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Response of seven African eggplant (*Solanum macrocarpon* L.) cultivars produced in Benin to salinity stress at seedling stage

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Salt stress is one of the abiotic factors that cause a depressive effect on plants. This work aims to evaluate the effect of salt stress on growth of young plants of 7 cultivars (Adja-ouere, Côte d'Ivoire, Dangbo, Kpinman, Kombara F1, Lanman and Togan) of African eggplant (*Solanum macrocarpon*) produced in Benin, locally called Gboma, in order to determine their relative salt-resistance levels. Five NaCl concentrations (0; 30; 60; 90 and 120 mM) were applied to 4-weeks old plants for 2 weeks in a completely randomized design with 3 replicates. Results revealed that the 3 root growth parameters evaluated were only significantly affected for one of the 7 cultivars while for the growth parameters of the aerial part, at least 4 cultivars were significantly affected except for leaf number. Thus, growth of aerial part was more sensitive to salt stress than that of root part. Cultivar Dangbo, which did not undergo significant reduction in growth for none of the 9 parameters evaluated, was the most salt resistant. It was followed by Togan which underwent significant growth reduction for only 3 growth parameters and only at the highest NaCl concentrations used. On the other hand, cultivar Kombara F1 which underwent a significant growth reduction from the lowest NaCl concentrations used for 4 of the nine parameters evaluated was the most salt sensitive. It was followed by Lanman, Kpinman and Adja-ouere with respectively 3, 2 and 2 growth parameters significantly reduced at the lowest NaCl concentrations used. Cultivar Côte d'Ivoire showed intermediate behavior.

Key words: Plant growth, NaCl, salt resistance, cultivars' discrimination, Gboma.

INTRODUCTION

Salinity is one of the most important environmental constraints limiting plant productivity around the world (Ashraf and Harris, 2004). Although most of the cultivated plants are glycophyte species, their overall responses to increasing NaCl do appear to be species-specific (Lutts et al., 1995; Wouyou et al., 2017; Kpinkoun et al., 2019; Kinsou et al., 2020). Moreover, within a given species, a substantial variation in salt sensitivity may occur among cultivars (Ould Mohandi et al., 2011; Manaa et al., 2011).

Plant species' response to salt depends also on several variables, starting with the species itself, the cultivar, the salt concentration, the growing conditions and the development stage of the plant (Alaoui et al., 2013). The identification of cultivars and genotypes tolerant to salts, capable of minimizing the depressive effects of salinity on yields, would certainly improve agricultural production in areas affected by salinity (Benidire et al., 2015) because the world averagely wastes 10 ha of cultivable land per minute, including 3 hectares due to salinization (Mermoud, 2006). FAO (2005) estimates that 7% of agricultural land in the world (920 million hectares) is affected by soluble salts made up of half of the irrigated areas (Zhu, 2001). In Benin, the market gardening is increasingly essential on the socio-economic level. This situation is due to the number of the actors who live directly or indirectly from the market gardening (Komlan et al., 2013). Horticultural products in general and vegetables in particular have become an important sector with high growth potential (Mahaliyanahaarachchi et al., 2004). These crops occupy a prominent position in the food production chain in Benin and are mainly cultivated in the coastal zone where they are exposed to salt stress (Ezin et al., 2012).

Climate change which tends to increase sea level further aggravates the phenomenon (Ezin et al., 2012). However, the extent of land affected by salinity is not precisely known in Benin as no study was focused on this problem. Preliminary (unpublished) studies carried out by our research team with our partners have shown that the country's coastal and some non-coastal vegetable production areas are at high salt risk. African eggplant (*Solanum macrocarpon*) is a popular vegetable in West Africa, where the leaves are a regular part of the diet (Tropical Plants Data Base, 2020). The plant also supplies an edible fruit and has a range of local medicinal uses. In Benin, this plant is part of the crops grown in market gardening as a leafy vegetable. It is known for its high nutritional value due to its high protein, fat, ash, crude fiber and moisture content (Oboh et al., 2005). Very few studies address the decline in its productivity and they generally focus only on biotic factors, pests and disease (FAO, 2004). Virtually no studies have been conducted on the effects of salinity on African eggplant growth and on the salt resistance of cultivars produced in Benin as no scientific report addressed this subject. Likewise, no other international study has addressed the physiological mechanisms involved in salt resistance in this species. The present study therefore aims at setting the stage for crossing such insufficiency by evaluating the behavior of 7 cultivars of *S. macrocarpon* produced in Benin in saline conditions at seedling stage.

