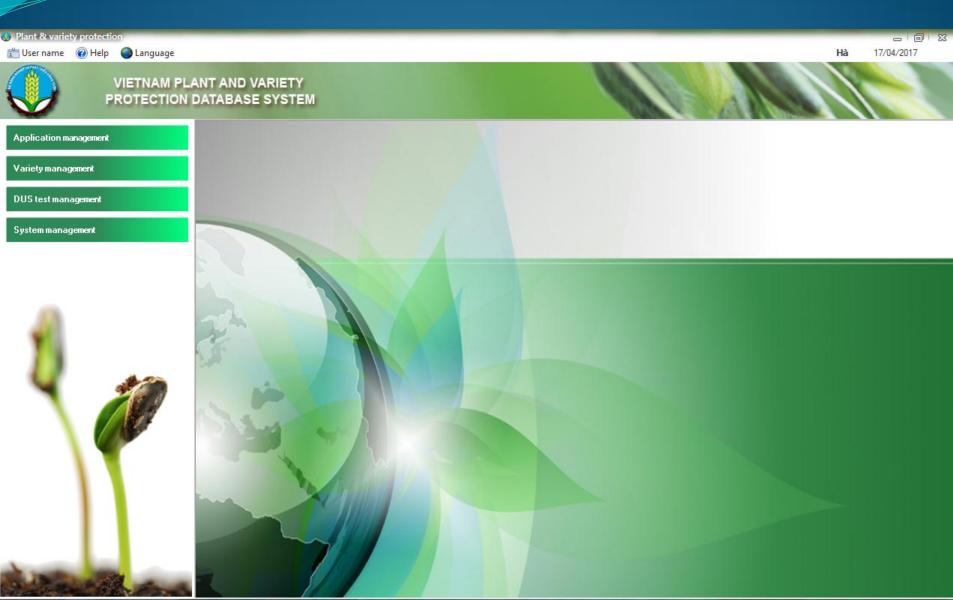
# DATABASE FOR THE DATA OF DUS TEST

Nguyen Thai Ha

Researcher

National Center For Plant Testing

## THE MAIN INTERFACE OF THE SOFTWARE













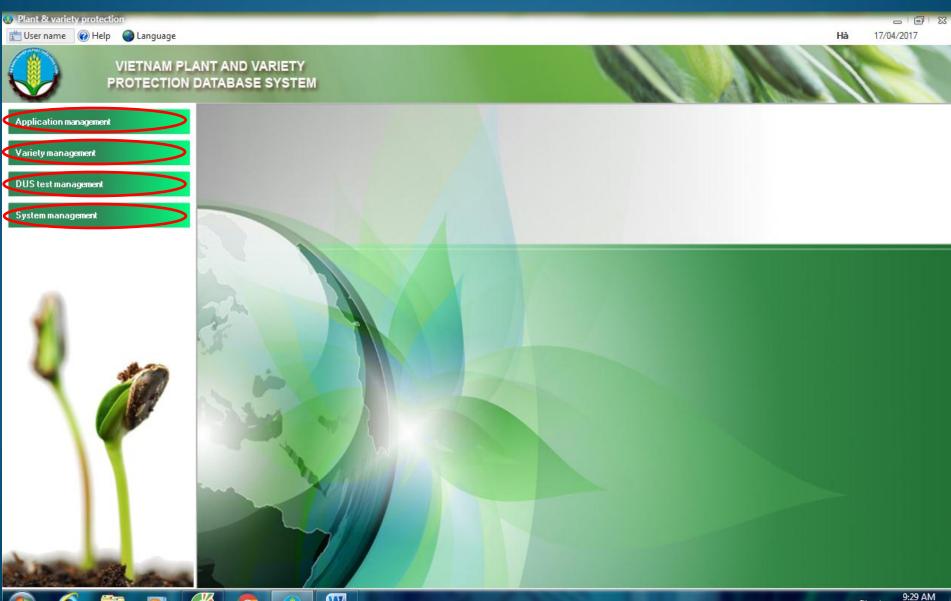




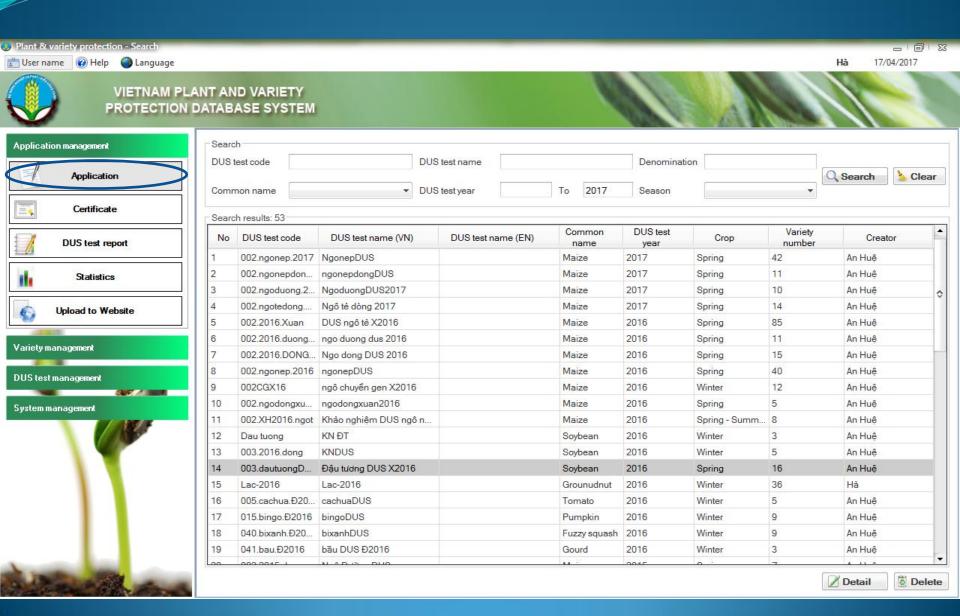


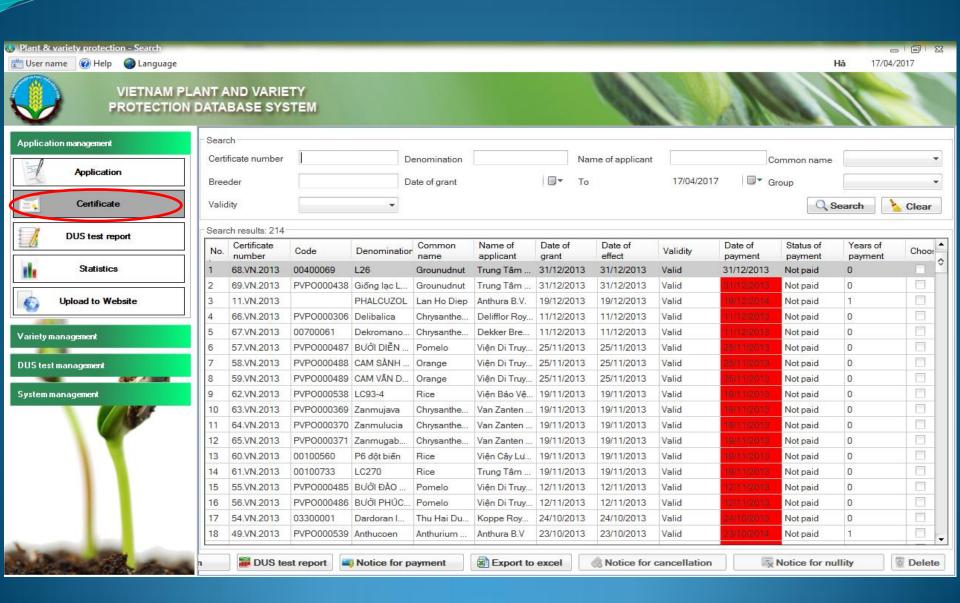


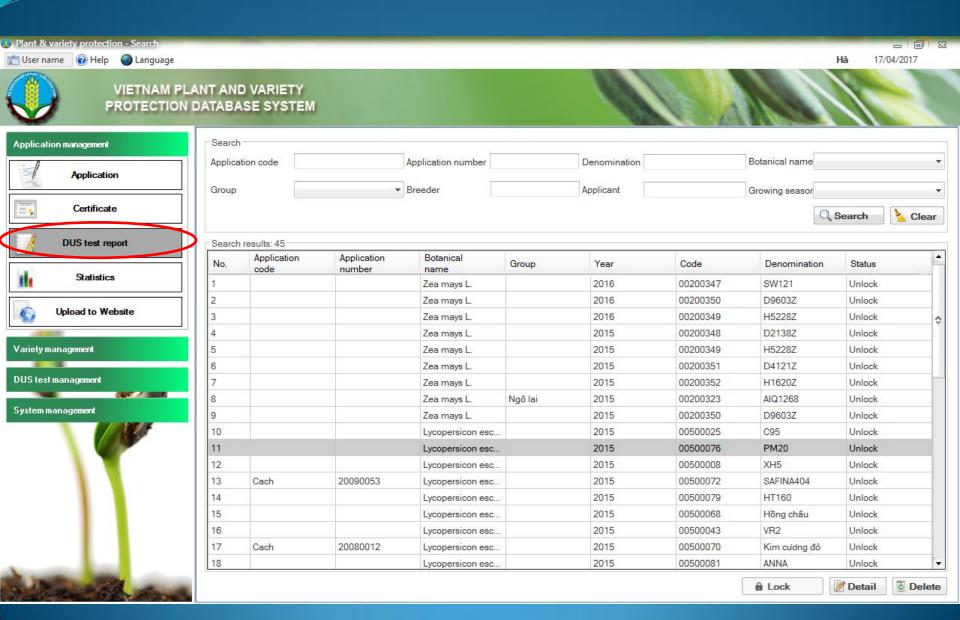
#### THE SOFTWARE HAS 4 MAIN PARTS

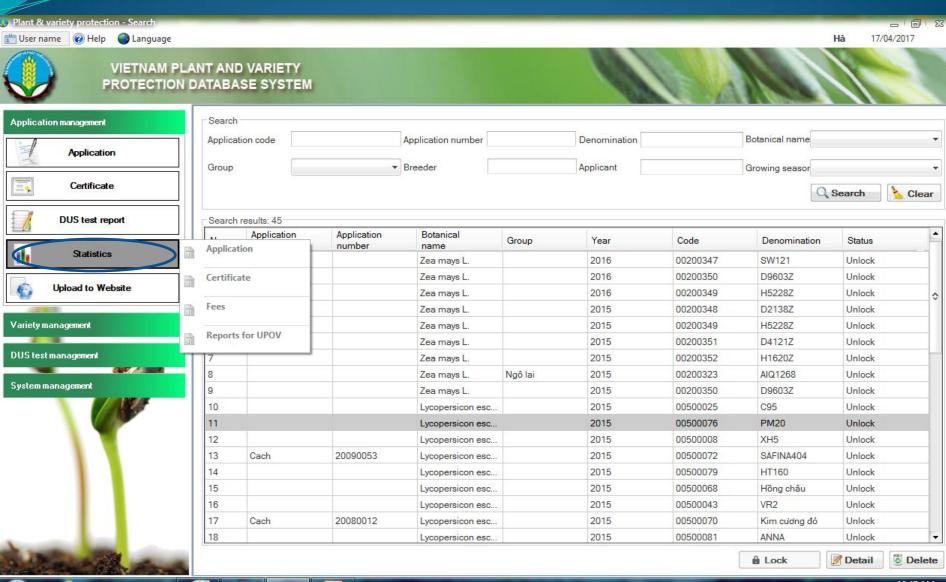






















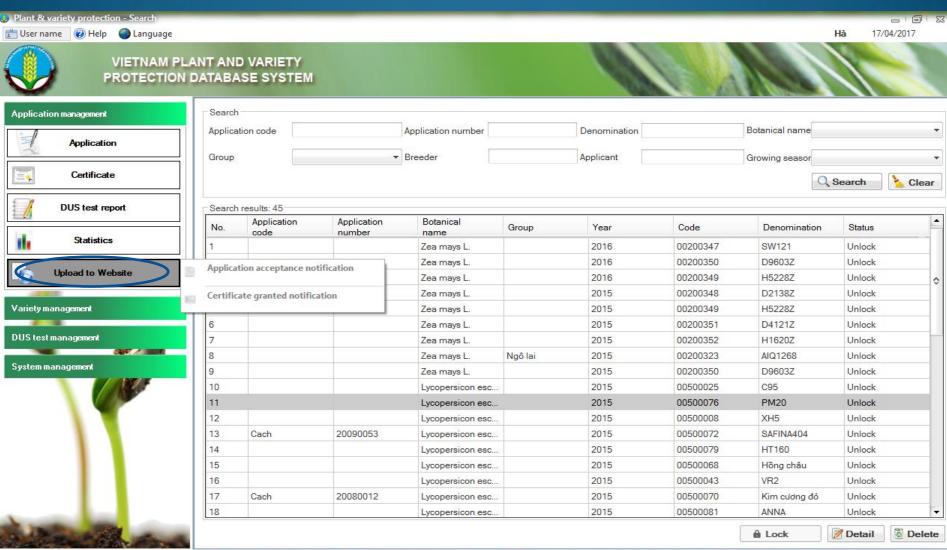






















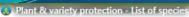








## II- VARRIETY MANAGEMENT











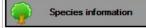


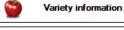


#### VIETNAM PLANT AND VARIETY PROTECTION DATABASE SYSTEM

Application management

Variety management





Characteristic table

DUS test management

| System managem | ent |  |
|----------------|-----|--|
|                |     |  |

| No.     | Common name (VN) | Common name (EN)     | Botanical name             | Species code | Number of<br>characteristic |  |
|---------|------------------|----------------------|----------------------------|--------------|-----------------------------|--|
| 1       | Bầu              | Gourd                |                            |              | 27                          |  |
| New s   | pecies           | Bauhinia sp          |                            | 036          | 0                           |  |
|         |                  | Fuzzy squash         |                            |              | 38                          |  |
| List of | species          | Pumpkin              | Cucurbita maxima Duch      | 015          | 35                          |  |
| 5       | Bi ngö moschata  | Pumpkin              | 100                        |              | 37                          |  |
| 6       | Bưởi             | Pomelo               | Citrus grandis L           | 016          | 0                           |  |
| 7       | Cà chua          | Tomato               | Lycopersicon esculentu     | 005          | 44                          |  |
| 8       | Cải bắp          | Cabbage              |                            | 008          | 42                          |  |
| 9       | Cam              | Orange               | Citrus L                   |              | 0                           |  |
| 10      | Cẩm chưởng       | Carnation            | Dianthus L                 | 017          | 0                           |  |
| 11      | Cây Gáo          | Neolamarckia cadamba |                            |              | 0                           |  |
| 12      | Clerodendrum     | Clerodendrum         |                            | 034          | 0                           |  |
| 13      | Cò               | Grass                | Pennisetum americanu       | 018          | 0                           |  |
| 14      | Đậu Cove         | Green bean           | A.                         |              | 53                          |  |
| 15      | Đậu đũa          | Cowpea               | Vigna unguiculata          | 013          | 25                          |  |
| 16      | Dâu Tây          | Strawb               | Fragaria L.                | 019          | 0                           |  |
| 17      | Đậu Tương        | Soybean              | Glycine max L.             | 003          | 24                          |  |
| 18      | Địa Lan          | Dia Lan              | Cymbidium Sw.              | 020          | 100                         |  |
| 19      | Dửa Chuột        | Cucumber             | Cucumis sativus (L.)       | 009          | 42                          |  |
| 20      | Dưa hấu          | Watermelon           | Citrullus lanatus (Thunb.) | 011          | 47                          |  |
| 21      | Hành             | Hanh                 | Allium Cepa                | 021          | 0                           |  |
| 22      | Hoa Bòng         | Kalanchoe Adans      | Kalanchoe blossfeldian     |              | 0                           |  |
| 23      | Hoa cúc          | Chrysanthemum        | Chrysanthemum (spec.)      | 007          | 91                          |  |
