Michael J. Miller (appearance *pro hac vice*)
Timothy Litzenburg (appearance *pro hac vice*)
Curtis G. Hoke (State Bar No. 282465)
The Miller Firm, LLC
108 Railroad Ave.
Orange, VA 22960
(540) 672-4224 phone; (540) 672-3055 fax
mmiller@millerfirmllc.com
tlitzenburg@millerfirmllc.com
choke@millerfirmllc.com

Attorneys for Plaintiff
DEWAYNE JOHNSON

ELECTRONICALLY
FILED
Superior Court of California, County of San Francisco
06/07/2018
Clerk of the Court
BY:LINDA ALLSTON
Deputy Clerk

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF SAN FRANCISCO

DEWAYNE JOHNSON,

Plaintiff,

v.

MONSANTO COMPANY

Defendants.

Case No. CGC-16-550128

DECLARATION OF CURTIS G. HOKE IN SUPPORT OF PLAINTIFF'S OPPOSITION TO DEFENDANT'S MOTION IN LIMINE 15 TO EXCLUDE REFERENCES TO ROUNDUP READY CROPS AND OTHER BIOTECHNOLOGY

Trial Judge: TBD

Trial Date: June 18, 2018
Time: 9:30 AM .
Department: TBD

DECLARATION OF CURTIS G. HOKE

I, Curtis Hoke, declare and state:

1. I am an attorney at law admitted to practice before all of the courts in the state of California. I am an attorney at The Miller Firm, LLC, attorneys of record for Plaintiff Dewayne Johnson. I am over eighteen years of age and am fully competent to make this Declaration in support of Plaintiff's Opposition to Defendant's Motion in Limine No. 15 to Exclude References to Roundup Ready Crops and Other Biotechnology. Except as otherwise expressly stated below, I have personal knowledge of the facts stated in this declaration, and if called to testify, I could and would competently testify to the matters stated herein.

2. Attached hereto as **Exhibit 1** is a true and correct copy of relevant portions of the Expert Report and Witness Statement of Dr. Kassim Al-Khatib.

3. Attached hereto as **Exhibit 2** is a true and correct copy of relevant portions of the expert toxicological assessment of Dr. William Sawyer.

4. Attached hereto as **Exhibit 3** is a true and correct copy of relevant portions of the 2/27/2018 deposition of William Sawyer, PhD.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on June 7, 2018 in Orange, Virginia.

By: ______________________
Curtis G. Hoke,
Declarant

EXHIBIT 1

Monsanto Litigation

Glyphosate Uses and its Contributions to Agriculture, Environment, Natural Resources and Protection of Human and Animal Health

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Expert Report and Witness Statement of Dr. Kassim Al-Khatib

Professor of Plant Sciences

UNIVERSITY OF CALIFORNIA - DAVIS

C. Glyphosate-Resistant Crops

Glyphosate-resistant crops have been genetically modified to enable plants to survive glyphosate treatments. Crops carrying the resistance genes can be treated with glyphosate during the growing season, allowing farmers greater flexibility in the timing of herbicide application. In addition, use of this herbicide in glyphosate-resistant crop systems has given farmers cost-effective broad-spectrum weed control options with the ability to control weeds that developed resistance to other herbicides' modes of action such as photosynthetic-, protox-, acetolactate synthase-, and acetyl COA carboxylase-inhibiting herbicides. Glyphosate has also increased the adoption of reduced or no-tillage cultural practices, resulting in more sustainable production systems. Furthermore, because glyphosate is strongly adsorbed to the soil, the threat of residual effects on succeeding rotational crops is negligible and the possibility of glyphosate leaching in the soil and contaminating ground water is eliminated. After years of using glyphosate, there is no issue of glyphosate ground water contamination unlike other common herbicides such as atrazine, metolachlor, metribuzin, diuron, alachlor, 2,4-D, trifluralin, picloram, hexazinone, and bromacil (Williams et al. 1988).