MATERIALS AND METHODS

Plant material

Seven African eggplant (*S.macrocarpon* L.) cultivars including 6 local (*Adja-ouere*, ***Côte d'Ivoire*** (CI), *Dangbo*, *Kpinman*, *Lanman* and *Togan*) and one imported variety (*Kombara* F1) were used. Seeds of cultivars CI, *Lanman* and *Kpinman* were provided by the National Institute of Agricultural Research of Benin (INRAB), while cultivars *Dangbo*, *Adja-ouere* and *Togan* were obtained from the Regional Agriculture Development Agency of Plateau (ATDA / Plateau, Republic of Benin). Seeds of *Kombara* F1 hybrid were bought from the company BENIN SEMENCES on the recommendation of ATDA / Plateau.

Experimental conditions

Experiment was carried out in a screening house at the National Institute of Agricultural Research of Benin (INRAB) / (Abomey-Calavi, Republic of Benin) from June to July, 2019. Plants were grown at a 26 / 22°C (day / night) temperature with natural light and a relative humidity of 55%. Seeds were germinated in trays filled with potting soil for 3 weeks. The young plants were then transferred to pots with 11 cm in diameter and 15 cm in height already prepared containing 2/3 of sand and 1/3 of compost at the rate of one plant per pot and cultivated for a week before the start of stress application. Plants were watered every 2 days for 2 weeks with 100 ml / pot of saline solution of 0, 30, 60, 90 and 120 mM of NaCl, corresponding respectively to the electrical conductivities of 0.221; 3.827; 6.47; 10.56 and 14.02 $dS.m^{-1}$ determined by a conductivity meter (WRC, CO310). The experimental setup is a completely randomized design (CRD) with 2 factors and 3 replicates. The 2 factors considered are African eggplant cultivars with 7 levels (*Adja-ouere*, CI, *Dangbo*, *Kpinman*, *Kombara* F1, *Lanman* and *Togan*) and the concentrations of NaCl with 5 levels (0, 30, 60, 90 and 120 mM).

Evaluation of the experiment

Plant height and root length were measured, while the leaf number was counted. Leaf length and width were measured using the youngest fully expanded leaf. Aerial part and root fresh masses were determined by weighing. Samples from each part were then transferred to an oven at 80°C for 72 h to determine the dry mass. These parameters were measured before the application of stress (Xo) and at the end of the experiment (X1) (after 2 weeks). The relative growth was calculated by the ratio (X1-Xo) / Xo.

Statistical analysis

For all parameters, each value is presented as the mean ± standard error with 3 replicates per treatment. The results are subject to one or 2 ways analysis of variance (ANOVA) as appropriate and the means are compared with the Turkey test. Analyses were carried out using JMP software (SAS Institute NC, 2007).

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Figure 1. Salinity symptoms in African eggplant leaves (cultivar Cote D'ivoire under 120 mM NaCl).

Figure 2. Plants from cultivar Kpinman (A) and cultivar Togan (B) after 2 weeks under different NaCl concentrations (0; 30; 60; 90 and 120 mM).

RESULTS

The effect of salt stress resulted in progressive leaves yellowing (chlorosis) and drying out (necrosis) (Figure 1). The effect of NaCl also resulted clearly in plant growth reduction (Figure 2) as the NaCl concentration increases. The 2-ways analysis of variance revealed a significant ($p<0.05$) depressive effect of salt stress on all the growth parameters considered and a significant ($p<0.01$) difference among cultivars (Table 1). The interaction between the 2 factors was significant only for plant height and shoot fresh mass.

Salinity effect induced a decrease of relative plant height growth after 2 weeks of stress in all cultivars tested with a variable response depending on the cultivar (Figure 3). The reduction was significant ($p<0.01$) for cultivars *Adja-ouere* and *Lanman* from 60 mM while for cultivar CI and *Kombara* F1, the effect was significant ($p <0.05$) only at 120 Mm NaCl. The effect of salt is not significant for cultivars *Dangbo*, *Kpinman* and *Togan*. Thus, cultivars *Dangbo*, *Kpinman* and *Togan* which have not undergone any significant reduction in their growth in the presence of salt are the least affected by salinity while cultivars *Adja-ouere* and *Lanman* which have undergone a significant reduction in their growth from 60 mMNaCl, were the most affected by salinity. The other cultivars *Kombara* F1 and CI were intermediate.

