groups each including groups out of the plurality of groups adjacent to each other, and

15 wherein the work-instruction unit displays the certain upper-order group together with the work in a case where the work is scheduled for all of work objects stored in the storage places of a certain upper-order group out of the plurality of upper-order groups.

20 7. The work assistance system of claim 5, wherein the work-instruction unit is configured to;

display the certain group together with the work together in a case where production lots of all of work objects stored in the storage places of the certain group are identical to each other and a work is scheduled for all
25 of the work objects stored in the storage places of the certain group, and

display the work performed to the storage place together with the storage place in a case where different work is scheduled or not scheduled, or

in a case where the production lots of some of all of the work objects stored in the storage places of to the certain group are different from each other.

8. The work assistance system of claim 7,

5 wherein the storage body has a plurality of upper-order group identifier each identifying respective one of a plurality of upper-order groups each including groups out of the plurality of groups adjacent to each other, and

 wherein the work-instruction unit displays the work to be
10 performed for the certain upper-order group together with the certain upper-order group in a case where the production lots of all of the work objects stored in the storage places of to the certain upper-order group are identical to one another or the work is scheduled for all of the work objects stored in the storage places of the certain upper-order group.