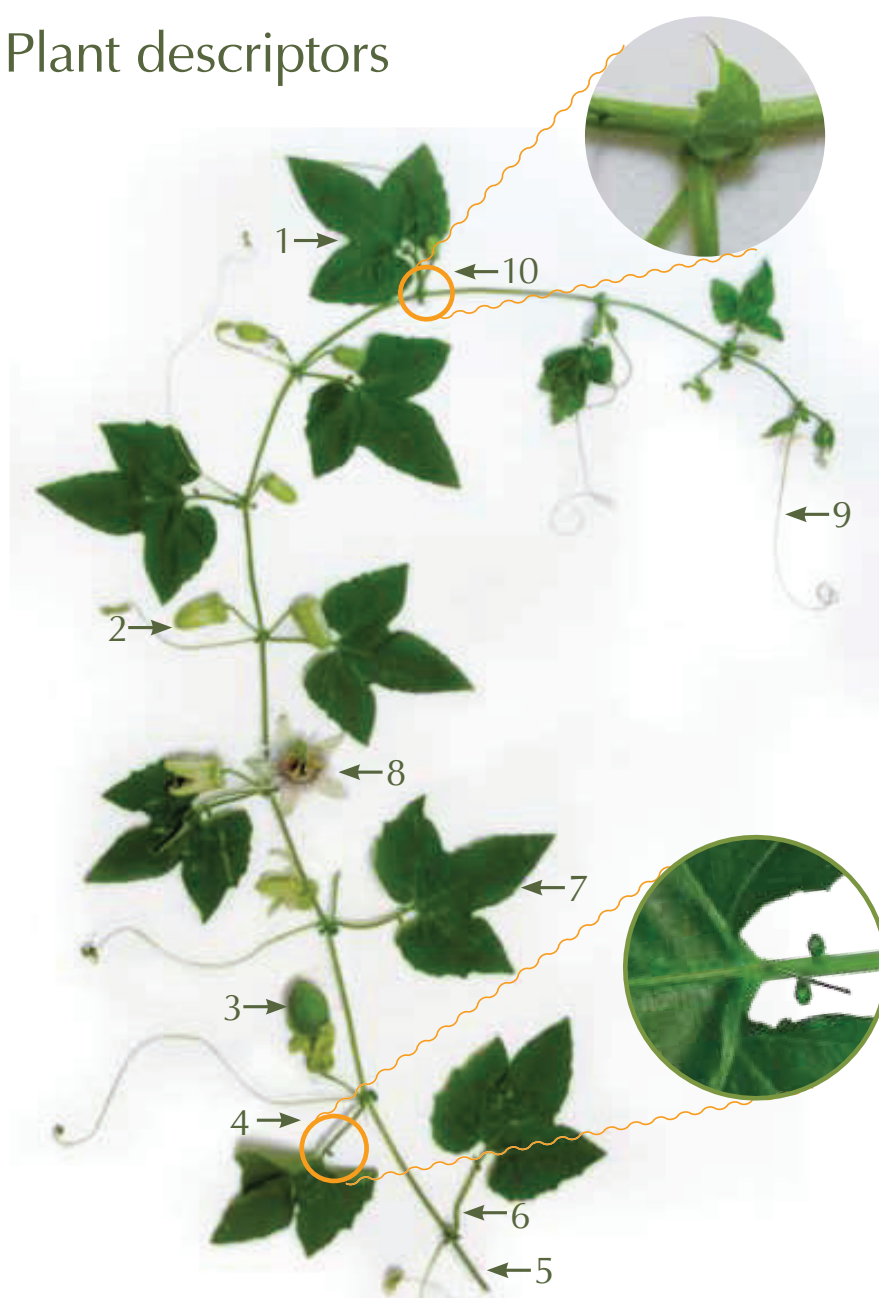


Morpho-agronomic descriptors

Plant descriptors



- Sinus 1
- Flower bud 2
- Fruit 3
- Nectary 4
- Branch 5
- Petiole 6
- Leaf 7
- Flower 8
- Tendrils 9
- Stipule 10

Figure 1. Parts of the *Passiflora morifolia* Mast branch.