Salinity effect resulted in a decrease in relative shoot fresh mass growth after 2 weeks of stress in all cultivars tested with a variable response depending on the cultivar (Figure 4). The reduction was significant ($p<0.05$) for cultivars *Kpinman*, *Lanman* and *Kombara* F1,

Table 1. Results of 2 ways analysis of variance for different growth parameters for 7 african eggplant cultivars cultivated in the presence of different NaCl concentrations.

Growth parameter	Stress	Cultivar	Interaction (Stress X Cultivar)
RPHG	30.251***	54.391***	2.394**
RRLG	17.188***	3.587**	0.532^{ns}
RLNG	7.788***	15.750***	0.677^{ns}
RSFMG	30.994***	26.807***	2.806***
RRFMG	3.569*	5.354**	0.291^{ns}
RSDMG	26.407***	19.975***	1.619^{ns}
RRDMG	12.205***	16.152***	1.630^{ns}
RLLG	25.283***	7.589***	0.829^{ns}
RLWG	27.617***	7.972***	0.462^{ns}

*: Difference significant at p<0.05; **: difference significant at p<0.01; ***: difference significant at p<0.001; ns: difference non –significant; RPHG: Relative Plant Height Growth, RLNG: Relative Leaf Number Growth, RSFMG: Relative Shoot Fresh Mass Growth, RSDMG: Relative Shoot Dry Mass Growth, RLLG: Relative Leaf Length Growth, RLWG: Relative Leaf Width Growth, RRLG: Relative Root Length Growth, RRFMG: Relative Root Fresh Mass Growth, RRDMG: Root Dry Mass Growth.

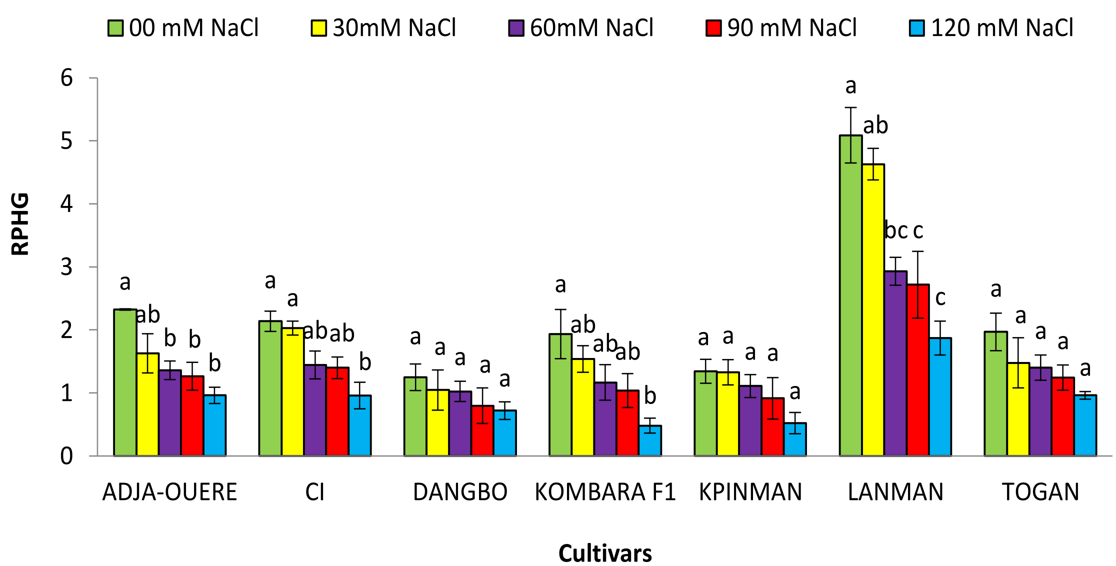

Figure 3. Plant relative height growth (PRHG) of 7 African eggplant cultivars under different NaCl concentrations (n = 3; vertical bars are standard errors). Values within cultivar with different letters are significantly different at p<0.05.

respectively from 30; 60 and 90 mM NaCl and only at 120 mM NaCl for cultivars *Adja-ouere*, CI and *Togan*. The effect was not significant for cultivar *Dangbo*. Thus, cultivar *Dangbo*, which did not undergo any significant reduction in its growth in the presence of salt, appears to be the least affected by salinity while cultivar *Kpinman*, which underwent a significant reduction in growth at the lowest NaCl concentration used (30 mM), was the most affected. The other cultivars are intermediate.

