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Effect of different stocking densities on survival of Nile tilapia fingerlings, *oreochromis niloticus* transported in plastic bags (Sudan)

أثر الكثافات التعميرية المختلفة علي معدل حياة أصبعيات البلطي النيلي اثناء الترحيل بواسطة الأكياس البلاستيكية - السودان

A thesis Submitted in partial Fulfillment of the requirements for the degree

Of Master of Science in Fish Technology

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October , 2013

Abstract :

Background: Fish farmers in Sudan obtain their seed stocks mainly not from their farms, and as such rely heavily on good packing conditions, so to implement most of transporting trips can covering sometimes 8–12 hours transportation time to maximize fish survival and quality.

The study here required main objective to identified the optimum loading for the success during transporting .

Methods: Closed oxygenated plastic bag which were carried three densities for each one with tow replicate for every treatment for the lower loading is 75 fingerlings /l the medium is , 100 fingerlings and last density is the larger one 140 fingerlings the duration factors was 10 hours, 11 hours and 18 hours .The fingerlings were sex reversed , their size is (5 g ±0.5).

Results: The data were analyzed useing spss computer software version- 16.0

Analysis result shown the factor of density in the two treatments (75 fingerlings + 100 fingerlings) was the best according to the survivor rate depending on type of the periods parameter. 10 hour=94% and 11 hours = 92% and here was N.S otherwise the comparative between those and the density 140 was high significant .

Conclusions: Variation between loading and durations is N.S at $P<0.05$, so the conclusions is found the optimum loading during transporting period was 100/l/18 (hundred fish per litter in 18 hours period) according to analysis details.

الخلاصـــة :-

اعتمـــاد مربـــي الاســـماك فـــي الســـودان بصـــورة اساســـية علـــي اســـتجلاب اصـــبعيات التربيـــة مـــن مصـــادر خـــارج مـــزارعهم ممـــا يكلـــف ذلـــك التجهيـــز لاحتمـــال الـــزمن الطويل احيانا من ثماني الي اثني عشر ساعة .

أُجريـــت هـــذه الدراســـة لإيجـــاد أفضـــل كثافـــة تحميليـــه ، وكانـــت اســـماك التجربـــة اصـــبعيات البلطـــي النيلـــي وأُســـتخدمت اكيـــاس بلاســـتيكية ســـعة ٦ لتـــر مصـــنوعة محلياً ، واختيرت هذه المعوامل لقياس عامل الحياة بالنسبة للكثافات المختلفة:

نـــوع وحجـــم الاســـماك وزمـــن الترحيـــل ونـــوع الكـــيس ونـــوع الميـــاه ودرجـــة الحـــرارة بالتســـاوي .ولكنهـــا اختلفـــت فقـــط فـــي الكثافـــات بغـــرض الحصـــول علـــي أفضـــل عامـــل مـــوثر والمعاملـــة المثلـــي مـــن الاختبـــارات الثلاثـــة كانـــت النتيجـــة ان لا فـــرق معنـــوي مـــا بـــين المعـــاملات (٧٥ و١٠٠ اصـــبعية) الا ان الكثافـــة الثالثـــة فـــي المعاملـــة (١٤٠أصـــبعية) أظهـــرت فيهـــا نســـبة مـــوت اعلـــي . وتـــم التحليـــل بواســـطة برنـــامج spss اصـــدارة 16.0واظهـــرت الفروقـــات معنويـــة فيمـــا بـــين المعـــاملات $P<0.05$ وتم اختيار أفضل نتيجة معاملة كنظام للخيار الامثل .

المـــدة الزمنيـــة التـــي اختيـــرت لتنفيـــذ البحـــث كانـــت كـــالاتي علـــي التـــوالي (١٠ ، ١١ ، ١٨ ساعة) وتكرار فرصتين لكل كثافة للفترات الزمنية المختلفة .

وخلصـــت الدراســـة بـــإن الكثافـــات ٧٥ أصـــبعية /اللتـــر و ١٠٠ أصـــبعية /اللتـــر همـــا الافضـــل فـــي هـــذه الدراســـة ولا فـــرق بينهمـــا لـــذلك تمـــت التوصـــية للعمـــل بتحميـــل عـــدد ١٠٠ اصـــبعية /اللتـــر مـــاء/١٨ ســـاعة فـــي نظـــام الاكيـــاس المغلقـــة بالاكســـجين معتبـــراً هذه النتئجة هي الامثل بالبحث .

Contents:

Abstract :…….…… ii

Abstract in Arabic :…….……..……. iii

Contents :…….…….…… iv

List of tables :…...……..…….……... v-vi

Acknowledgments:……..…….. vii

1.chapter one :……..……1- 1

1.1. Introduction……1

1.3. Objectives…….....2

2. **chapter tow** :……....3- 22

1.1.literature review ……..…3

1.1.1 Method of Transporting Live Fingerlings:….……...4

1.1.1 method in plastic bags…….4

1.1.2 Hauling box or tank method:……..5

1.2. Loading Techniques:…….……...5

1.3. factors influence in fish transport…….…….……..……..5

1.3.1 Handling:……..……...5

1.3.2. Crowding:……..5

1.1.6.3 Temperature:……....6

2.1.6.4 Water quality:……..7

2.1.6.5 Tolerance transport……..9

2.1.6.6 Presence of food in the intestine:…….…10

2.1.6.7 Age and size of fish…….....10

2.1.7 Live fish transportation methods:……13

2.1.8 Transportation by open system:……...…13

2.1.9 The main factors and principles associated with fish transport:……15

2.1.9.1 Quality of fish…….15

2.1.9.2 Oxygen……16

3. Chapter three:……..… 23- 26

3.1.1 The materials used in experiment:……..…….24

3.1. 1.3 Procedure (method):…….……..…23

3.2 Methods:……23

3.1.4 Measurements and Readings:……...23

3.1.5 statistical analysis :…….……..24

3.1.5 material used in experiment:……24

4. Chapter four :……27-31

4.1 Results :……..27

4.2 Raw Data record before and during transport:……29

5. Chapter five :……...32

1. Discussion:……...32

6. Chapter six

:…….……٣٣

6.1. Conclusion :……..…3٣

6.2. References : ……3٤-3٦

List of tables

Table (1). Stress tolerance of some commonly cultured fish species

Table (2). Guide on fish age group/size and transport rule

Table (2) Recommendations in transporting different sizes of fish with defused oxygen tanks .

Table (3)Experiment design to be analytics by victoria spss

Table (4) Summaries of spss program analysis :

Table (5) temperature, turbidity record before and during transport:

Table (6) Data record result:

Table (7) highest density 140 /l result .

Table (8) second density 100 /l result .

Table (9) third density 100 /l result .

Table (9) Interaction of factors showing .

ACKNOWLEDGEMENTS

I thank my supervisor **Dr. Ahmed Elaabid Hamad Mohamed** for his assistance during the study and dissertation period .

I am really grateful for his all time support, understanding my liability, and always help me to improving the quality of the project. providing a helping hand during data collection.

I thank to all college staff and jobs colleagues.

I thank to my family who always help and encourage me to progress , my mother, my father and wife .

everything is possible with pray and hard work

best wishes ,,,,,,,,,,