| 24      | Hoa Hồng         | Rose                 | Rosa L.                    | 022          | 0                           |  |















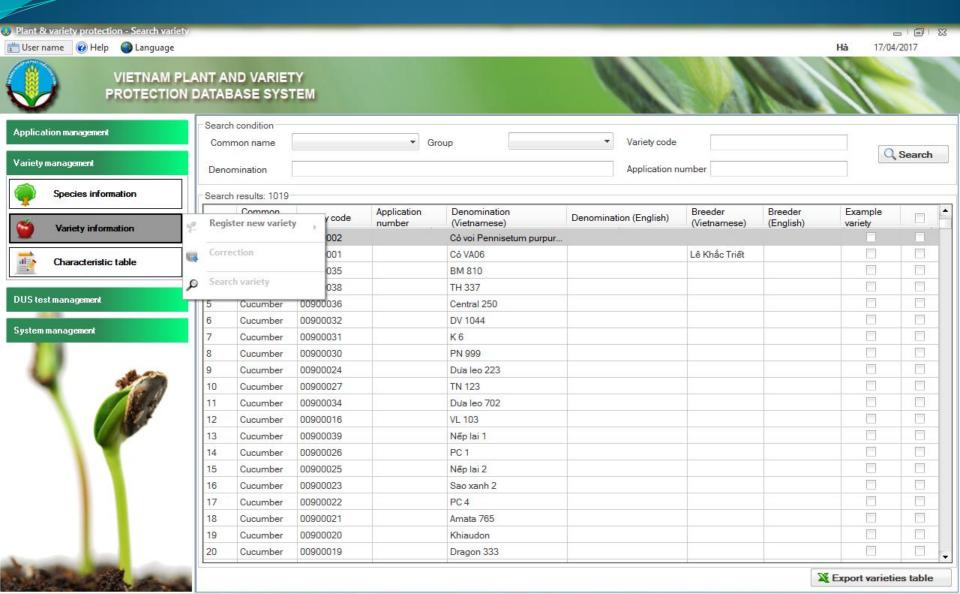








## II- VARRIETY MANAGEMENT

























## II- VARIETY MANAGEMENT













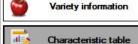
Language

#### VIETNAM PLANT AND VARIETY PROTECTION DATABASE SYSTEM

Application management

Variety management





**DUS** test management

| nent |
|------|
|      |
| 11   |
|      |

| No.  | Name of characteristic table | e (VN)                         | Name of characteristic table (EN)   | Common name         |   |  |
|--|------------------------------|--------------------------------|---|---------------------|---|--|
| 1  | Bàng tính trạng bầu          |                                |   | Gourd               |   |  |
| 2  | Bàng tính trạng bí xanh      |                                |   | Fuzzy squash        |   |  |
| 3  | Bảng tính trạng bí ngô       |                                |   | Pumpkin             |   |  |
| 4  | Bảng tính trạng bí ngô (Cuc  | urbita moschata Duch.)         | Table of characteristics of pumpkin (Cucurbita moschata Duc                   | Pumpkin             |   |  |
| 5  | Bảng tính trạng đặc trưng c  | ùa Cà Chua                     |   | Tomato              |   |  |
| 6  | Bảng tính trang đặc trưng C  | ài bắp                         |   | Cabbage             |   |  |
| Making                                     | a new characteristic table   | ậu cove                        |   | Green bean          |   |  |
| e un   | characteristic table         |                                | Table of characteristics of Asparagus - Bean                                  | Cowpea              |   |  |
| Search                                     | Characteristic table         | iống Đậu Tương                 |   | Soybean             |   |  |
| 10   | Bàng tính trạng địa lan TG/  | 164/3 ngày 24 tháng 3 năm 1999 | 4 tháng 3 năm 1999 Table of characterisitics of CymbidiumTG/164/3 24 March 19 |                     |   |  |
| 11   | Bảng tính trạng Dưa chuột    |                                | Table of characterisitics of Cucumber   | Cucumber            | 0 |  |
| 12   | Bảng tính trạng đặc trưng c  | ủa giống Dưa Hấu               |   | Watermelon          |   |  |
| 13   | Bảng tính trạng đặc trưng c  | ùa giống Hoa Cúc               |   | Chrysanthemum       |   |  |
| 14   | Bảng tính trạng đặc trưng H  | ồng Môn                        |   | Anthurium Andreanum |   |  |
| 15   | Bảng tính trạng đặc trưng k  | ê ngọcTG/260/1(ngày 24 tháng 3 | Table of characteristics of Pearl MilletTG/260/1 (24 March 20                 | D Pearl Millet      |   |  |
| 16   | Bảng tính trạng đặc trưng K  | hoai Tây QCVN 01-69: 2011/BNN  | Table of characteristics of potatoQCVN 01-69: 2011/BNNPTNT                    | Potato              |   |  |
| 17   | Bàng tính trạng đặc trưng c  | ùa giống Lạc                   |   | Grounudnut          |   |  |
| 18   | Bàng tính trạng đặc trưng la | n hồ điệpTG/213/1(ngày 9 tháng | Table of characteristics of PhalaenopsisTG/213/1 (9 April 2003)               | Lan Ho Diep         |   |  |
| 19   | Bảng tính trạng đặc trưng c  | ùa giống Lúa                   | Procedure to conduct for Distinctness, Uniformity and Stability               | Rice                |   |  |
| 20   | Bảng tính trạng đặc trưng c  | ủa giống Lúa phía nam          | Procedure to conduct for Distinctness, Uniformity and Stability               | Rice                |   |  |
| 21   | Bàng tính trạng đặc trưng c  | ùa giống Mía                   |   | Cane                |   |  |
| 22 Bảng tính trạng Mướp đẳng               |                              |                                |   | Bitter melon        |   |  |
| 23 Bảng tính trạng đặc trưng của giống Ngô |                              |                                |   | Maize               |   |  |
| 24   | Bảng tính trạng Ớt Tiêu chu  | ẩn ngành 10TCN 690:2006        | Table of characteristic of chilli 10TCN 690:2006                              | Chili               |   |  |
| 25   | Bảng tính trang đặc trưng c  | ùa giống Su Hào                |   | Kohlrabi            | - |  |