Salinity resulted in a decrease in relative shoot dry mass growth after 2 weeks of stress in all cultivars tested with a variable response depending on the cultivar (Figure 5). The reduction was significant (p<0.01) from 60 mM NaCl for cultivar *Kpinman* and from 90 mM, respectively for cultivars *Adja-ouere* and *Lanman*. Cultivars CI, *Kombara* F1 and *Togan* were only significantly affected (p<0.05) at 120 mM. The effect was not significant for cultivar *Dangbo*. Thus, cultivar *Dangbo*, which did not undergo any significant reduction in growth in the presence of salt was the least affected by salinity, while cultivar *Kpinman*, which underwent a significant reduction in growth from 60 mM NaCl was the most

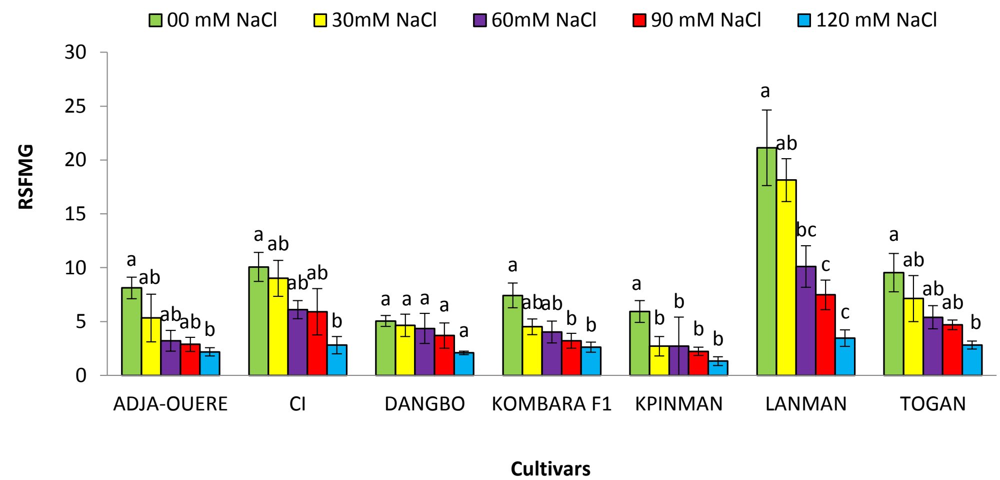

Figure 4. Relative shoot fresh mass growth (RSFMG) of 7 African eggplant cultivars under different NaCl concentrations (n = 3; vertical bars are standard errors). Values within cultivar with different letters are significantly different at p<0.05.

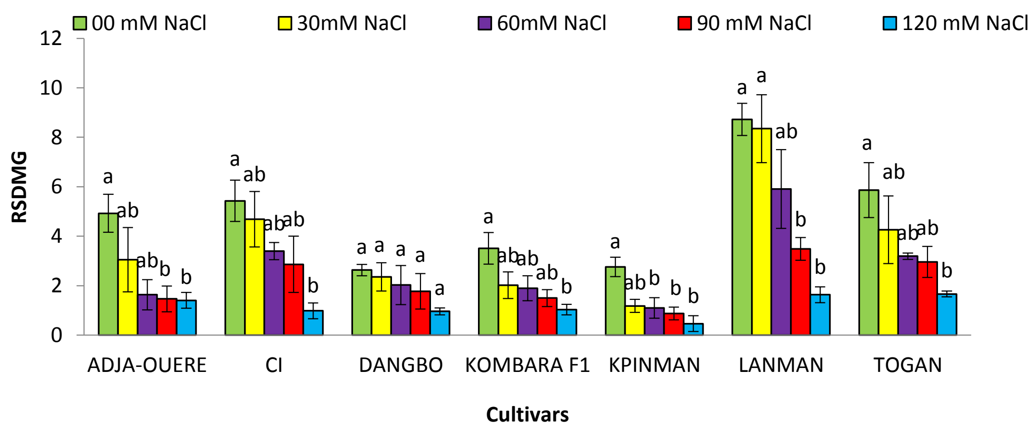

Figure 5. Relative shoot dry mass growth (RSDMG) of 7 African eggplant cultivars under different NaCl concentrations (n = 3; vertical bars are standard errors). Values within cultivar with leters different letters are significantly different at p<0.05.

affected. The other cultivars were intermediate.