The adoption of glyphosate-resistant crops has increased dramatically in the last 15 years. Most of the increase in crop acreages is attributed to glyphosate-resistant soybean, corn, canola, alfalfa, cotton, and sugar beet. The outcomes of this unprecedented adoption of glyphosate-resistant crops have been many, but perhaps most dramatic is the simplification of weed control tactics. Growers can now apply glyphosate at higher rates and at multiple times without concern about crop damage or environmental impacts.

The development and marketing of glyphosate-resistant crops fundamentally changed how crop farmers could apply glyphosate. Before glyphosate-resistant crop technology developed, farmers could spray glyphosate prior to crop emergence for early-season weed control, or after harvest to clean up late-season weeds. Mechanical innovations enable some glyphosate use within crops by using shielded sprayers and devices to wipe the herbicide onto weeds that are taller than crops (Derting et al. 1987) but these approaches in annual crops were risky, difficult, and not fully utilized. The development of glyphosate-resistant crops allows glyphosate to be applied after the crop has emerged, leaving the crop unharmed but controlling all actively growing weeds. This historically significant technological advance set the stage for unprecedented and rapid growth in the area planted to glyphosate-resistant crops. Prior to glyphosate-resistant crops, field crops sprayed with glyphosate constituted less than 10% of cotton, maize, and soybean acres and now constitute 90% or more (U.S. Department of Agriculture 2017). Today, the use of glyphosate in conjunction with genetically engineered herbicide-tolerant crops accounts for about 56% of global glyphosate use.

Several studies have shown that potential effects of glyphosate on water, air, and soil contamination are minimal, compared to those caused by the herbicides that were replaced when glyphosate-resistant crops were adopted (Liphadzi et al. 2005). In the USA, the advent of glyphosate-resistant soybeans resulted in a significant shift to reduced- and no-tillage practices, thereby reducing environmental degradation by agriculture. A survey conducted in Southern and Midwestern states showed that the adoption of glyphosate-resistant crops resulted in a large increase in the percentage of growers using no-till and reduced-till systems. Tillage intensity declined more in continuous glyphosate-resistant cotton and soybean (45% and 23%, respectively) than in rotations that included no glyphosate-resistant crops (Givens et al. 2009).

D. Orchards and Vineyards

Glyphosate is also an essential part of weed control in the setting of orchards and vineyards. In many vineyards and orchards, growers rely heavily on glyphosate as a main weed control practice.

Weed control is an essential part of any healthy and high-yielding orchard. Weeds compete throughout the lives of tree fruits and vines for water, light, and essential nutrients. Weeds can interfere with irrigation of the trees or vines by blocking the sprinkler pattern, causing uneven or inefficient irrigation, or by plugging the sprinklers. Micro-sprinklers are even more susceptible than other styles of sprinklers because they are often placed low to the ground. In addition, serious weed competition can cause young trees to have stunted growth and reduced fruit size and yield. This can result in significant economic losses. Furthermore, certain insect pests of tree fruit and vines that live in host-plant weeds multiply on the weed plants and migrate up into the trees, causing direct damage to the fruit and economic losses. Additionally, over winter, tree-damaging rodents like to hide in the habitats created by weed cover. While there, they feed on tree bark and roots, causing damage. Rodent pests (meadow voles, mice, etc.) will be deprived of habitats next to trees if weeds are controlled. Another damaging effect of weeds is when significant weed cover occurs that makes worker and machine access difficult (e.g., dangerous for ladder work). Moreover, weeds such as thistles can impair hand harvest of grapes, blueberries, raspberries, and other crops.

A number of herbicides with soil residual activity are labeled for use in trees and vines. These herbicides prevent annual weeds from emerging or establishing, but most often do not kill weeds that have already emerged at the time of treatment. Combining an herbicide that has soil residual activity with glyphosate can greatly extend the period of weed control and eliminate or greatly reduce the need for multiple applications of glyphosate. Due to the low cost of glyphosate and its effectiveness on many weeds, many growers use it as a main herbicide in their weed control programs (Peachey et al. 2013).

