

Extending / Duplicating a Resource to create a new or different output

Often an Orixa App contains a Resource which generates some useful output, but the user decides they need "something more". This webpage shows the steps that should be taken to achieve this, from a practical example.

The Existing Resource: A Cube which shows farmer-acreage data

	Cocoa		Oil Palm			
	Hectares	YieldEstTon	Hectares	YieldEstTon		
Grand total	1,104,607.27	13,304.17	829.28	385.14	1,103,778.00	12,919.03
C1	119.51	411.47	22.77	7.81	96.75	403.66
C2	1,095,863.87	1,324.09	75.74	64.21	1,095,788.12	1,259.88
Dro	14.93	38.72	4.82	2.38	10.12	36.35
NA	37.37	197.83	4.91	1.58	32.45	196.25
Org	8,571.59	11,332.06	721.04	309.16	7,850.56	11,022.89
Total						
Abdullahi Musah AS 191	1.20	10.00			1.20	10.00
Abena Amponsah BO 466	1.01	7.30			1.01	7.30
Abena Helina AS 555	1.60	4.56			1.60	4.56
Abigail Ofosuua AS 496	6.56	44.60			6.56	44.60
Abraham Adamptey PR 07	4.62	34.35	0.81	0.35	3.81	34.00
Abraham Odoi AS 450	6.46	2.59	4.28	1.03	2.18	1.56
Abrowkwa Maxwell AS 250	5.86	31.22	2.22	1.02	3.64	30.20
Adams Kwaku AS 256	2.72	7.54	2.22	0.74	0.50	6.80
Addo Treku AS 605	6.43	3.77	6.43	3.77		
Adelaide A. Yeboah AS 582	4.84	39.20			4.84	39.20
Adelaide Obovren AS 204	1.80	21.50			1.80	21.50

Farmer Organic status cube

The above image shows a **data-cube** of:

1. Cocoa and Oil Palm acreages and yield-estimates
2. with totals by farmer **certification status**.
3. Each total includes a "drill down" to show the list of individual farmers with their individual acreages and yield estimates.

The Cube is produced from a **Resource** record in the Resources data-table. Users now want to extend their system to add **new crops** to the output.

Resources data: 24,815,210

ID	Name	Component	Location
23976	Crop Cultivation Distribution	Cube	En
23757	Deliveries Dashboard	Cube	En
23757	Deliveries Farmer Dashboard	Cube	En
24138	Farmer Crop Hectares Cube (Search Farmer Code)	Cube	En
23757	Inspections Dashboard	Cube	En
23757	Inspections Dashboard	Cube	En
23757	NonConformities Dashboard	Cube	En
24815	Organic Listing 2024 Cube	Cube	En
23757	Quality Measures Cube	Cube	En
14007	Social Indicator Staff Activity Cube	Cube	En
23757	Staff Wages By Month Pivot	Cube	En
23757	Timeaway Dashboard	Cube	En
23757	Timeaway Dashboard - total taken per month	Cube	En
23757	Wages Pivot by Staff Type and Department	Cube	En

```

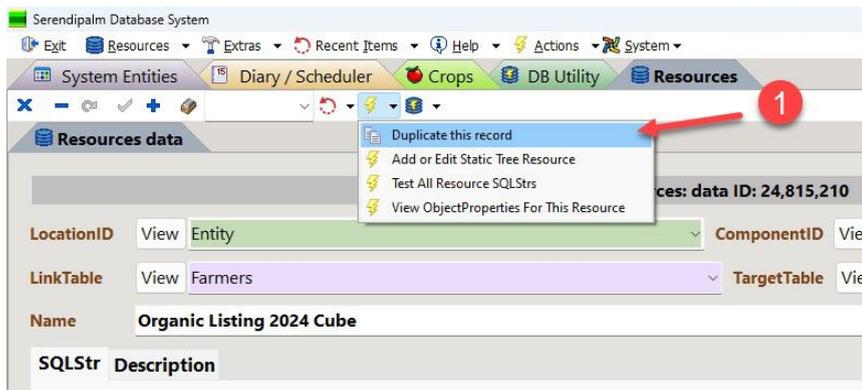
1 SELECT
2   CAST([MinDate] as DATE) as "MinDate",
3   CAST([MaxDate] as DATE) as "MaxDate",
4   COALESCE(SUBSTRING(S.Name FROM 0 FOR 3), 'NA') as
5   F.FarmerCode,
6   F.Crop,
7   P.FullName as Farmer,
8   O.FullName as CBO,
9   F.DateRegistered,
10  COALESCE(FormatDate(F.LastUseProhibitedMat), '-ne')
11  as F.LastInspection,
12  F.DaysSinceInspection,
13  F.SumYieldEstimate / 1000 as YieldEstTon,
14  F.MajorSeasonYield,
15  F.MinorSeasonYield,
16  F.TotalFarmSize,
17  F.Hectares,
18  F.ApprovalType,
19  F.Inspector
20
21 FROM Farmers F
22 LEFT JOIN People P ON (F.ID = P.ID)
23 LEFT JOIN Types T ON (T.ID = P.GenderID)
24 LEFT JOIN Status S ON (F.StatusID = S.ID)
25 LEFT JOIN Organizations O ON (O.OrganizationID = F.OrganizationID)

```

Resource used to generate the farmer-acreage Cube

1. One record in the Resources data-table includes all the information needed by the Application to create the Cube.
2. A complex SQL statement pulls back data from the database.
3. Choosing the "ComponentID" "Cube" means that the data will be generated as a data-cube. Users can design this cube themselves within the App. Once they have a design they like, they can save it. The details of the design are saved in the Resource's "ObjectProperties" data-field.