Salinity resulted in decrease on relative leaf number growth after 2 weeks of stress in all cultivars tested with a variable response depending on the cultivar (Figure 6). The reduction was significant (p<0.01) only for cultivar *Kombara* F1 from 60 mM and was not significant for all the other cultivars. Thus, cultivar *Kombara* F1 was the most affected by salinity in terms of leaf number compared to the other 6 cultivars.

Salinity induced a decrease in relative leaf length growth after 2 weeks of stress in all cultivars tested with a variable response depending on the cultivar (Figure 7). The reduction was significant (p<0.01) only for cultivar *Adja Ouere* from 60 mM and at 120 mM for cultivars *Kombara* F1, *CI* and *Lanman*; leaf length growth reduction was not significant for all the other cultivars. Thus, cultivar *Adja Ouere* was the most affected by salinity in terms of leaf length growth and Dangbo, Togan and Kpinman the least affected.

Salinity induced a decrease in relative leaf width growth after 2 weeks of stress in all cultivars tested with a variable response depending on the cultivar (Figure 8). The reduction was significant (p<0.01) only for cultivar *Adja-ouere*, *Lanman* and *Kpinman* from 90 mM and at 120 mM for cultivars *Kombara* F1, *CI* and *Togan*; leaf width growth reduction was not significant for Dangbo. Thus, cultivars *Adja ouere*, *Lanman* and *Kpinman* were the most affected by salinity in terms of leaf width growth and Dangbo the least affected.

Salinity effect resulted in decrease on root growth for all

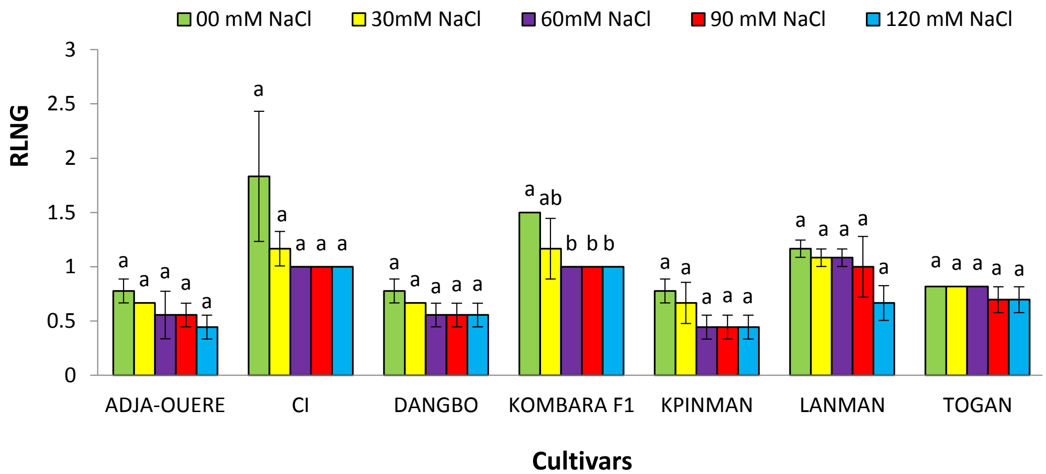

Figure 6. Relative leaf number growth (RSDMG) of 7 African eggplant cultivars under different NaCl concentrations (n = 3; vertical bars are standard errors). Values within cultivar with different letters are significantly different at p<0.01.

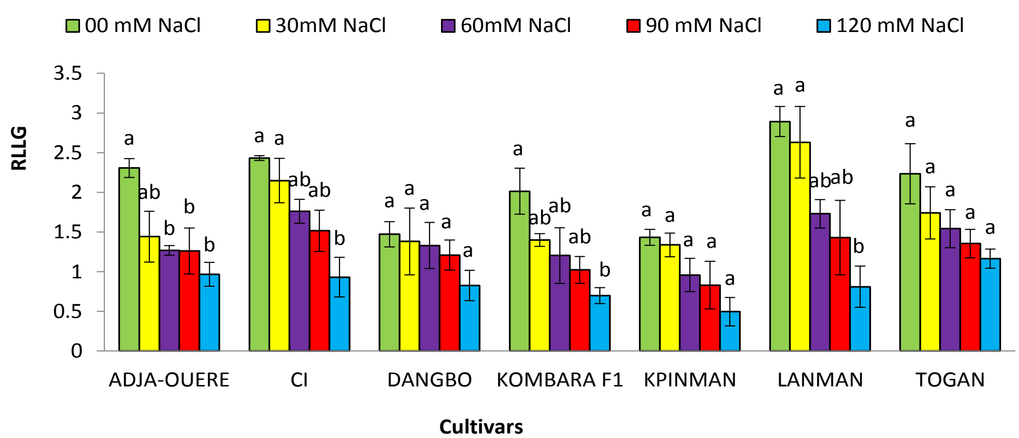

Figure 7. Relative leaf length growth (RLLG) of 7 African eggplant cultivars under different NaCl concentrations (n = 3; vertical bars are standard errors). Values within cultivar with different letters are significantly different at p<0.01