E. Crop Desiccation and Harvest-Aid

Pre-harvest crop desiccation is the application of an herbicide to a crop shortly before harvest. In cooler environments, when crops are late to mature or when crops are unevenly ripened, desiccation is a critical tool for harvesting crops. Late harvest and uneven crop growth is a problem in northern climates during wet summers or when weed control is poor. Late harvest

EXHIBIT 2

TCAS

Toxicology Consultants & Assessment Specialists, LLC
6450 Pine Avenue, Sanibel, FL 33957
29 Fennell Street, Skaneateles, NY 13152
(239) 472-2436 [FL] (315) 685-2345 [NY] (800) 308-0080
E-mail: drsawyer@experttoxicologist.com & Website: experttoxicologist.com

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Toxic Exposures · Environmental Testing · Risk Assessment · Forensic Toxicology · Causation Evaluation

Toxicological Assessment of Dewayne Johnson and Toxicological Risk Assessment of Glyphosate and Roundup® and Ranger PRO® Formulations

William R. Sawyer, Ph.D., D-ABFM
Toxicologist

December 21, 2017

Prepared for

Michael J. Miller, Esq.
Jeffrey A. Travers, Esq.
Timothy Litzenburg, Esq.

The Miller Firm, LLC
108 Railroad Avenue
Orange, VA 22960

Part B: Introduction to Glyphosate

Glyphosate (Roundup® and Ranger PRO®) History and Use

Glyphosate is the active ingredient in various herbicide formulations known as Roundup®. The Monsanto Company discovered the herbicide activity of glyphosate in 1970 and initiated sales and distribution for weed control in 1974. Glyphosate is not selective and is used on food and non-food crops. Over the subsequent four decades, glyphosate use as an herbicide has greatly expanded. It is used in agriculture, forestry, industrial rights-of-way and in residential applications worldwide.

Glyphosate's use in agriculture has been further expanded by the development of genetically modified plants that are tolerant to glyphosate treatment (Roundup-Ready®).[30] This has significantly increased the use of glyphosate on these crops for weed control with no concern for crop injury.[31] As a result, genetically modified crops contain far more glyphosate residue than conventional crops.

The introduction of glyphosate-resistant (GR) crops in 1996 and the expiration of the glyphosate patent have resulted in its ubiquitous use today, characterized by a 15-fold global increase since the mid 1990's.[32] According to glyphosate pesticide registration, in 1993 approximately 13 to 20 million acres of land had been treated with 18.7 million pounds of glyphosate and used mostly on hay/pasture, soybeans and corn.[33] According to the U.S. Geological Survey, in 2014, 300 million pounds of glyphosate were used on agricultural land in the U.S. Since 1974 in the U.S., over 3.5 billion pounds of glyphosate have been applied.[34]

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30 Williams, G. et al., Safety evaluation and risk assessment of the herbicide Roundup and its active ingredient, glyphosate, for humans," 2000, Regulatory Toxicology and Pharmacology, Vol.31, pg. 117-165.

31 Duke, S. S., Encyclopedia of Agrochemicals, 2003, John Wiley & Sons.

32 Benbrook, C.M., "Trends in glyphosate herbicide use in the United States and globally," 2016, Environmental Sciences Europe. 28:3.

33 U.S. EPA, "Registration eligibility decision-facts: Glyphosate," 1993 United States Environmental Protection Agency, Prevention, Pesticides and Toxic Substances (7508W), EPA-738-F-93-011.

34 Benbrook, C.M., "Trends in glyphosate herbicide use in the United States and globally," 2016, Environmental Sciences Europe. 28:3.

