

RAPD

4 3 2 1 *1

86/7/14 :

-1
2
3
-4
*

E-mail : Gh.Elyasi@Gmail.com

DNA (RAPD) DNA DNA
16 18 RAPD 20 24
25 DNA 15 0/98 0/94
(0/02) (0/06)
RAPD-PCR
RAPD DNA :

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Study of Turkey Genetic Diversity Using RAPD Markers

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Abstract

Application of DNA marker technology in poultry as a tool for species and strain identification has progressed rapidly during the last decade. Random amplified polymorphic DNA (RAPD) markers can be generated using short arbitrary primers to amplify genomic DNA, giving a genotype-specific pattern of bands. RAPD analysis should lead to the saturation of the genome without the requirement of previous genetic information. The purpose of this study was to evaluate genetic similarities and distances among four-colored phenotype of turkey population that kept in Turkey Research Station of Iran using RAPD technique. Blood samples were taken from 20 Black, 16 Golden, 24 Pied and 18 White local turkeys. Genomic DNA was extracted from 25µl blood samples. RAPD technique, using 15 primers, was applied to amplification of different fragments of genome. The genetic similarity between the groups varied from 0.94 to 0.98 between phenotypic groups. The highest genetic distance (0.06) was determined between the White and Golden phenotypic groups and the lowest genetic distance (0.02) was obtained between White and Black groups. The results of this research showed that RAPD-PCR is an appropriate tool for evaluation of genetic variation in poultry and color is not a useful character to differentiate turkey genetic groups.

Key Words: DNA marker, Genetic distance, RAPD, Turkey

(2002)
(1996)
DNA
12
(r=0/8)
)
(1996)
DNA
DNA
DNA
(1998)
(2003) (2001)
¹PCR
²RAPD PCR DNA

²Random Amplified Polymorphic DNA

¹Polymerase Chain Reaction

/1	18	/	...	144
				1387

	DNA			(1998)
DNA	DNA		RAPD	70
				5
		DNA		
			10	
(1)		15		
1/5)	25			RAPD
20 dNTP	0/2 MgCl2		4	4
Taq DNA	1		RAPD	
50	1 Polymerase			
PCR	(DNA			
3	94			
		40		
37	45	94		
2	72	1		RAPD
10	72			
	70	6 %2		RAPD
			16	18
			20	24
	Popgene 3.2		EDTA	%10
(1973)	Nei	25	DNA	20
			(1995)	(1990)

1		
5'→3'		
1	Moh 01	TGGACTCGAG
2	Moh 02	GCACTGAGTA
3	Moh 04	GCATGCGATC
4	Moh 06	ACGTCGAGCA
5	Moh 07	TACGCAGACT
6	Moh 11	TGCATCGTAC
7	Moh 12	ACGCCGTACG
8	Moh 13	GCTGCTCGAGT
9	Moh 26	CGAACCTGATC
10	Moh 27	GCTTGCAGATC
11	OPC 02	GTGAGGGCGTC
12	OPC 05	GATGACCGCC
13	OPC 08	TGGACCGGTG
14	OPC 16	CACACTCCAG
15	OPD 05	TGAGCGGACA

DNA
DNA

RAPD

(2 1)

5

(2)

)

14 OPC-05

RAPD

(2000)

(3 3)

(2005)

(2001)

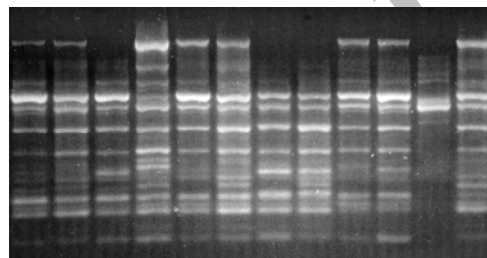
2

5'→3'

/1	18	/	...	146
				1387
9	12	GTGAGGCGTC	OPC 02	
14	18	GATGACCGCC	OPC 05	
9	12	TGGACCGGTG	OPC 08	
10	11	CACACTCCAG	OPC 16	
11	14	TGAGCGGACA	OPD 05	

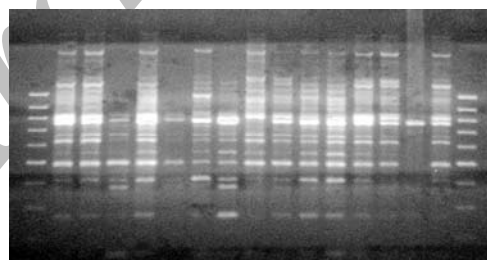
RAPD-PCR

RAPD



OPC-02

1



OPC-05

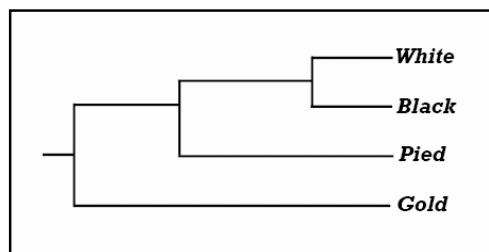
2

(1973)

3

0/96	0/97	0/98	
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0/95	0/94	---
0/97	---	---



(1973)

3

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