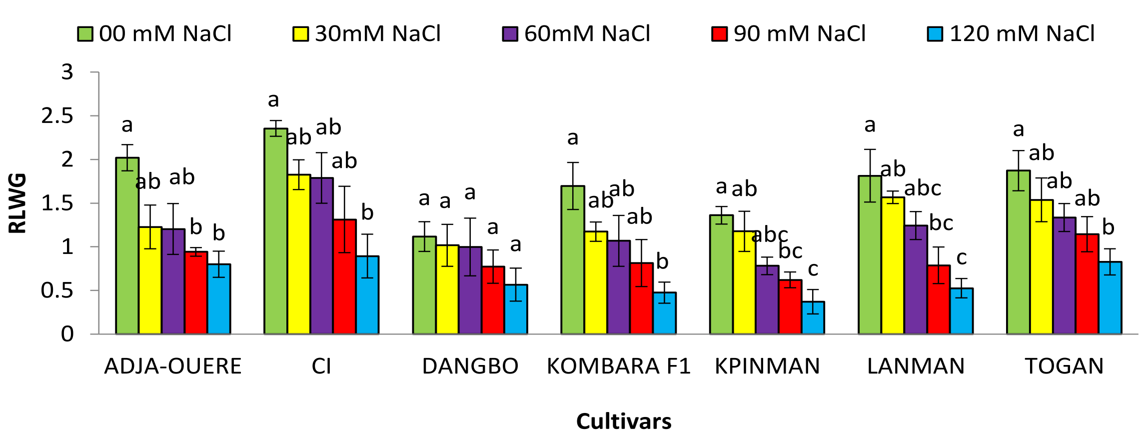

Figure 8. Relative leaf width growth (RLWG) of 7 African eggplant cultivars under different NaCl concentrations (n = 3; vertical bars are standard errors). Values within cultivar with different letters are significantly different at p<0.01.

Table 2. Effect of different NaCl concentrations (0, 30; 60; 90 and 120 mM) on relative root length growth of 7 African eggplant cultivars after 2 weeks of stress : *Values are means* ±SE (n = 3).

Cultivars	NaCl concentrations (mM)				
	00	30	60	90	120
Adja-Ouere	1.056±0.22[a]	1.044±0.53[a]	0.694±0.41[a]	0.297±0.22[a]	0.102±0.02[a]
CI	1.359±0.44[a]	1.289±0.34[a]	1.219±0.13[a]	1.031±0.28[a]	0.314±0.18[a]
Dangbo	0.881±0.06[a]	0.808±0.40[a]	0.576±0.20[a]	0.179±0.10[a]	0.111±0.06[a]
Kombara F1	1.054±0.24[a]	0.697±0.26[a]	0.470±0.19[a]	0.381±0.05[a]	0.124±0.10[a]
Kpinman	1.042±0.18[a]	0.824±0.14[a]	0.654±0.22[a]	0.533±0.29[a]	0.080±0.07[a]
Lanman	1.810±0.18[a]	1.205±0.24[ab]	0.607±0.29[b]	0.369±0.13[b]	0.354±0.32[b]
Togan	1.207±0.18[a]	0.831±0.08[a]	0.775±0.21[a]	0.764±0.22[a]	0.482±0.04[a]

Values within line with different letters are significantly different at p<0.01.

Table 3. Effect of different NaCl concentrations (0. 30; 60; 90 and 120 mM) on relative root fresh mass growth of 7 African eggplant cultivars after 2 weeks of stress: *Values are means* ±SE (n = 3).