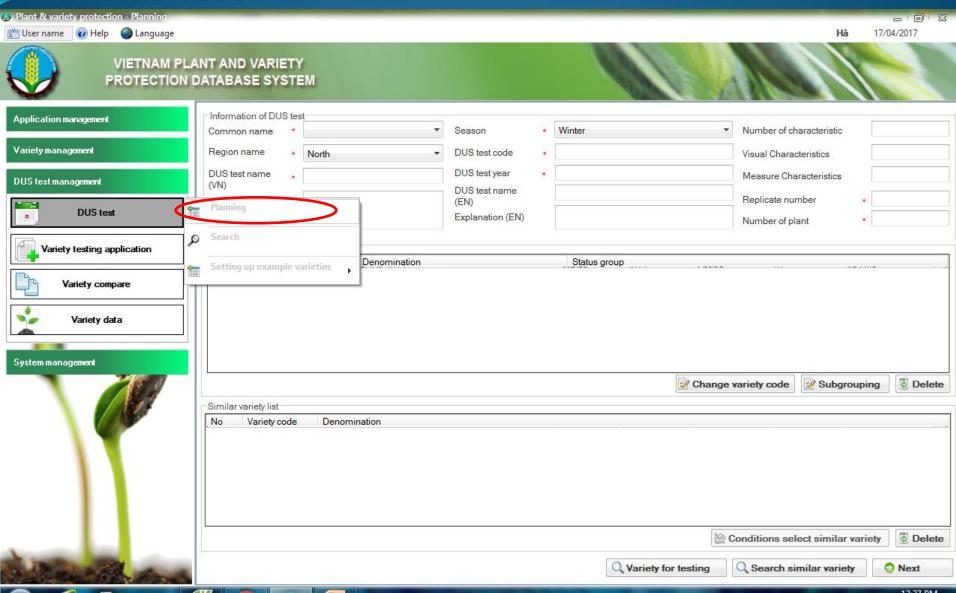


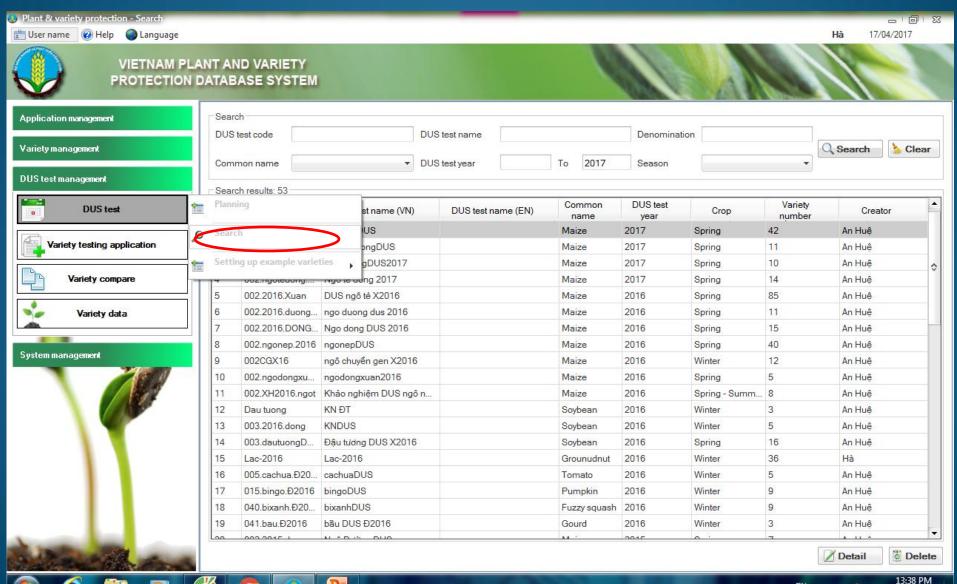




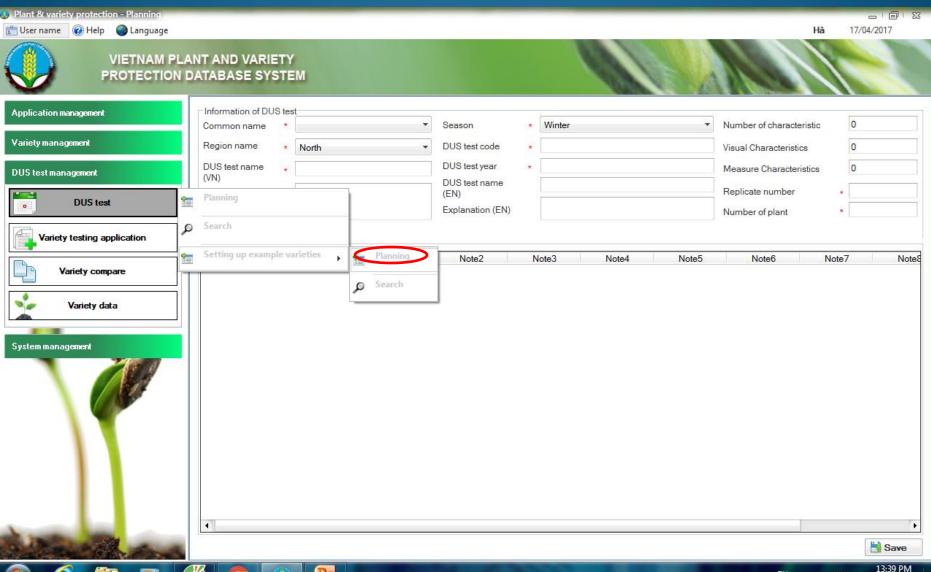




















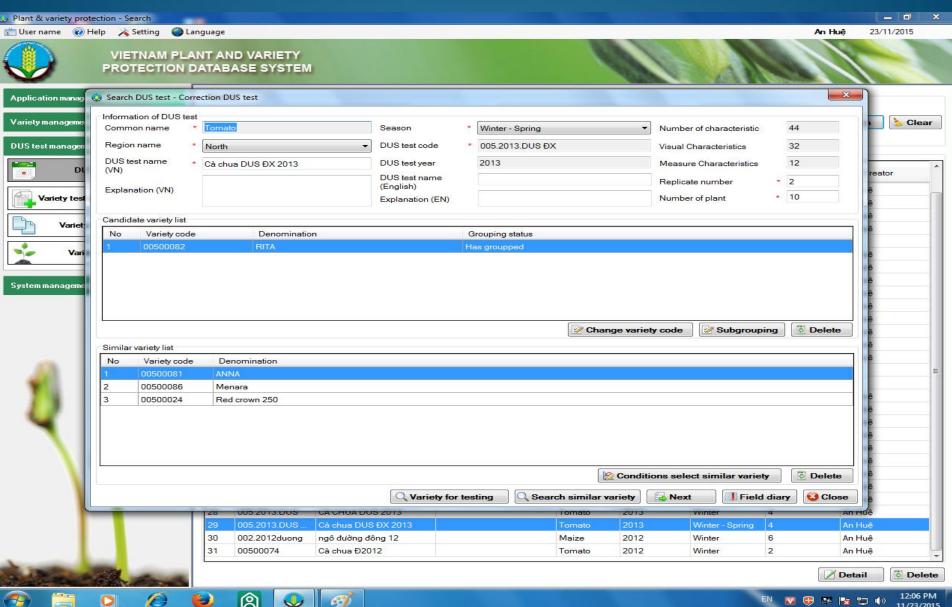














| Search               | Search DUS test - DUS test diary |                   |              |  |   |  |   |  |  |  |  |                            |
|----------------------|----------------------------------|-------------------|--------------|--|---|--|---|--|--|--|--|----------------------------|
| DUS test information |                                  |                   |              |  |   |  |   |  |  |  |  |                            |
|                      | DUS test code                    | 005.2013.DUS      | ĐX           |  | DUS test ye                                       | ar 2013                                    |   |  |  |  |  |                            |
|                      | Common name                      | Tomato            |              |  | Replicate n                                       | um   |   | _  |  |  |  |                            |
|                      | Commonnanie                      | Tomato            |              |  | Replicate III                                     | um   |   |  |  |  |  |                            |
| Quantita             | tive characteristic              | Qualitative chara | cteristic    |  |   |  |   |  |  |  |  |                            |
|                      |                                  |                   |              | Characteristic 3   |   |  |   |  |  |  |  |                            |
| No                   | Replicates                       | Variety Code      | Denomination | - QN -<br>Inflorescences:<br>Number of<br>inflorescences<br>on main stem | Characteristic 5 - QN - Stem: length of internode | Characteristic 7<br>- QN - Leaf:<br>Length | Characteristic 8<br>- QN - Leaf:<br>Width | Characteristic<br>21 - QN -<br>Peduncle:<br>length | Characteristic<br>22 - QN - Fruit:<br>Size | Characteristic<br>23 - QN - Fruit:<br>Ratio<br>length/diameter | Characteristic<br>32 - QN - Fruit:<br>Thickness of<br>pericarp | Chara<br>41 - Q<br>Fruit:S |
| 1                    | 1                                | 00500082          | RITA         |  | 55  | 47   | 42  | 1  | 100  | 1.2  | 0.9  |                            |
| 2                    | 1                                | 00500082          | RITA         |  | 57  | 50   | 46  | 1  | 100  | 1.11   | 0.7  |                            |
| 3                    | 1                                | 00500082          | RITA         |  | 60  | 48   | 41  | 1.1  | 100  | 1.17   | 0.7  | =                          |
| 4                    | 1                                | 00500082          | RITA         |  | 62  | 49   | 44  | 1.1  | 100  | 1.2  | 0.7  |                            |
| 5                    | 1                                | 00500082          | RITA         |  | 64  | 50   | 45  | 1  | 100  | 1.16   | 8.0  |                            |
| 6                    | 1                                | 00500082          | RITA         |  | 58  | 50   | 47  | 1.1  | 100  | 1.19   | 8.0  |                            |
| 7                    | 1                                | 00500082          | RITA         |  | 60  | 51   | 43  | 1.1  | 100  | 1.23   | 0.9  |                            |
| 8                    | 1                                | 00500082          | RITA         |  | 57  | 52   | 42  | 1  | 100  | 1.24   | 0.7  |                            |
| 9                    | 1                                | 00500082          | RITA         |  | 60  | 50   | 45  | 1  | 100  | 1.18   | 0.7  |                            |
| 10                   | 1                                | 00500082          | RITA         |  | 61  | 51   | 43  | 1.1  | 100  | 1.17   | 8.0  |                            |
| 11                   | 1                                | 00500081          | ANNA         |  | 60  | 47   | 43  | 1.2  | 105  | 1  | 0.8  |                            |
| 12                   | 1                                | 00500081          | ANNA         |  | 70  | 50   | 45  | 1.2  | 105  | 1.07   | 1  |                            |
| 13                   | 1                                | 00500081          | ANNA         |  | 65  | 48   | 40  | 1.1  | 105  | 1.02   | 0.9  |                            |
| 14                   | 1                                | 00500081          | ANNA         |  | 66  | 50   | 45  | 1.2  | 105  | 1.05   | 8.0  |                            |
| 15                   | 1                                | 00500081          | ANNA         |  | 69  | 51   | 46  | 1.3  | 105  | 1.07   | 0.9  |                            |
| 16                   | 1                                | 00500081          | ANNA         |  | 65  | 49   | 46  | 1.3  | 105  | 1.02   | 8.0  |                            |
| 17                   | 1                                | 00500081          | ANNA         |  | 60  | 51   | 44  | 1.1  | 105  | 1.04   | 0.9  |                            |
| 18                   | 1                                | 00500081          | ANNA         |  | 68  | 49   | 43  | 1.4  | 105  | 1.11   | 0.9  |                            |
| 19                   | 1                                | 00500081          | ANNA         |  | 70  | 48   | 45  | 1.3  | 105  | 1.13   | 0.9  |                            |
| 20                   | 1                                | 00500081          | ANNA         |  | 67  | 50   | 42  | 1.2  | 105  | 1.05   | 8.0  |                            |
| 21                   | 1                                | 00500086          | Menara       |  | 68  | 52   | 47  | 1.2  | 125  | 1.19   | 0.9  |                            |
| 22                   | 1                                | 00500086          | Menara       |  | 70  | 51   | 54  | 1.3  | 125  | 1.07   | 0.9  |                            |
| 23                   | 1                                | 00500086          | Menara       |  | 72  | 56   | 52  | 1.5  | 125  | 1.11   | 0.9  |                            |
| 24                   | 1                                | 00500086          | Menara       |  | 85  | 48   | 48  | 1.5  | 125  | 1.25   | 0.9  |                            |
| 25                   | 1                                | 00500086          | Menara       |  | 80  | 50   | 49  | 1.4  | 125  | 1.14   | 1  |                            |
| 26                   | 1                                | 00500086          | Menara       |  | 76  | 55   | 50  | 1.4  | 125  | 1.15   | 0.9  |                            |
| 27                   | 1                                | 00500086          | Menara       |  | 82  | 49   | 52  | 1.3  | 125  | 1.12   | 0.9  |                            |
| 28                   | 1                                | 00500086          | Menara       |  | 68  | 49   | 52  | 1.3  | 125  | 1.19   | 1  |                            |
| 29                   | 1                                | 00500086          | Menara       |  | 72  | 51   | 50  | 1.4  | 125  | 1.17   | 0.9  |                            |
| 30                   | 1                                | 00500086          | Menara       |  | 80  | 53   | 48  | 1.3  | 125  | 1.21   | 0.8  | -                          |
| 4                    |                                  |                   |              | III  |   |  |   |  |  |  |  |                            |



