Photos: Onildo Nunes de Jesus

NFR: Number of fruits

Counting and characterizing the number of fruits should be conducted during peak crop production (suggested to be between the 10th and 12th month after field planting, depending on the growing region). Every fruit on the plant (small and large) should be counted. When counting the fruits, it is suggested to pollinate and mark some flowers in the plot with colorful ribbons to identify the next date for a new fruit count, considering the fully ripe fruits derived from this marking. Thus, the next evaluation will only occur after the development and abscission of fruits previously identified and the emergence of the new fruit crop.

YFR: Fruit yield

Fruit yield is measured by weighing and counting all the fruits of the experimental plot during part of the production period or for the whole production period. The estimated yield is expressed in tons per hectare. The total number of fruits per hectare may also complement the information on the estimated crop yield. For productivity, the number of plants in the plot and the number of plants per hectare should be considered, as well as the spacing used in the experiment (HAFLE et al., 2009; JESUS et al., 2016).

NDF: Number of days from planting to the beginning of flowering

The time from planting until the beginning of flowering may vary depending on environmental conditions and also due to differences among genotypes. Thus, this measurement is obtained by recording the number of days required from planting until the beginning of flowering, which should be recorded weekly until the end of flowering (ARAÚJO et al., 2008).

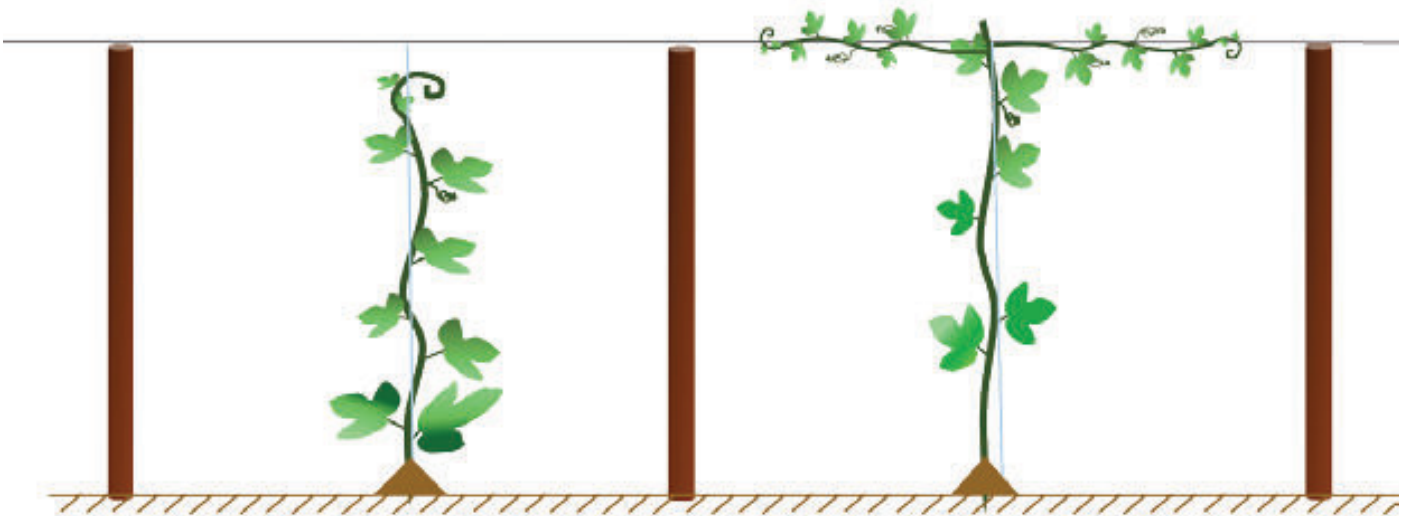
NDP: Number of days from planting to the beginning of production

Early yield is an important aspect to be evaluated in different passion fruit accessions. It is used to anticipate harvesting periods and even to increase productivity in some situations. This measure is determined by the number of days from planting in the field until the fall of the first ripe fruit.