Cancer Risk Assessment Results: Cancer Slope Factor (CSF) Basis

Cancer risk level is determined as a consequence of applying a standard set of equations as established by U.S. EPA to specific variables as shown in the equations below. This section presents cancer risk level calculations using the cancer slope factor (CSF) for glyphosate exposures to herbicide applicators and the general population as well as dietary exposure cancer risk to the U.S. general population

Cancer Risk for Herbicide Applicators and the General Population

The cancer risks introduced from dietary glyphosate within the general U.S. population as well as to exposed farmers and applicators is calculated based on determined glyphosate exposure doses and the frequency and duration of exposure to the carcinogen (glyphosate). This is then spread across the lifetime of the individual. The calculation uses the cancer slope factor and is determined by the following equation:

$$Cancer\ Risk = \frac{Exposure\ dose\ X\ risk\ factor\ (cancer(oral)\ slope\ factor) X\ years\ of\ exposure}{70\ years\ (lifetime)}$$

Cancer Risk to the U.S. General Population via Dietary Exposure

Glyphosate exposures occur through dietary consumption of glyphosate residue on food and in drinking water. As reported in Solomon, (2016),[266] the U.S. EPA Dietary Exposure Evaluation Model (DEEM) estimates the average exposure of the general population to glyphosate as 0.088 mg/kg bw/day from an estimate that ranged from 0.058 – 0.23 mg/kg bw/day.

Consequently, the upper range of the dietary exposure cancer risk level is determined as:

$$Cancer\ Risk = \frac{\left[0.23 \frac{mg}{kg} per\ day\ X\ 0.00169 \left(\frac{mg}{kg} per\ day\right)^{-1}\ X\ 70\ years\right]}{70\ years\ (lifetime)} = 3.9\ X\ 10^{-4}$$

[266] Solomon, K., "Glyphosate in the general population and in applicators: a critical review of studies on exposures," 2016, Critical Reviews in Toxicology, Vol.46: sup 1, 21 -27, DOI: 10.1080/10408444.2016.1214678

EXHIBIT 3

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF SAN FRANCISCO

CASE NO.: CGC-16-550128

DEWAYNE JOHNSON,

Plaintiff,

vs.

MONSANTO COMPANY,

Defendant.

_________________________________/

CONFIDENTIAL

Continued Videotaped Deposition of WILLIAM SAWYER, PH.D., taken at 1451 Middle Gulf Drive, Sanibel, Florida, commencing at 8:09 a.m. - 5:57 p.m., Tuesday, February 27, 2018, before Tracie Thompson, RMR, CRR, CLR, Registered Merit Reporter, Certified Realtime Reporter, Certified LiveNote Reporter.

JOB No. 2820385

PAGES 265 - 557

BY MR. TRAVERS:

Q And attorneys for Monsanto were asking you about your Roundup use. Is there anything you do to minimize your exposure to glyphosate in diet?

A Oh, yes. My wife only buys organic. We never buy GMO food. She's very careful about that. I mean, there are times I probably do eat glyphosate in food when I go out. For example, lunch today here, I don't know where that bread came from, but yes.

Q With respect to your personal spraying of Roundup, how does your use of Roundup compare to DeWayne Johnson's?

MR. DHINDSA: Objection.

THE WITNESS: It would be a bread crumb on the floor of a big room. I have a yard which is completely mulch. And as I said, I have only used it once since the hurricane in September. And right now, I don't think there's hardly a weed in the yard. It's fairly clean.

BY MR. TRAVERS:

Q And you take these extra precautions in your use of Roundup and your dietary exposure because you're aware of a cancer risk with it, correct?

MR. DHINDSA: Objection.

THE WITNESS: I've been aware of its carcinogenic potential since about 1994. And the first time or two I used it, I was quite concerned about the mist. And I used a wire drill in my workshop and changed my wand so it didn't create a mist. And I've been extremely cautious with the use of it. Even though I don't use much of it, I'm certainly aware of its hazards and am taking precautions.

BY MR. TRAVERS:

Q Can we go to the Paz-y-Mino study, Exhibit 42.

A Okay.

Q And I'm just looking at the abstract. What was the conclusion of these authors in the abstract?

A The results suggest that in the formation used during aerial spraying, glyphosate had a genotoxic effect on the exposed individuals.

Q And can you go to the first column, the last paragraph. Does this say whether pure glyphosate was used, or was it a formulation of glyphosate in this study?

A It was Roundup Ultra, a herbicide containing glyphosate PEA, which is the tallow amine surfactant and the adjuvant Cosmo-Flux.