| DUS te    | est diary - Results summary                             | _             |              |              |  |  |  |  |  |  |  |
|-----------|---|---------------|--------------|--------------|--|--|--|--|--|--|--|
| Quantitat | Quantitative characteristic  Qualitative characteristic |               |              |              |  |  |  |  |  |  |  |
| No        | Characteristic  | Variety name  | Replicates 1 | Replicates 2 |  |  |  |  |  |  |  |
| 1         | Inflorescences: Number of inflorescences                | RITA          |              |              |  |  |  |  |  |  |  |
| 2         | Inflorescences: Number of inflorescences                | ANNA          |              |              |  |  |  |  |  |  |  |
| 3         | Inflorescences: Number of inflorescences                | Menara        |              |              |  |  |  |  |  |  |  |
| 4         | Inflorescences: Number of inflorescences                | Red crown 250 |              |              |  |  |  |  |  |  |  |
| 5         | Stem: length of internode                               | RITA          | 59.4         | 61.70        |  |  |  |  |  |  |  |
| 6         | Stem: length of internode                               | ANNA          | 66           | 68.30        |  |  |  |  |  |  |  |
| 7         | Stem: length of internode                               | Menara        | 75.3         | 75.50        |  |  |  |  |  |  |  |
| 8         | Stem: length of internode                               | Red crown 250 | 66.4         | 64.70        |  |  |  |  |  |  |  |
| 9         | Leaf: Length  | RITA          | 49.8         | 49.90        |  |  |  |  |  |  |  |
| 10        | Leaf: Length  | ANNA          | 49.3         | 48.90        |  |  |  |  |  |  |  |
| 11        | Leaf: Length  | Menara        | 51.4         | 51.60        |  |  |  |  |  |  |  |
| 12        | Leaf: Length  | Red crown 250 | 46.9         | 47.90        |  |  |  |  |  |  |  |
| 13        | Leaf: Width   | RITA          | 43.8         | 43.90        |  |  |  |  |  |  |  |
| 14        | Leaf: Width   | ANNA          | 43.9         | 44.10        |  |  |  |  |  |  |  |
| 15        | Leaf: Width   | Menara        | 50.2         | 50.20        |  |  |  |  |  |  |  |
| 16        | Leaf: Width   | Red crown 250 | 45.1         | 44.80        |  |  |  |  |  |  |  |
| 17        | Peduncle: length  | RITA          | 1.05         | 1.06         |  |  |  |  |  |  |  |
| 18        | Peduncle: length  | ANNA          | 1.23         | 1.21         |  |  |  |  |  |  |  |
| 19        | Peduncle: length  | Menara        | 1.36         | 1.38         |  |  |  |  |  |  |  |
| 20        | Peduncle: length  | Red crown 250 | 1.09         | 1.06         |  |  |  |  |  |  |  |
| 21        | Fruit Size  | RITA          | 100          | 95.00        |  |  |  |  |  |  |  |
| 22        | Fruit: Size   | ANNA          | 105          | 110.00       |  |  |  |  |  |  |  |
| 23        | Fruit: Size   | Menara        | 125          | 130.00       |  |  |  |  |  |  |  |
| 24        | Fruit: Size   | Red crown 250 | 140          | 140.00       |  |  |  |  |  |  |  |
| 25        | Fruit: Ratio length/diameter                            | RITA          | 1.185        | 1.21         |  |  |  |  |  |  |  |
| 26        | Fruit: Ratio length/diameter                            | ANNA          | 1.056        | 1.05         |  |  |  |  |  |  |  |
| 27        | Fruit: Ratio length/diameter                            | Menara        | 1.16         | 1.16         |  |  |  |  |  |  |  |
| 28        | Fruit: Ratio length/diameter                            | Red crown 250 | 1.051        | 1.07         |  |  |  |  |  |  |  |
| 29        | Fruit: Thickness of pericarp                            | RITA          | 0.77         | 0.79         |  |  |  |  |  |  |  |
| 30        | Fruit: Thickness of pericarp                            | ANNA          | 0.87         | 0.86         |  |  |  |  |  |  |  |
| 31        | Fruit Thickness of pericarp                             | Menara        | 0.91         | 0.92         |  |  |  |  |  |  |  |
| 32        | Fruit: Thickness of pericarp                            | Red crown 250 | 0.71         | 0.71         |  |  |  |  |  |  |  |
| 33        | Fruit Shelf-life  | RITA          | 15           | 15.00        |  |  |  |  |  |  |  |
| 34        | Fruit:Shelf-life  | ANNA          | 14           | 14.00        |  |  |  |  |  |  |  |
| 35        | Fruit:Shelf-life  | Menara        | 11           | 10.00        |  |  |  |  |  |  |  |
| 36        | FruitShelf-life   | Red crown 250 | 15           | 14.00        |  |  |  |  |  |  |  |
| 37        | Time of flowering                                       | RITA          | 72           | 73.00        |  |  |  |  |  |  |  |
| 38        | Time of flowering                                       | ANNA          | 79           | 79.00        |  |  |  |  |  |  |  |
| 39        | Time of flowering                                       | Menara        | 77           | 79.00        |  |  |  |  |  |  |  |
| 40        | Time or nowering  | D L OSS       | 77           | 79.00        |  |  |  |  |  |  |  |



