PDE: Plant development

To evaluate this descriptor, it is important that all seedlings are sown and planted at the same time. After planting, the growth of seedlings under field conditions should be followed from the 3rd to the 4th month (Figure 2). This descriptor makes it possible to evaluate the vigor and precociousness of the genotypes (JESUS et al., 2016). This evaluation can be done in a predetermined period. For this evaluation the following classes should be adopted:

1. Presence of primary branches 2. Presence of secondary branches



3. Presence of tertiary branches (curtain)

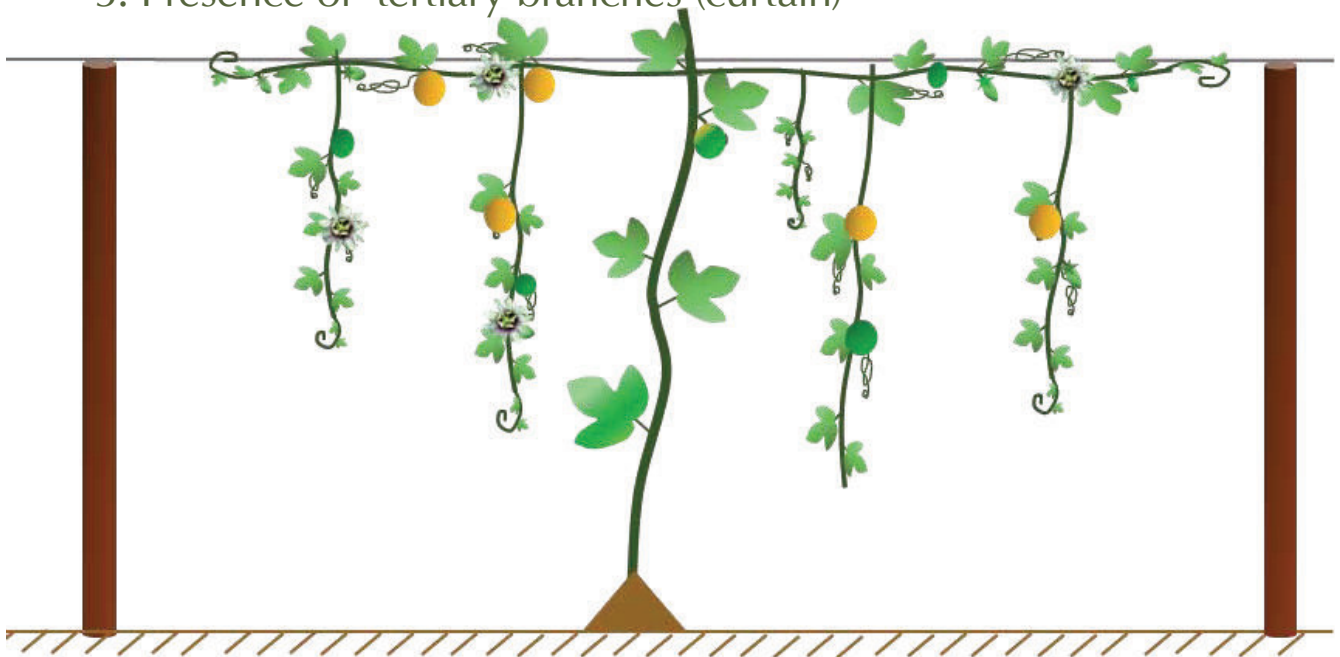
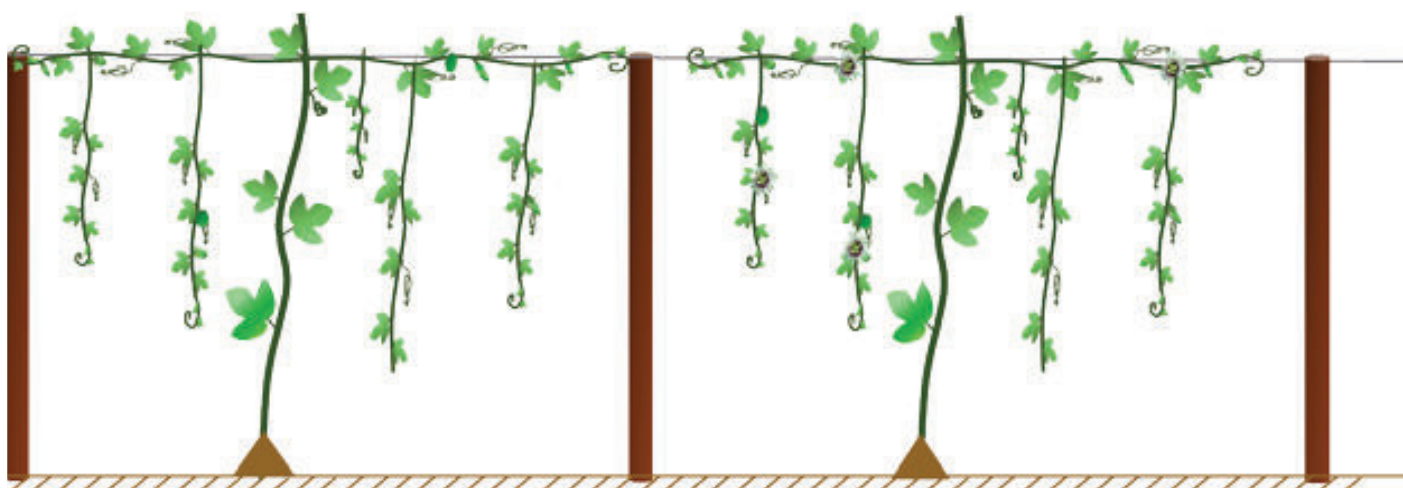