Cultivars	NaCl concentrations (mM)				
	00	30	60	90	120
Adja-Ouere	8.0136±7.26[a]	4.870±0.62[a]	3.054±1.84[a]	0.965±0.51[a]	0.843±0.42[a]
CI	5.733±0.53[a]	5.409±1.26[a]	5.085±1.02[a]	4.295±1.41[a]	2.076±0.72[a]
Dangbo	3.596±0.66[a]	3.193±0.55[a]	2.387±1.13[a]	1.434±0.54[a]	0.682±0.05[a]
Kombara F1	4.851±0.69[a]	2.490±0.42[b]	2.046±0.46[b]	1.935±0.37[b]	1.916±0.32[b]
Kpinman	4.531±0.64[a]	2.765±0.34[a]	2.081±0.65[a]	2.027±1.11[a]	1.378±0.65[a]
Lanman	11.533±8.95[a]	11.500±2.90[a]	10.455±3.49[a]	7.966±3.51[a]	3.377±1.40[a]
Togan	3.216±0.26[a]	2.978±0.82[a]	2.698±1.12[a]	2.656±0.84[a]	0.883±0.06[a]

Values within line with different letters are significantly different at p<0.01.

Table 4. Effect of different NaCl concentrations (0. 30; 60; 90 and 120 mM) on relative root dry mass growth of 7 African eggplant cultivars after 2 weeks of stress : *Values are means* ±SE (n = 3).

Cultivars	NaCl concentrations (mM)				
	00	30	60	90	120
Adja-Ouere	1.266±0.35[a]	0.671±0.63[a]	0.120±0.10[a]	0.080±0.06[a]	0.080±0.06[a]
CI	1.545±0.41[a]	1.424±0.43[a]	1.363±0.31[a]	0.878±0.39[a]	0.484±0.16[a]
Dangbo	0.600±0.20[a]	0.511±0.19[a]	0.257±0.23[a]	0.048±0.01[a]	0.016±0.00[a]
Kombara F1	1.258±0.33[a]	0.247±0.13[b]	0.182±0.05[b]	0.140±0.08[b]	0.247±0.13[b]
Kpinman	1.666±0.35[a]	0.933±0.17[a]	0.486±0.45[a]	0.360±0.15[a]	0.353±0.32[a]
Lanman	4.333±0.60[a]	4.166±1.60[a]	2.250±1.00[a]	1.183±0.58[a]	0.525±0.36[a]
Togan	0.859±0.12[a]	0.456±0.25[a]	0.424±0.22[a]	0.368±0.18[a]	0.014±0.00[a]

Values within line with different letters are significantly different at p<0.01.

parameters in all cultivars tested with a variable response depending on the cultivar (Tables 1 to 3). The reduction in relative root length growth observed was significant (p<0.01) only for cultivar *Lanman* cultivar from 60 mM NaCl (Table 2); while for the relative root fresh and dry masses growth, the reduction was significant (p<0.01) only for cultivar *Kombara* F1 from 30 mM NaCl (Tables 3 and 4). Thus, cultivar *Lanman* was the most affected by salinity for root length whereas cultivar *Kombara* F1 was the most affected by salinity for root fresh and dry masses. From the analysis of the effect of salt stress on the different growth parameters studied, it appears that cultivar *Dangbo*, which did not undergo significant reduction in growth for none of the 7 parameters evaluated, was the least affected among the 7 cultivars tested. It was followed by cultivar *Togan* which underwent significant growth reduction for only 3 growth parameters and only at high concentrations of NaCl (120 mM). On the other hand, cultivar *Kombara* F1 which underwent a significant reduction in growth from the lowest concentrations of NaCl used (30 and 60 mM) for 4 of the nine parameters evaluated was the most affected. It was followed by cultivar *Lanman, Kpinman* and *Adja-ouere* with respectively 3, 2 and 2 growth parameters significantly reduced at the lowest NaCl concentrations used. Cultivar CI showed intermediate behavior.

Furthermore, it is important to note that the 3 root growth parameters evaluated were only significantly affected by salinity for one of the 7 cultivars while for the growth parameters of the aerial part, at least 4 cultivars were significantly affected except for leaf number. Thus, root growth seemed to be less sensitive to salinity than the aerial part.

DISCUSSION

Effects of salt stress on plant growth

Plants exposed to salt stress showed symptoms of chlorosis and leaf necrosis. Similar results have been reported in several species including pepper (Ibn Maaouia-Houimli et al., 2011), sugar cane (Gandonou et al., 2012) and tossa jute (Loko et al., 2020). The presence of NaCl salt in the plant growing medium inhibited the growth of both aerial part and roots of the young plants of all the 7 cultivars. The reduction of plant growth by salt stress is a current phenomenon as reported in several vegetables species including tossa jute (Ghosh et al., 2013; Ben Yakoub et al., 2019), amaranth amaranth (Omami et al., 2005; Omami and Hammes 2006); pepper (Sikha et al., 2013; R'him et al., 2013): tomato (Abir et al., 2006; Albacete et al., 2008; Ould Mohamdi et al., 2011; Abdelgawad et al., 2019 ; Our results revealed variability among the response of the 7 cultivars to salt stress according to the growth parameter.