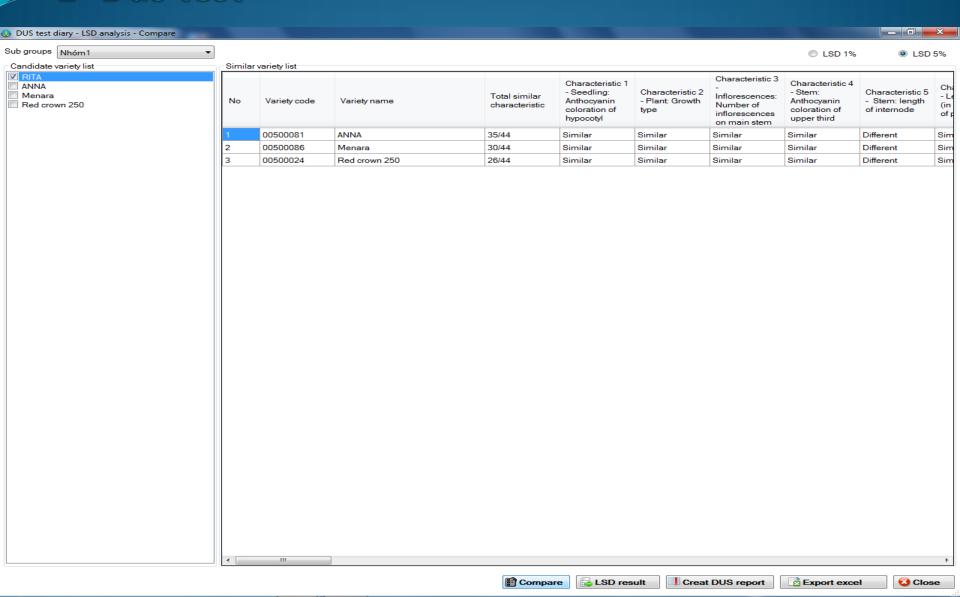






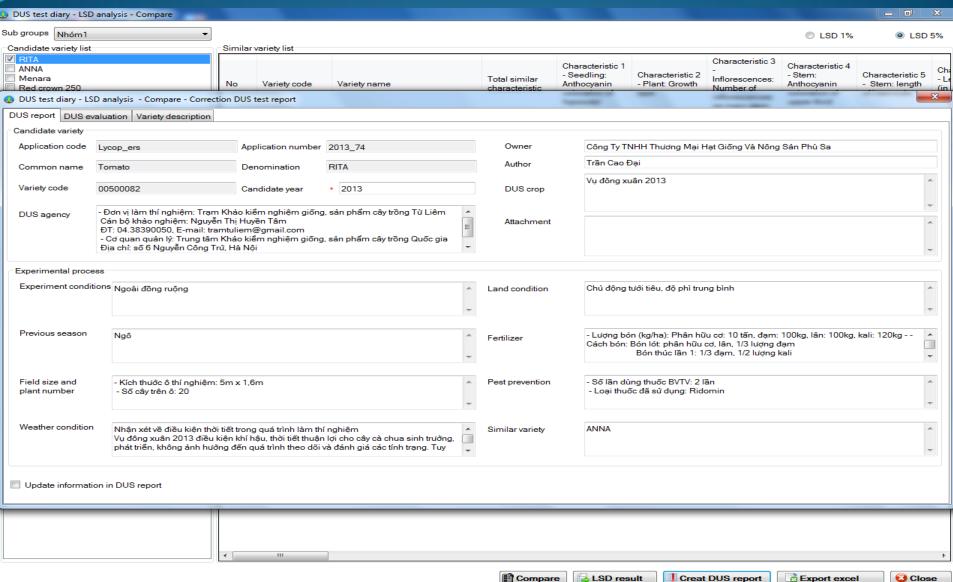
#### 1- Dus test

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11/23/2015

#### 1- Dus test

























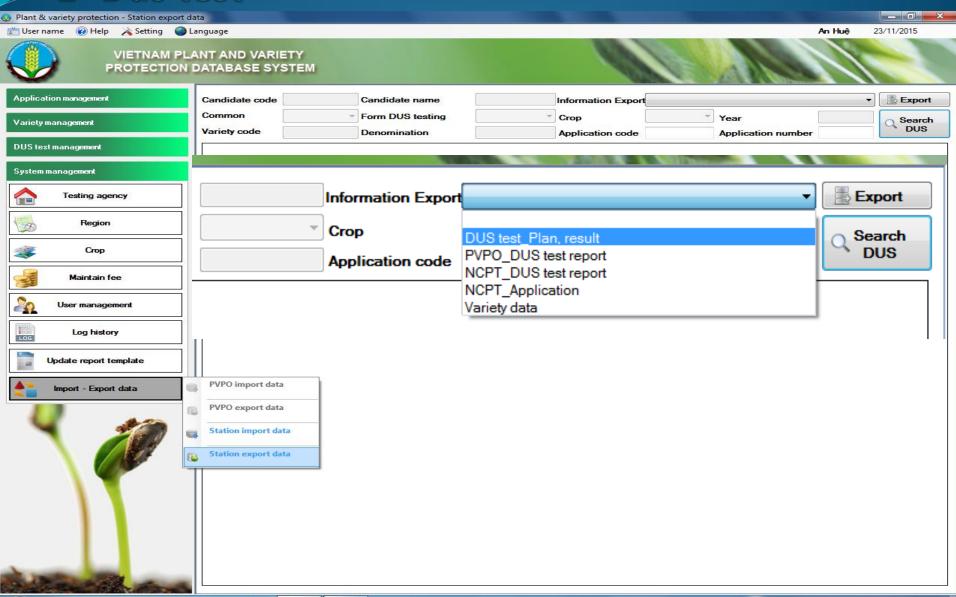
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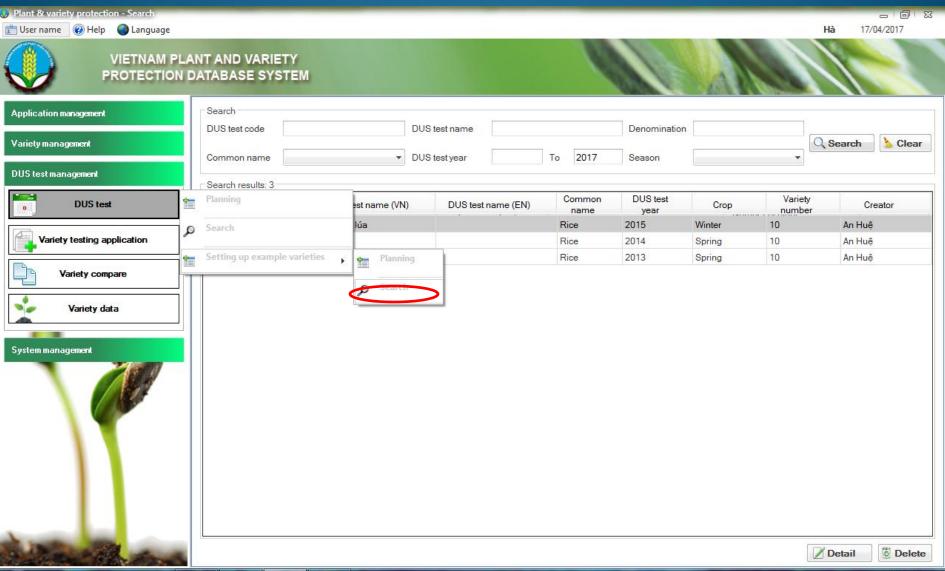
#### 1- Dus test

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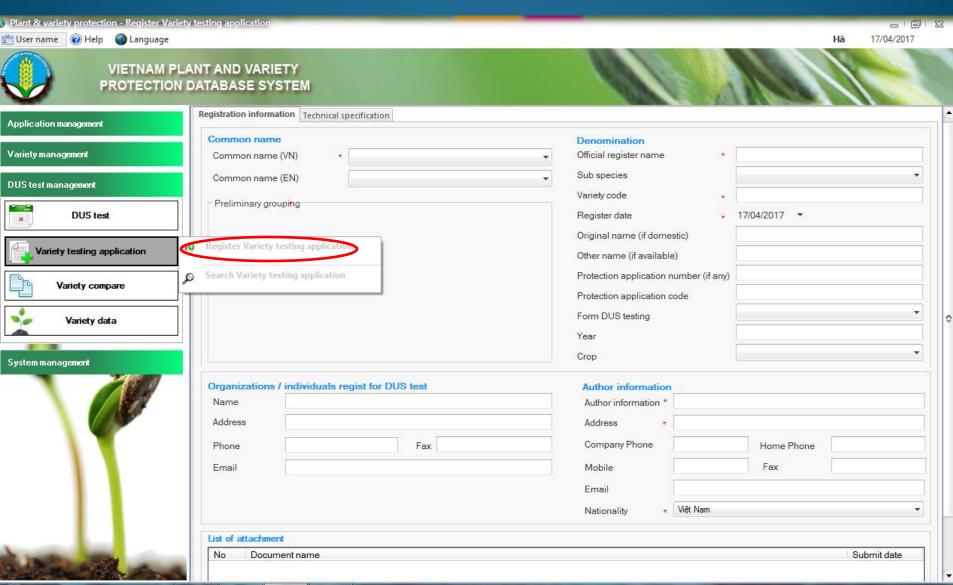
| U | Cập nhật khảo nghiệ  | ệm   | giống điển hình |                       |   |              |                          | Σ  |
|---|----------------------|------|-----------------|-----------------------|---|--------------|--------------------------|----|
|   | Information of DUS t | test |                 | 1                     |   |              |                          |    |
|   | Common name          | ±    | Rice            | Season                | ± | Winter ▼     | Number of characteristic | 65 |
|   | Region name          | ±    | North ▼         | DUS test code         | ± | 001.2015.lua | Visual Characteristics   | 52 |
|   | DUS test name        | *    | KN GĐH lúa      | DUS test year         | ± | 2015         | Measure Characteristics  | 13 |
|   | (VN)                 |      |                 | DUS test name<br>(EN) |   |              | Replicate number *       | 1  |
|   | Explanation (VN)     |      |                 | Explanation (EN)      |   |              | Number of plant *        | 10 |

| No | Characteristic name           | Note1 | Note2 | Note3        | Note4    |   | Note5        |   | Note6 |   | Note7       |   | Note8 |   | Note9 |  |
|----|-------------------------------|-------|-------|--------------|----------|---|--------------|---|-------|---|-------------|---|-------|---|-------|--|
| 13 | Leaf blade: Length            |       | •     |              | <b>-</b> | • |              | • | NTL 1 | • |             | • |       | • | ▼     |  |
| 14 | Leaf blade: Width             |       | •     | P6 đột biến  | <b> </b> | • | Hoa khôi 4   | • |       | • |             | • |       | • | ▼     |  |
| 19 | Time of heading (50% of pl    |       | •     | Koshihikari  | ▼        | • | NTL 1        | • |       | • |             | • |       | • | ▼     |  |
| 25 | Stem: Thickness               |       | •     | Koshihikari  | ▼        | • | Hương việt 3 | • |       | • |             | • |       | • | ▼     |  |
| 26 | Non-prostrate varieties only: |       | •     | Koshihikari  | <b>-</b> | • |              | • |       | • | BM 9962     | • |       | • | •     |  |
| 30 | Panicle: Length of main axis  | -     | •     | Koshihikari  | -        | • |              | • |       | • | BM 9962     | • |       | • | •     |  |
| 31 | Panicle: Number per plant     |       | •     | ĐTL 2        | <b>-</b> | • | Koshihikari  | • |       | • |             | • |       | • |       |  |
| 44 | Time of maturity              |       | •     | Koshihikari  | <b>-</b> | • | NTL 1        | • |       | • |             | • |       | • | ▼     |  |
| 53 | Grain: Weight of 1000 fully d |       | •     | Khang dân    | <b>-</b> | • |              | • |       | • |             | • | NTL 1 | • | ▼     |  |
| 54 | Grain: Length                 |       | -     | Koshihikari  | <b>-</b> | • |              | • |       | • | ST 7        | • |       | • | ▼     |  |
| 55 | Grain: Width                  |       | -     | Khang dân    | ▼        | • |              | • |       | • | NV 1        | ¥ |       | • | ▼     |  |
| 58 | Decorticated grain: Length    | ▼     |       | Koshihikari  | ▼        | • | Hoa khôi 4   | • |       | • |             | • |       | • | ▼     |  |
| 59 | Decorticated grain: Width     | -     |       | Hương việt 3 | ▼        |   |              | • |       | • | Koshihikari | • |       | - | •     |  |