Figure 2. Plant development: Presence of primary branches (1); Presence of secondary branches (2) and Presence of tertiary branches (curtain).

PFF: Presence of flowers and fruits

After the seedlings reach the crop wire (Figure 3) and when secondary branches (lateral branches) are present, the evaluations of the presence and absence of flowers and fruits can be performed (JESUS et al., 2016):

1. Absence of flowers and fruits
2. Presence of flowers only



3. Presence of flowers and fruits
4. Presence of fruits only

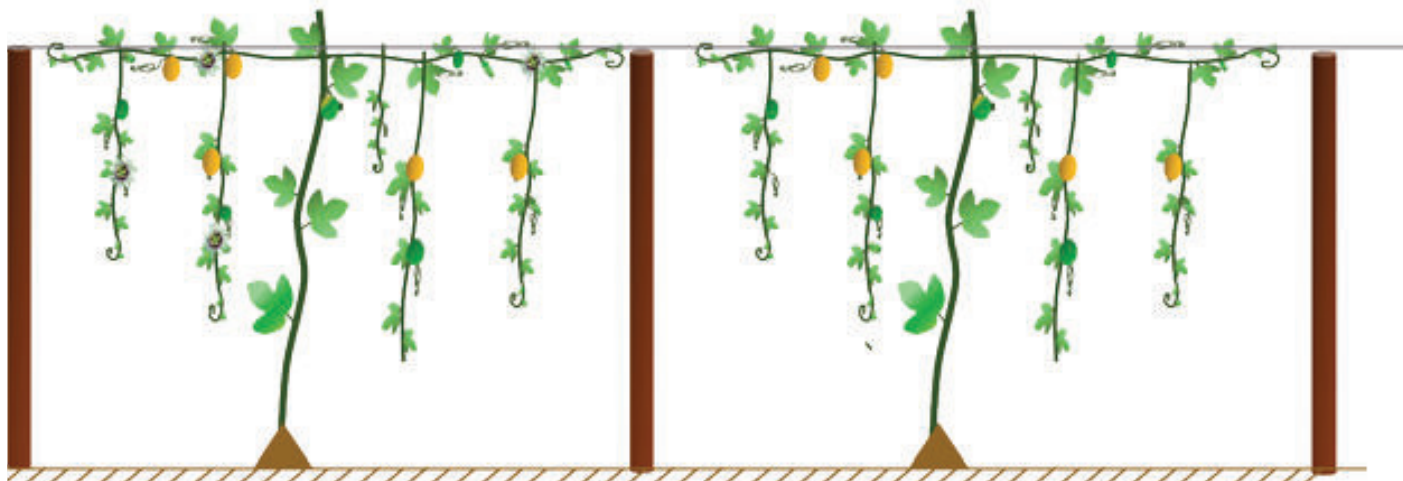


Figure 3. Flowers and fruits: Absence of flowers and fruits (1); Presence of flowers only (2); Presence of flowers and fruits (3) e Presence of fruits only (4).

Observations for the evaluation of the branch

- Branch: evaluate vigorous branches resulting from spring budding (young branches, of the year, still not fully lignified).
- If the plant does not present the characteristic under evaluation (for example absence of bracts in the flowers) assign zero to the descriptor and specify the reason.