The presence of NaCl in the culture medium results, after 2 weeks, in a significant reduction in plant height and root length of the plants. Our results show on the one hand that only the heights of 4 cultivars out of the 7 studied were significantly affected by the different concentrations of NaCl and, on the other hand, they caused a significant decrease in root growth only in one cultivar. Similar results have been reported by Jamil et al. (2007) Zaid (2016) on eggplant and Ben Nouioua and Chaima (2019) on carrots. According to Benmahioul et al. (2009), the decrease in growth is the result at the cellular level of a decrease in the number of cell divisions during abiotic stresses (salt and water stress). The fresh and dry masses of the aerial and root parts have decreased largely under the effect of salt stress. The reduction in biomass was significant for shoot and roots fresh and dry masses. This reduction in biomass was also reported by Turham et al. (2009) and Sholi (2012) on tomato; Akinci et al. (2004) on eggplant, Anchour (2016) on okra; Wouyou et al., (2017) on amaranth and Jahan et al. (2019) on carrot. Leaf length and width were also reduced by salinity at least in 4 of the 7 African eggplant cultivars tested indicating that salt stress reduced leaf expansion of these cultivars. According to Neumann (1997), the inhibition of leaf expansion by salt reduces the volume of leaf tissue and therefore limits the production of new leaves. However, the reduction in leaf number under salt stress was significant only in one cultivar from the 7 tested. These results indicate that the correlation between salt effect on leaf expansion and leaf number did not really exist in African eggplant. The reduction of leaf number by salinity was reported in some other vegetable species such as eggplant (Hannachi and Van Labeke, 2017) and chili (Kpinkoun et al., 2019).

In addition, it is important to note that the 3 root growth parameters evaluated were only significantly affected by salinity for one of the 7 cultivars while for the growth parameters of the aerial part, at least 4 cultivars were significantly affected except for leaf number. The root part seemed less sensitive to salinity than the aerial part. These results are consistent with those of Wouyou et al. (2017) on amaranth and Kpinkoun et al. (2019) on chili. According to Munns and Tester (2008), saline stress initially induces rapid osmotic changes which affect the growth of roots in a short time and consequently, the disruption of the development of the aerial parts. This allows the plant to store the energy necessary to cope with stress in order to reduce the irreversible damage caused, when the threshold of lethal concentration is reached (Benmahioul et al., 2009). Contrary results were obtained by R'him et al. (2013) on chili in which the root part is most affected. This is explained by Hamrouni et al. (2011) by the fact that the plant adapts to salt stress by first reducing its root system thus preserving the aerial part in order to maintain and ensure the production of photosynthetic. According to Odjegba and Chukwunwik (2012), the reduction in plant growth, in particular in the accumulation of biomass, could be the consequence of water stress resulting from a decrease in the external osmotic potential and / or the accumulation of toxic ions in the tissues (Odjegba and Chukwunwik, 2012) including Cl^- (Tavakkoli et al., 2011). Further studies are needed to determine which of these physiological factors are preponderant in the African eggplant response to salinity.

Salt resistance of the 7 cultivars

It appears that cultivar *Dangbo* was the least affected among the 7 cultivars tested, which is considered therefore as the most salt resistant, followed by cultivar *Togan*. In contrast, cultivar *Kombara* F1 was the most affected followed by cultivars *Lanman*, *Kpinman and Adja-ouere*. They appeared as the less salt resistant. The cultivar *Côte d'Ivoire* exhibited intermediate behavior. Thus, there is variability among cultivars relatively to their response to salinity. It is well known in plants that there is substantial variation in resistance to salinity among cultivars of the same species (Gandonou et al., 2012; Wouyou et al., 2017; Kpinkoun et al., 2019; Kinsou et al., 2020).

Conclusion

Salinity affected all cultivars considered in this study by its depressive effect on plant growth, but the behavior varies depending on the plant considered and the cultivar. Thus, the aerial part is more sensitive to salinity than roots. In addition, cultivars *Togan* and *Dangbo* appear to be the most resistant to salinity and cultivars *Kombara* F1, *Lanman*, *Kpinman* and *Adja-ouere* the most sensitive. For the first time, variability was revealed in salinity resistance of local cultivars of african eggplant.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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