#### 2- Variety testing application













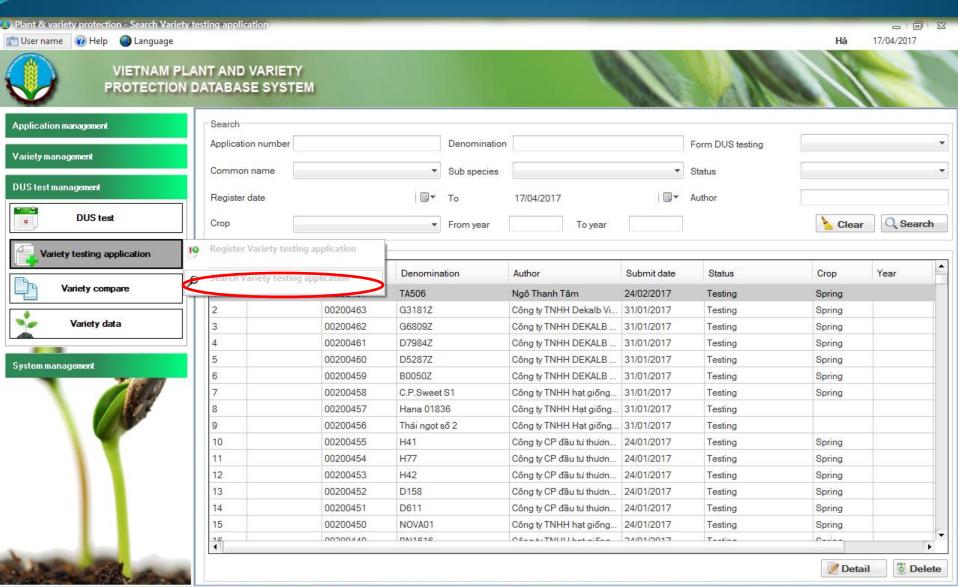








#### 2- Variety testing application











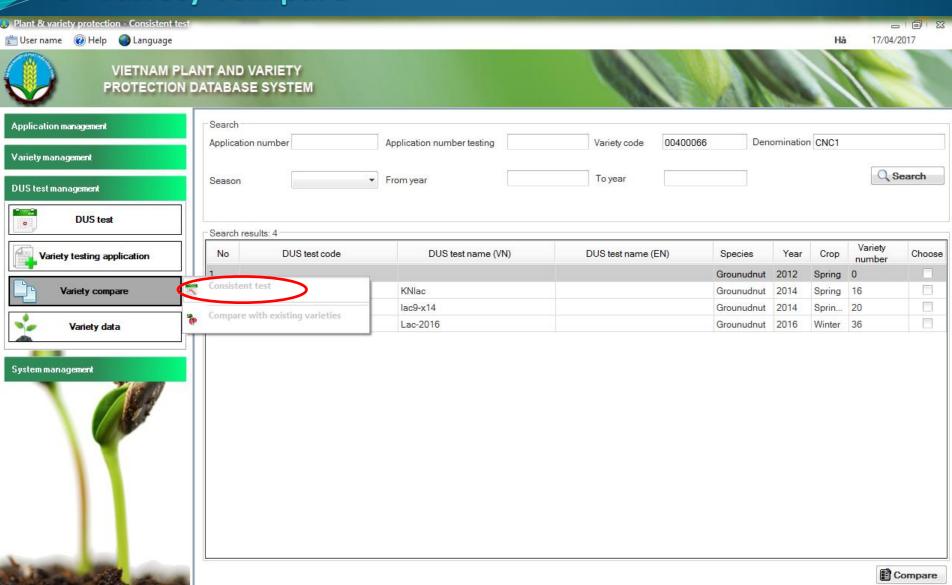








#### 3- Variety compare











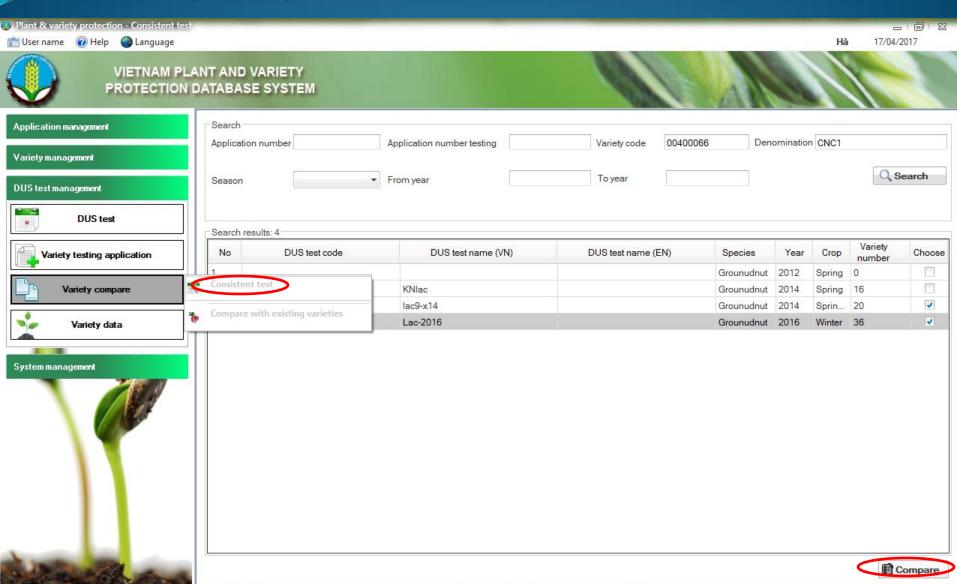








#### 3- Variety compare

















#### 3- Variety compare

👽 Variety comparation - Compare result

| No   | Characteristic name  | Quantitative<br>characteristic | Spring - Summer -<br>2014 | Winter - 2016 |
|------|--|--------------------------------|---------------------------|---------------|
|      | Disab Consult habitatalanceira   | characteristic                 | 2014                      | 2             |
|      | Plant: Growth habit (at flowering)   |                                | 2                         | 2             |
| 2    | Main stem: Growth habit (prostrate varieties only)                           |                                | -                         | -             |
| 3    | Side branches: Growth habit (prostrate varieties only                        |                                | -                         | -             |
| 4    | Plant Branching (as for 1)   | <b>V</b>                       | 4.15                      | 5.6           |
| 5    | Time of maturity (for curing)  | <b>✓</b>                       | 131                       | 130.5         |
| 5.1  | Leaflet: length  | <b>v</b>                       | 4.955                     | 4.975         |
| 5.2  | Leaflet: Width   | ₹                              | 2.53                      | 2.36          |
| 7    | Leaflet Color  |                                | 5                         | 5             |
| В    | Flowering:General pattern  |                                | 3                         | 3             |
| 9    | Flowering: Inflorescence   |                                | 2                         | 2             |
| 10   | Pod: Constrictions   |                                | 4                         | 4             |
| 11   | Pod: Texture of surface  |                                | 6                         | 6             |
| 12.1 | Pod: one seed  | <b>▽</b>                       | 11.17                     | 10.783        |
| 12.2 | Pod: two seeds   | <b>▽</b>                       | 88.414                    | 89.066        |
| 12.3 | Pod: three   | ₹.                             | -                         | 0.152         |
| 13   | Pod: Prominence of beak  |                                | 7                         | 7             |
| 14   | Pod: Shape of beak   |                                | 2                         | 2             |
| 15   | Kernel: Color of uncured mature testa  |                                | 1                         | 1             |
| 16   | Kernel: Color of mature uncured testa (varieties with monochrome testa only) |                                | 7                         | 7             |
| 17   | Kernel: Shape  |                                | 3                         | 3             |
| 18   | Kernel: weight per 100 kernels   | ₹                              | 69.01                     | 67.003        |
| 19   | Kernel: dormancy periode   |                                | 1                         | 1             |
| 20   | Kernel: Ratio of kernel per pod  | ✓                              | 70.674                    | 63.852        |
| 21   | (Phaeoisariopsis personata)  |                                | -                         | -             |
| 22   | (Puccinia arachielis)  |                                | -                         | -             |
| 23   | (Ralstonia solanacearum)   |                                | -                         | -             |
| 24   | (Aspergillus niger)  |                                | _                         | _             |
| 25   | (Sclerotium rolfsii)   |                                | _                         | _             |











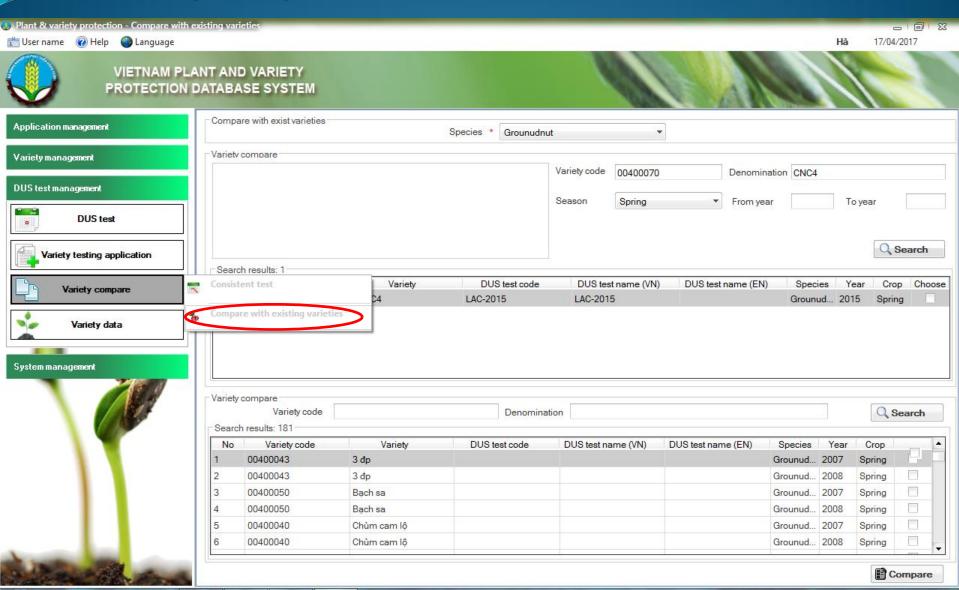








#### 3- Variety compare



















#### 3- Variety compare

| y Vantei | y comparation Exists - Compare result                        |                             |                       |                                 |                                |
|----------|--|-----------------------------|-----------------------|---------------------------------|--------------------------------|
| No       | Characteristic name  | Quantitative characteristic | CNC4<br>Spring - 2015 | HẠT ĐÔ<br>Spring - 2014 : 11/28 | TBG45<br>Spring - 2015 : 11/28 |
| 1        | Plant: Growth habit (at flowering)                           |                             | 3                     | 2                               | 2                              |
| 2        | Main stem: Growth habit (prostrate varieties only)           |                             | 1                     | 2                               | -                              |
| 3        | Side branches: Growth habit (prostrate varieties only        |                             | 5                     | 5                               | -                              |
| 4        | Plant: Branching (as for 1)                                  | <b>✓</b>                    | 5                     | 4.3                             | 4.85                           |
| 5        | Time of maturity (for curing)                                | <b>✓</b>                    | 117                   | -                               | 117                            |
| 6.1      | Leaflet:: length   | <b>✓</b>                    | 6.08                  | 53.3                            | 5.955                          |
| 6.2      | Leaflet:: Width  | <b>✓</b>                    | 2.91                  | 27.75                           | 2.935                          |
| 7        | Leaflet: Color   |                             | 4                     | 5                               | 4                              |
| 8        | Flowering:General pattern                                    |                             | 3                     | 3                               | 3                              |
| 9        | Flowering: Inflorescence                                     |                             | 2                     | 2                               | 2                              |
| 10       | Pod: Constrictions   |                             | 3                     | 4                               | 4                              |
| 11       | Pod: Texture of surface                                      |                             | 4                     | 4                               | 4                              |
| 12.1     | Pod: one seed  | <b>✓</b>                    | 7.336                 | 9.617                           | 9.675                          |
| 12.2     | Pod: two seeds   | <b>✓</b>                    | 12.241                | 10.374                          | 20.082                         |
| 12.3     | Pod: three   | ✓                           | 45.282                | 45.666                          | 70.242                         |
| 13       | Pod: Prominence of beak                                      |                             | 4                     | 5                               | 4                              |
| 14       | Pod: Shape of beak   |                             | 2                     | 2                               | 2                              |
| 15       | Kernel: Color of uncured mature testa                        |                             | 1                     | 1                               | 1                              |
| 16       | Kernel: Color of mature uncured testa (varieties with monoch |                             | 4                     | 4                               | 4                              |
| 17       | Kemel: Shape   |                             | 3                     | 3                               | 3                              |
| 18       | Kemel: weight per 100 kemels                                 | ✓                           | 49.167                | 44.779                          | 51.167                         |
| 19       | Kemel: domancy periode                                       |                             | 1                     | 1                               | 1                              |
| 20       | Kemel: Ratio of kemel per pod                                | ✓                           | 74.65                 | 77.772                          | 76.162                         |
| 21       | (Phaeoisariopsis personata)                                  |                             | -                     | -                               | -                              |
| 22       | (Puccinia arachielis)  |                             | -                     | -                               | -                              |
| 23       | (Ralstonia solanacearum)                                     |                             | -                     | -                               | -                              |
| 24       | (Aspergillus niger)  |                             | -                     | -                               | -                              |
| 25       | (Sclerotium rolfsii)   |                             | -                     | -                               | -                              |