BRC: Branch color

1. Light-green



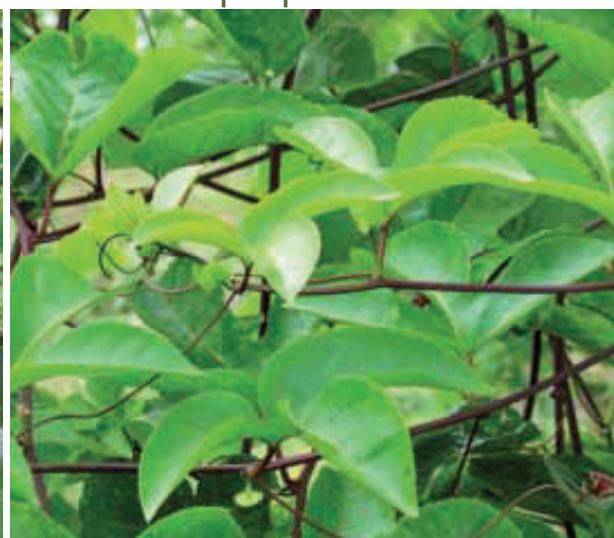
2. Dark-green



3. Purplish-green



4. Reddish-purple



Photos: Onildo Nunes de Jesus

Source: Adapted from Brazil (2008a, 2008b).

PAB: Presence of anthocyanin on the branches

1. Absent (no anthocyanin)



2. Few (more green than purple)



3. Medium (more purple than green; purplish-green)



4. High (completely reddish purple)



Photos: Onildo Nunes de Jesus

PHE: Presence of heterophylly

1. Absent



Photos: Onildo Nunes de Jesus

2. Present



PST: Presence of stipule

1. Absent

Photos: Onildo Nunes de Jesus



2. Present



References

- ARAÚJO, F. P.; SILVA, N.; QUEIROZ, M. A. Divergência genética entre acessos de *Passiflora cincinnata* Mast com base em descritores morfoagronômicos. **Revista Brasileira de Fruticultura**, v. 30, n. 3, p. 723-730, 2008.
- BRAZIL Ministério da Agricultura, Pecuária e Abastecimento. **Instruções para execução dos ensaios de distinguibilidade, homogeneidade e estabilidade de cultivares de maracujá das espécies: *Passiflora alata* Curtis; *Passiflora amethystina* J. C.Mikan; *Passiflora caerulea* L.; *Passiflora cincinnata* Mast.; *Passiflora coccinea* Aubl.; *Passiflora foetida* L.; *Passiflora gardneri* Mast.; *Passiflora ligularis* Juss.; *Passiflora mucronata* Lam.; *Passiflora nitida* Bonpl. ex Kunth; *Passiflora quadrangularis* L.; *Passiflora setacea* DC.; *Passiflora tenuifila* Killip e *Passiflora tripartita* (Juss.).** 2008a. Available at: <<http://www.agricultura.gov.br>> Accessed on: 10 mar. 2013.
- BRAZIL Ministério da Agricultura, Pecuária e Abastecimento. **Instruções para execução dos ensaios de distinguibilidade, homogeneidade e estabilidade de cultivares de maracujá (*Passiflora edulis* Sims).** 2008b. Available at: <<http://www.agricultura.gov.br>> Accessed on: 10 mar. 2013.
- GLOSSÁRIO de termos botânicos. Available at: <http://felix.ib.usp.br/bib304/glossario_2009.pdf>. Accessed on: 09 ago. 2013.
- HAFLE, O. M.; RAMOS, J. D.; LIMA, L. C. O.; FERREIRA, E. A.; MELO, P. C. Produtividade e qualidade de frutos do maracujazeiro-amarelo submetido à poda de ramos produtivos. **Revista Brasileira de Fruticultura**, v. 31, n. 3, p. 763-770, 2009.
- JESUS, O. N.; SOARES, T. L.; GIRARDI, E. A.; ROSA, R. C. C.; OLIVEIRA, E. J.; CRUZ NETO, A. J.; SANTOS, V. T.; OLIVEIRA, J. R. P. Evaluation of intraspecific hybrids of yellow passionfruit in organic farming. **African Journal of Agricultural Research**, June 2016.