Duplicating This Resource



Duplicating a resource

Rather than re-writing the entire resource to generate a new version, just "Duplicate this record", as shown above. This is a very useful function, especially when a lot of work has been done to design a resource.

Once the new record is created, adjust the SQL to pull back new data, in this case data for other crops.

How to re-write the SQL

Example SQL for the Resource (simplified)

```
SELECT
  COALESCE(SUBSTRING(S.Name FROM 0 FOR 3), 'NA') as OrganicStatus,
  F.FarmerCode,
  FI.Crop,
  P.FullName as Farmer,
  FI.SumYieldEstimate / 1000 as YieldEstTon,
  FI.Hectares
FROM Farmers F
LEFT JOIN People P ON (F.ID = P.ID)
LEFT JOIN Status S ON (F.StatusID = S.ID)
LEFT JOIN
  (SELECT
    I.PersonID,
    FF.MainCropID,
    C.Name as Crop,
    SUM(FF.YieldEstimate) as SumYieldEstimate,
    SUM(FF.Hectares) as Hectares
  FROM Inspections I
  LEFT JOIN FarmFields FF ON FF.InspectionsID = I.ID
  LEFT JOIN Crops C ON C.ID = FF.MainCropID
  WHERE MainCropID IN (539, 553)
  AND I.DateDone BETWEEN DATE [MinDate] AND DATE [MaxDate]
  AND FF.Current = true
  GROUP BY I.PersonID, MainCropID) FI ON (FI.PersonID = F.ID)
WHERE Crop IS NOT NULL
ORDER BY OrganicStatus, FarmerCode
```

Note the line from the above script:

```
WHERE MainCropID IN (539, 553)
```

The Cube is only showing the details of 2 crops. This WHERE clause is the place in the script where these 2 crops are selected. How can we add other crops? We just need to add additional IDs to this list

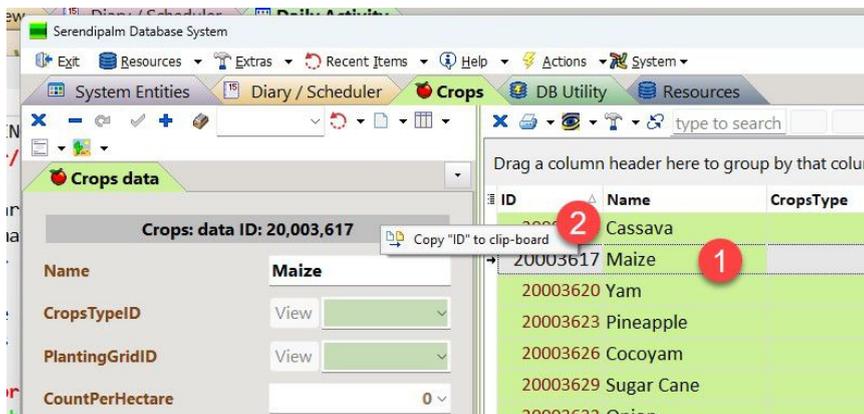
Finding the ID of Crops to use in the resource

ID	Name	CropsType	PlantingGrid	PruningFreq	CountPerHect	YieldEstimateP	PlantingCost
539	Cocoa			0	0	0	0.00
543	Citrus			0	0	0	0.00
547	Cabbages			0	0	0	0.00
553	Oil Palm			0	0	0	0.00
7001675	Rice			0	0	0	0.00
8002627	Irish Potato			0	0	0	0.00
10010211	Okra			0	0	0	0.00
20003611	Plantain			0	0	0	0.00
20003614	Cassava			0	0	0	0.00
20003617	Maize			0	0	0	0.00
20003620	Yam			0	0	0	0.00
20003623	Pineapple			0	0	0	0.00
20003626	Cocoyam			0	0	0	0.00
20003629	Sugar Cane			0	0	0	0.00
20003632	Onion			0	0	0	0.00
20003635	Pepper			0	0	0	0.00
20003638				0	0	0	0.00

The Crops Grid

Open the Crops Grid, and look at the data. The 2 crops which appear in the SQL are marked with arrow. You can see their IDs: 539 and 553.

To add other crops to the newly created resource, simply pick out their IDs and use them in the SQL. There is even a small feature of Orixia to make this step easier.



Copying the ID for "Maize" to the clip board to use in the SQL

1. Open the Crops Grid and double click on a Crop you want to add to the new Resource. In this case we have selected "Maize".
2. Right-click on the "ID" field in the Edit Window and click "Copy to Clip-board"

Now go to the SQLStr field of the newly duplicated Resource and **paste** this copied value into the line:

```
WHERE MainCropID IN (539, 553, 20003617)
```

The Cube will now show data for 3 crops, including Maize.