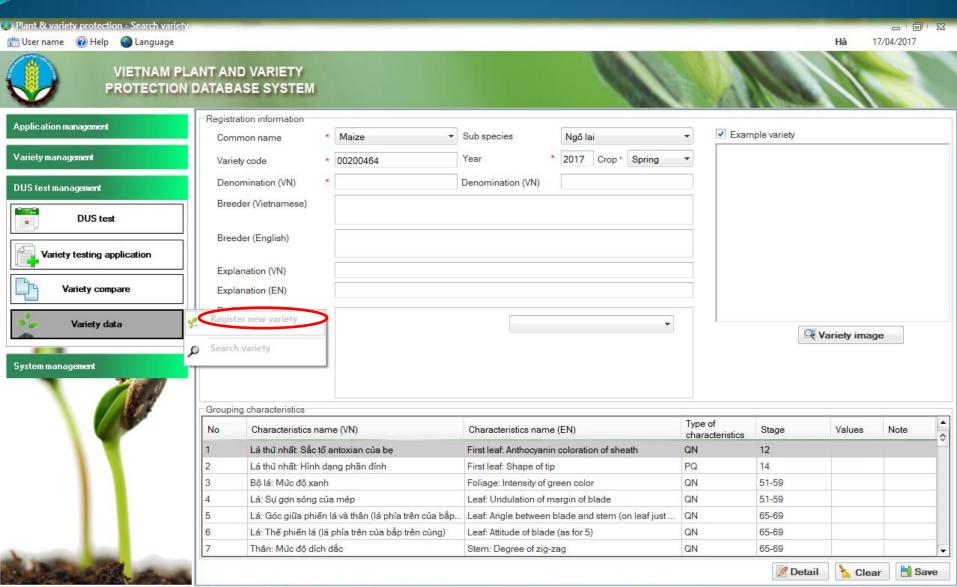




















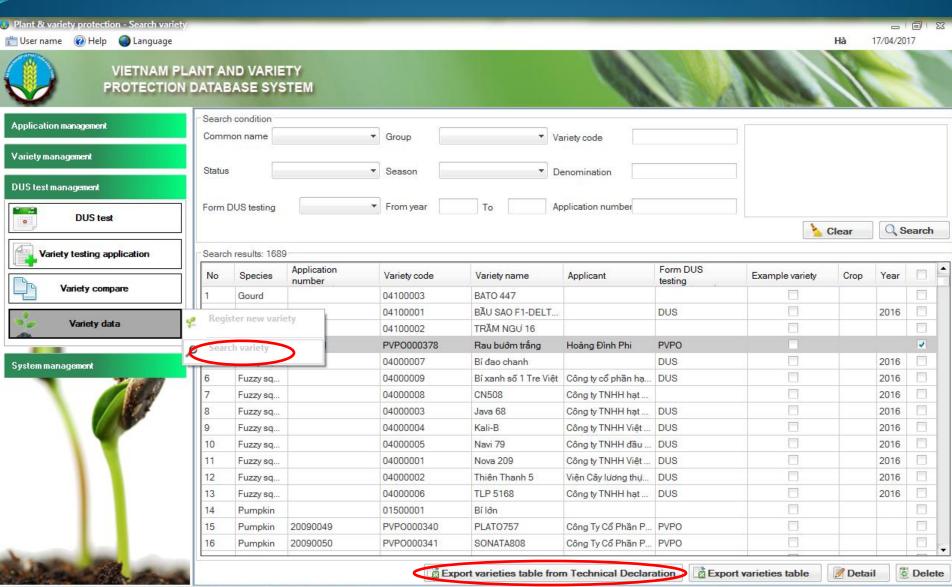






















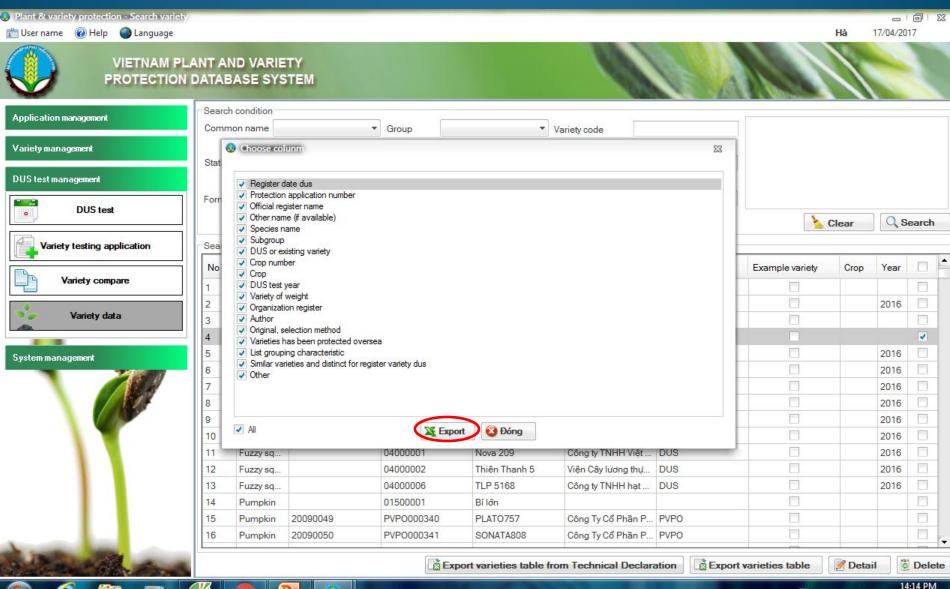




















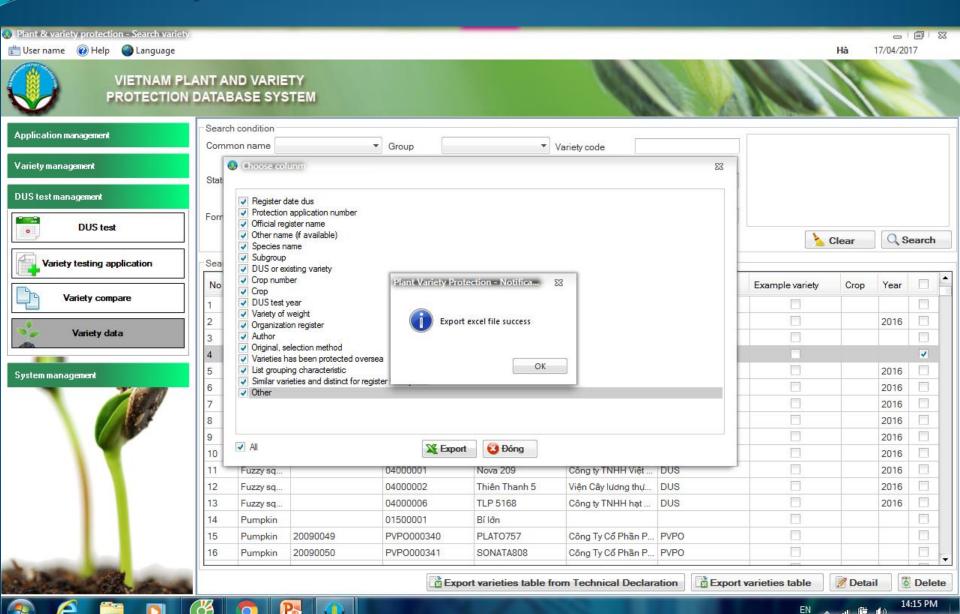


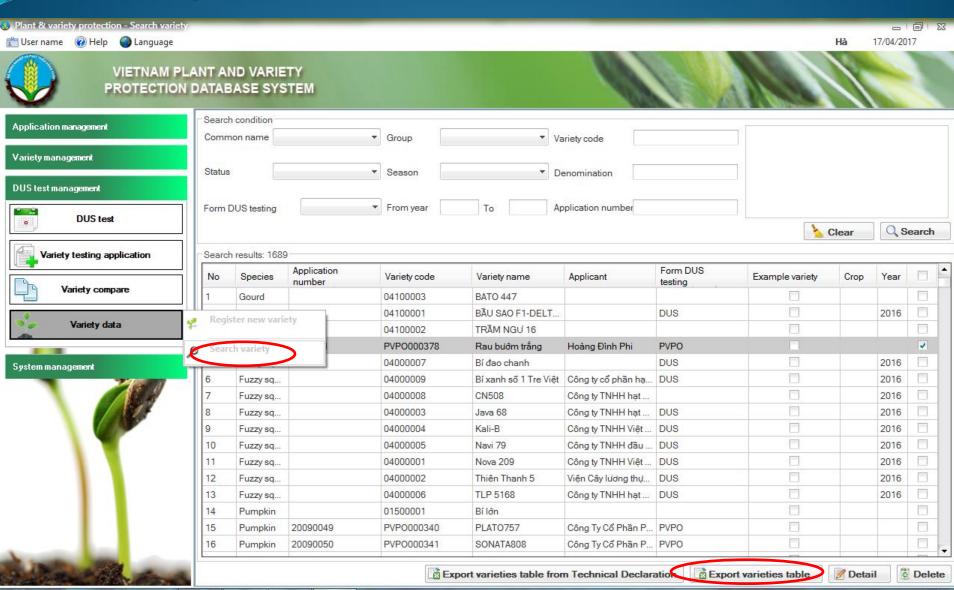






















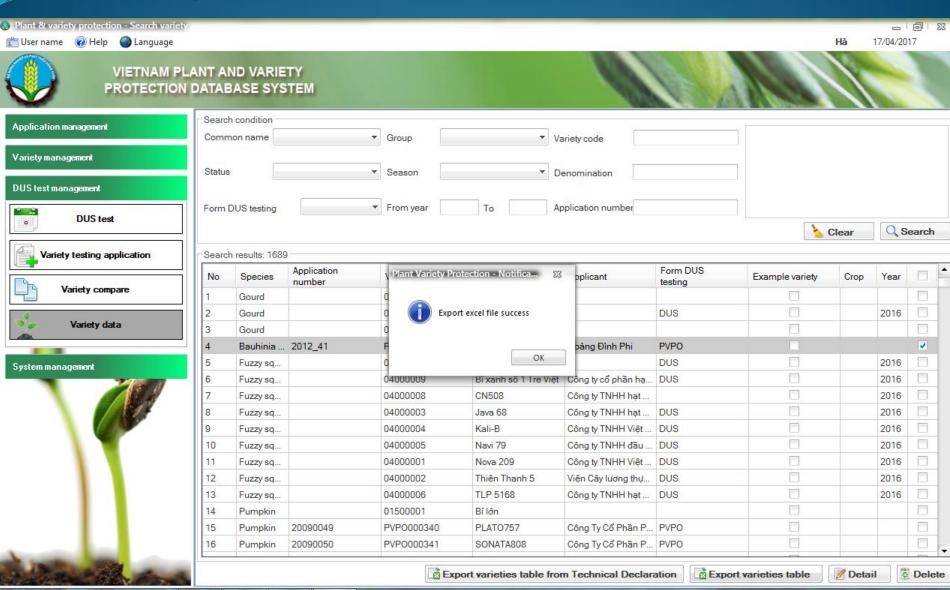






















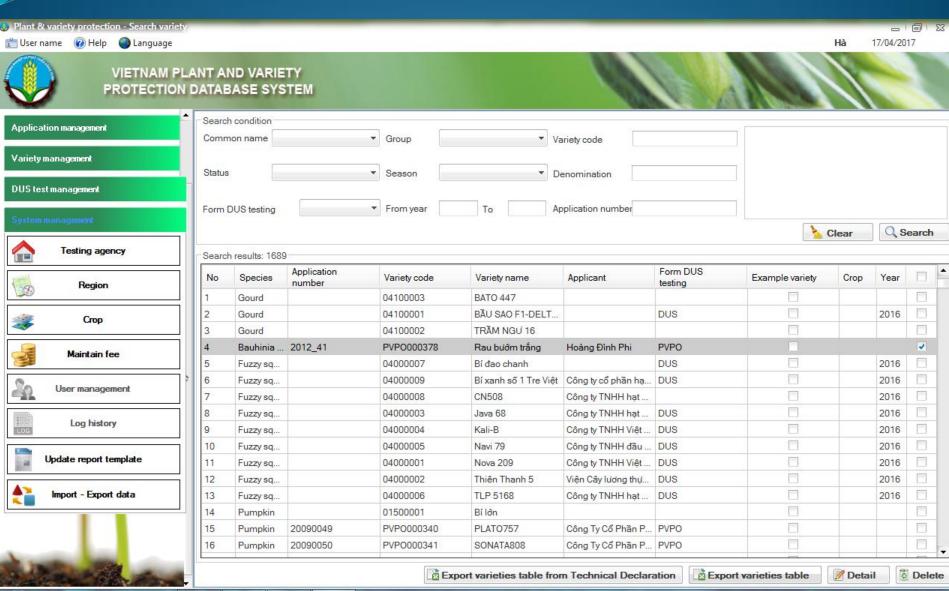






















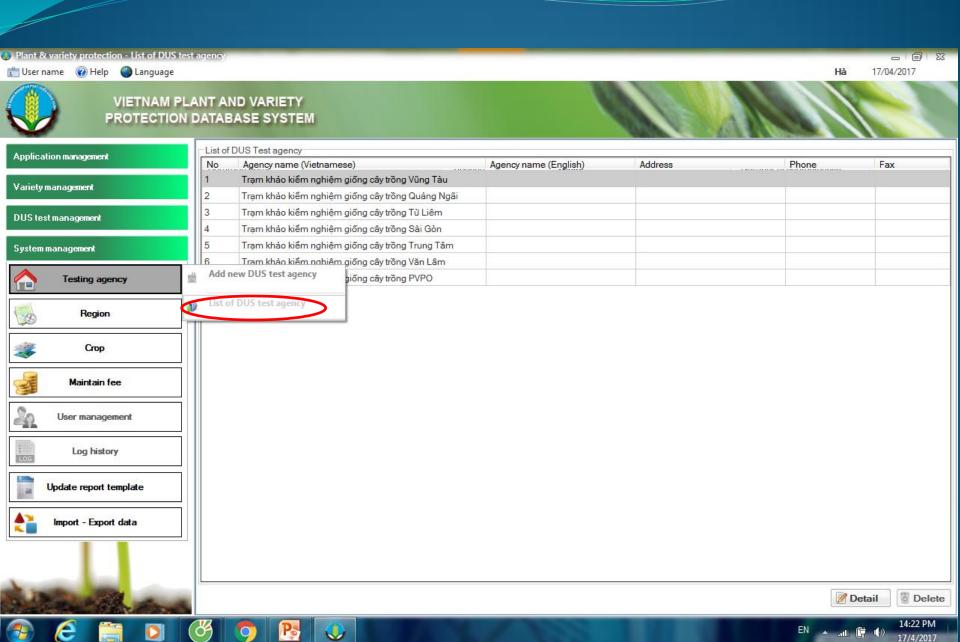


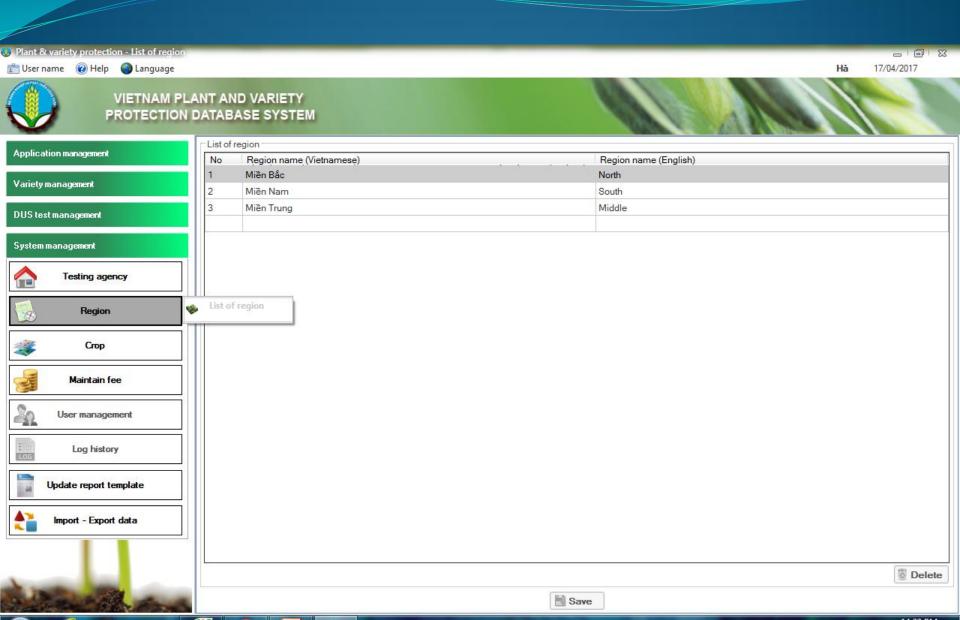




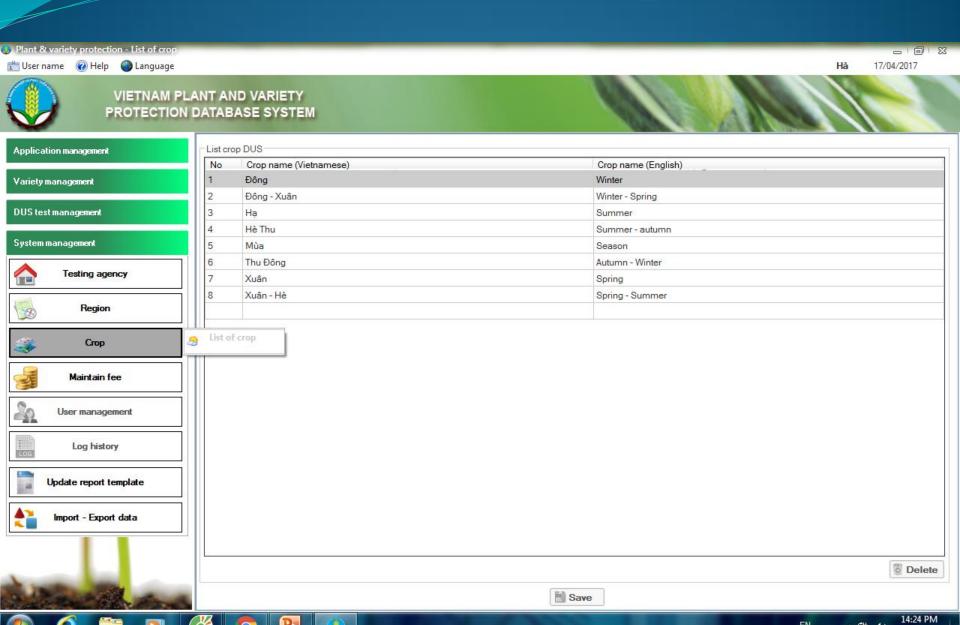


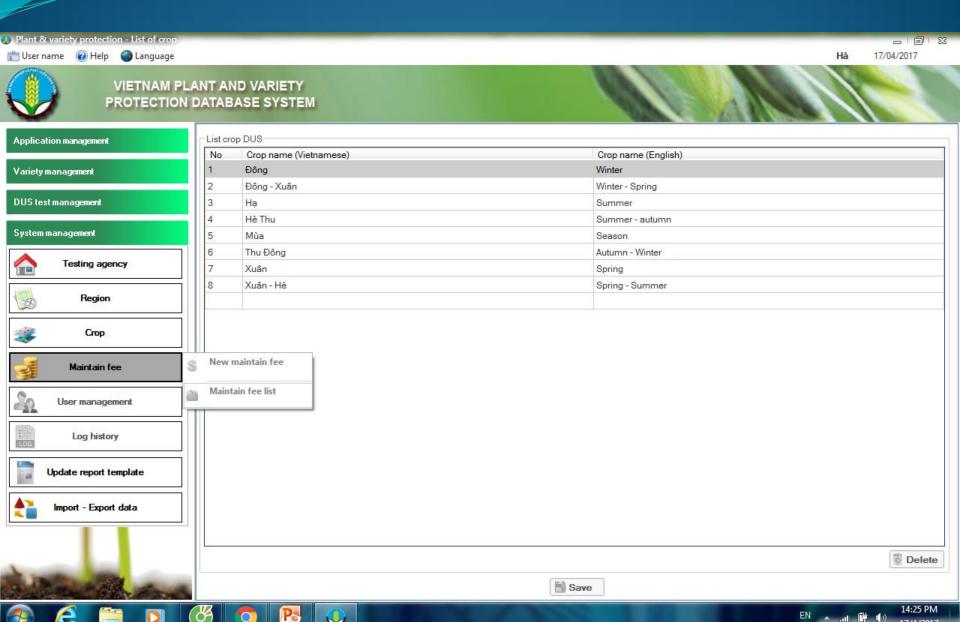












### System management

